Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

Official File

FREEDOM OF INFORMATION ACT/PRIVACY PROGRAM

October 24, 2014

In reply refer to: FOIA #BPA-2014-01406

Matthew Fox
Ex 6

Mr. Fox:

This is a final response to your request for Bonneville Power Administration (BPA) records under the Freedom of Information Act (FOIA), 5 U.S.C. § 552. Your request was received in our office on July 10, 2014, with an acknowledgement letter sent to you on July 23, 2014. On October 9, 2014, we sent you extension letter with a new target date of November 21, 2014.

You requested:
"[T]he contract to BPA Project # 2011-014-00, titled: "Evaluate Status and Limiting Factors of Pacific Lamprey in the Lower Deschutes River, Fifteenmile Creek and Hood River Subbasins. Deborah Docherty is Project Manager. This request is for current contract year 10/1/2013-9/30/2014."

Response:
We conducted a search of the electronic records of the Contract Administrator. We have located 65 pages of material responsive to your request. We are releasing these records in full.

Although you agreed to pay fees of $25.00 there are no fees associated with this request.

Appeal:
You may still seek administrative appeal pursuant to Department of Energy FOIA regulations at 10 C.F.R. § 1004.8 if you feel the search was not adequate. If you choose to appeal, you must do so in writing within 30 days, and include the following information:

(1) The nature of your appeal - denial of records, partial denial of records, adequacy of search, or denial of fee waiver;
(2) Any legal authorities relied upon to support the appeal; and
(3) A copy of this determination letter.

Clearly mark both your letter and envelope with the words "FOIA Appeal," and direct it to the following address:

Director, Office of Hearings and Appeals
Department of Energy
1000 Independence Avenue SW
Washington DC 20585-1615

I appreciate the opportunity to assist you. If you have any questions, please contact Sarah A. Westenberg, FOIA Case Officer at (503) 230-3795.

Sincerely,

C.M. Frost
Freedom of Information Act Officer

Enclosure: Responsive document(s)

UNITED STATES GOVERNMENT

INTERGOVERNMENTAL CONTRACT

Mail Invoice To:

fwinvoices@bpa.gov
F & W Invoices - KEWB-4
P. O. Box 3621
Portland OR 97208-3621

Contract : 00062952
Release :
Page : 1

Vendor:
THE CONFEDERATED TRIBES OF WARM SPRINGS
RESERVATION OF OREGON
PO BOX C
WARM SPRINGS OR 97761

Please Direct Inquiries to:

KRISTI J. VAN LEUVEN
Title: CONTRACT SPECIALIST
Phone: 503-230-3605
Fax : 503-230-4508

Attn:

Contract Title: 2011-014-00 EXP EVAL STATUS/LIMITING FACTORS OF PACIFIC LAMPREY

Total Value : $553,598.00
Pricing Method: COST, NO FEE
Performance Period: 10/01/13 - 09/30/14

** NOT TO EXCEED **
Payment Terms: % Days Net 15

Contractor Signature

Jake O. Suppah, Secretary-Treasurer/CEO
Printed Name/Title

9/19/13
Date Signed

Kristi Van Leuven
BPA Contracting Officer

9/13/2013
Date Signed

Intergovernmental Contract 62952

Eval Status/Limiting Factors of Pacific Lamprey
Project Number 2011-014-00
Intergovernmental Contract 62952

BPA TECHNICAL POINT OF CONTACT (COTR): DEBBIE DOCHERTY (503) 230-4458
BPA CONTRACTING OFFICER: KRISTI VAN LEUVEN (503) 230-3605

This intergovernmental contract (IGC) includes the following documents:

1. Face page
2. This page 2 and page 3
3. Terms and Conditions
4. Statement of Work
5. Budget
6. Property Inventory

This IGC replaces the previous one (58343) which will expire 9/30/2013. All property on the attached property inventory is transferred to this new IGC.

Where noted in the contract clause, the prime contractor shall include relevant clauses in any subcontract issued for this work.

This IGC is subject to the cost principles of OMB Circular A-87 and Part 25 of the Bonneville Purchasing Instructions.

The Bonneville Purchasing Instructions, Appendix 19-A, Property Management Procedures for Contractors, is hereby incorporated by reference and made a part of this contract. Appendix 19-A may be accessed at:
http://www.bpa.gov/corporate/business/bpi/APP19-A.pdf

The BPA COTR is authorized to perform the following:

- Inspect and review work performed;
- Inspect or witness test presentations or other activities;
- Interpret Technical Specifications;
- Approve submitted deliverables/reports (including property inventory reports);
- Approve invoices;
- Reject nonconforming services, materials, or equipment; and
- Maintain a file of all Contractor property acquisition and disposition documents.

The COTR is not authorized to perform the following:

- Contract Modifications that change the contract price, technical requirements or time for performance;
- Suspension or termination of the Contractor's right to proceed, either for default or for convenience of BPA;
- Final decisions on any matters subject to appeal, as provided in a disputes clause

BONNEVILLE Power Administration	**Intergovernmental Contract 62952**

Please mail invoices with above IGC # to: Bonneville Power Administration
Attn: **Fish & Wildlife Invoices / KEWB-4**
PO Box 3621
Portland, OR 97208-3621
fwinvoices@bpa.gov

We now have a central mailbox to use for invoices. It is located at fwinvoices@bpa.gov. All invoices should be submitted in PDF format. Please put the following information in the email subject line: entity/contract number/invoice performance period/invoice #invoice amt. when mailing future invoices. A separate email is required for each invoice.

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UNIT 1 — SCHEDULE

CONTRACT TYPE (7-1)
(JUL 13)(BPI 7.10)

This is a cost reimbursement intergovernmental type contract.

LIMITATION ON TRAVEL COSTS (22-50)
(SEP 10)

Costs incurred for lodging, meals, and incidental expenses shall be reimbursed on an actual cost basis to the extent that they do not exceed, on a daily basis, the per diem rates in effect at the time of travel as set forth in the Federal Travel Regulation, prescribed by the General Services Administration, for travel in the conterminous 48 United States. Per Diem shall be authorized for travel in excess of 12 hours and shall not exceed 75% of the daily rate for the first and last day of official travel. Lodging and other expenses exceeding $75.00 must be supported with receipts, which shall be submitted with the request for payment.

Airline costs will be reimbursed on an actual cost basis to the extent determined reasonable and allocable under Part 13 of the Bonneville Purchasing Instructions. Generally, airline costs will be limited to coach or economy class. Any variation from these requirements must be approved by the Contracting Officer. Contractors may request a letter from the Contracting Officer, authorizing access to an airline, lodging, or other rates negotiated for government travel to the extent such authorization is honored by the service providers.

Per Diem rates are available at: http://www.gsa.gov/portal/category/21287

The Federal Travel Regulations are available at: http://www.gsa.gov/portal/content/102886

UNIT 2 — CONTRACT CLAUSES

PAYMENT AND TAXES

IGC ELECTRONIC FUNDS TRANSFER PAYMENT (22-54)
(DEC 04)

(a) Payment Method. Payments under this contract, including invoice and contract financing payments, will be made by electronic funds transfer (EFT). Contractors are required to provide its taxpayer identification number (TIN) and other necessary banking information as per paragraph (c) of this clause to receive EFT payment.

(b) Contractor EFT arrangement with a financial institution or authorized payment agent. The Contractor shall designate to BPA, as per paragraph (c) of this clause, and maintain at its own expense, a single financial institution or authorized payment agent capable of receiving and processing EFT using the Automated Clearing House (ACH) transfer method. The most current designation and EFT information will be used for all payments under all BPA contracts, unless the BPA Vendor File Maintenance Team is notified of a change as per paragraph (d) of this clause. An initial designation should be submitted after award, but no later than three weeks before an invoice or contract financing request is submitted for payment. **Electronic Funds Transfer will only be approved to one EFT account number per Vendor name and location.**

(c) Submission of EFT banking information to BPA. The Contractor shall submit EFT enrollment banking information directly to BPA Vendor File Maintenance Team, using Substitute IRS Form w9e, Request for Taxpayer Identification Number and Certification. This form is available either from the Contracting Officer(CO) or from the Vendor File Maintenance Team. Submit completed enrollment form to the Vendor Team. Contact and mailing information:

Bonneville Power Administration
PO Box 491
ATTN: NSSS - MODW Vendor Maint.
Vancouver, WA 98666-0491

E-mail Address: VendorMaintenance@BPA.gov
Phone: (360) 418-2800
Fax: (360) 418-8904

(d) Change in EFT information. In the event that EFT information changes or the Contractor elects to designate a different financial institution for the receipt of any payment made using EFT procedures, the Contractor shall be responsible for providing the changed information to the BPA Vendor File Maintenance Team office. The Vendor File Maintenance Team must be notified 30 days prior to the date such change is to become effective.

(e) Suspension of Payment. BPA is not required to make any payment under this contract until receipt of the correct EFT payment information from the Contractor.

(f) EFT and prompt payment. BPA shall pay no penalty on delay of payment resulting from defective EFT information. BPA will notify the Contractor within 7 days of its receipt of EFT information which it determines to be defective.

(g) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the Assignment of Claims clause of this contract, the assignee shall provide the assignee's EFT information required by paragraph (c) of this clause.

PAYMENTS IN ARREARS (25-50)
(JUN 09)

(a) The contractor shall submit proper invoices on a monthly basis in arrears to:

Bonneville Power Administration
(Program Analyst-KEWB-4)
PO Box 3621
Portland OR 97208-3621
fwinvoices@bpa.gov

A proper invoice must include all of the following information:

1) Name of contractor (must reasonably match the name on the contract);

2) Contractor address (only when not set up as Electronic Funds Transfer);

3) Invoice date;

4) BPA contract number;

5) Contractor invoice number (must be a number unique to the contractor and not used on any other invoice with BPA);

6) Invoice Performance Period (e.g., "For work actually performed during the period of June 1 through June 30, 2003"). If the invoice performance period covers more than one budget period or BPA fiscal year, the contractor must provide a sub-total of the costs attributable to each budget period or fiscal year. For example, work performed prior to September 30 should be sub-totaled separately from work performed after September 30);

7) Shipping terms, if applicable (i.e., FOB Destination);

8) Contact name, title and telephone number;

9) For fixed price contracts: Description (including, for example, contract line/sub-line number), price, and quantity of goods and services rendered;

10) For cost reimbursement contracts: Documentation required under section (b), below.

(b) For Cost Reimbursement Contracts, the contractor will provide a summary of the approved budget by line item for the current budget year and provide cumulative expenditures, for the current contract period, by line item to date. The categories below are the minimum level of documentation required for each line item.

Line Item Description	Minimum Documentation Required **See note below for exceptions	Documentation NOT Required **See note below for exceptions
Salaries – direct labor only	A list, by position title and/or name, showing units of time and pay rate in the same units used in the contract's budget. For example, this could be hours worked multiplied by hourly rate, or in a monthly salary unit. This must be consistent with the labor categories shown in the awarded budget. On a quarterly basis, the COTR may request individual employee names as a "spot-check" to verify the specific individuals whose time is being charged to the contract. Individual invoice approvals shall not be delayed during this "spot-check" and any adjustments, if necessary, shall be made in future payments.	Individual time sheets and employee names.
Salary Fringes	Must be stated at the same rates in the approved indirect rate agreement.	Detailed information supporting fringe benefit amounts, such as insurance policies, etc.
Travel and transportation (including per diem)	Copy of the summary page of the travel voucher or other document(s) that was used to reimburse the person that traveled. List purpose of travel, destinations, and dates if not on the summary page. A single summary page, rather than individual copies of travel vouchers, is required when more than 5 people traveled during the invoice period.	Airline ticket receipts, hotel receipts, meal receipts, etc.
Vehicles	For GSA vehicles identify the cost per month. Do not bill for costs such as new tires, repairs, etc., since these costs are included in the GSA rental cost. Very limited, legitimate non-GSA covered costs may be allowed. Privately Owned Vehicles (POVs) must show costs in miles multiplied by rate. POVs do not receive additional reimbursement for repairs, and maintenance costs.	Copies of receipts, gas bills, etc.
Training/Tuition	Description of the training received, who received the training, dates of the training, and cost of the training. Level of detail must be adequate to determine whether it is allowable under the F&W Contract Management Manual.	Conference registration receipts, payment vouchers, etc.

Line Item Description	Minimum Documentation Required **See note below for exceptions	Documentation NOT Required **See note below for exceptions
Equipment and materials greater than $10,000 per item (non expendable)	Itemized description of the equipment, date of purchase, purchase cost, model number, and serial number.	Copies of receipts, freight bills, etc.
Equipment less than $10,000 but more than $1000 per item	Itemized list of equipment with year purchased.	Copies of receipts, freight bills, etc.
Miscellaneous Supplies and Equipment under $1000 per item	Summarize the kinds of equipment and miscellaneous supplies by type (e.g., office supplies, power tools, camera, etc.).	Copies of receipts, freight bills, etc.
Operations, repair and maintenance (including computer services)	For repairs and maintenance over $100, itemize what service was obtained and the cost (e.g., repair of a motor).	Copies of payment vouchers, repair invoices, parts bills, etc.
Equipment Rental	For rentals, within a one-month period that exceeds $500, provide description of what was rented, dates or hours of rental, and rental rates and whether rates include operator.	Rental receipts, time sheets, etc.
Easement, Purchase, or lease of land	Specify area and type. For example: Purchase 500-acre Jones property, grazing allotment, in perpetuity. 15-year lease on riparian zone 300-foot buffer on both sides for ½ mile on June Creek.	
Overhead/Other Indirect Costs	Identify the overhead/indirect rate used to calculate the dollar amount. Rates shall be applied consistent with the current rate negotiated by the Cognizant Audit Agency or by the CO. If a revised rate has been approved by the Cognizant Audit Agency, provide a copy of the approved rate agreement to the CO. Identify the line items to which the indirect rate applies.	Itemized lists or records of costs included in overhead or other indirect costs.

Line Item Description	Minimum Documentation Required **See note below for exceptions	Documentation NOT Required **See note below for exceptions
Subcontracts (also include when work being billed was performed by subcontractor)	If the subcontract is a cost reimbursement contract, and greater than or equal to 50% of the contract amount, the subcontract costs shall be provided in the same level of detail as those required above for the prime contractor. If the subcontract is a fixed price contract, itemize each subcontractor cost by: vendor name, work accomplishment dates, and amount spent. This applies for both "progress" payments, or "payment in full" (at the end of performed work) according to the vendors subcontract terms.	Cost reimbursement contract: Same guidance as for prime contractor line items. Fixed price contract: itemized receipts.
Summary Financial Information	By line item, provide a summary of the approved budget and cumulative expenditures to date for the current contract period (e.g., March 1st, 2004 through April 30th, 2005).	

**More detailed information may be required when certain situations occur such as those listed below where the CO, COTR, and their manager determine more detailed information is needed: (this list is not intended to be all inclusive).

- Amounts billed are inconsistent with the negotiated budget, such as:
  - Fringe benefits are different than negotiated
  - Labor category rates and/or categories are different than negotiated
  - Equipment is different or costs more than negotiated
  - Indirect cost rate is different than Cognizant Audit Agency current approved rate or CO negotiated rate, whichever is appropriate
  - Budget line item is expended at a faster rate than expected based on Work Schedule
  - Extensive line item transfer requests are occurring
  - Overcharges or other invoice abnormalities occur.

(c) Non-itemized and/or incomplete billings will be returned to the contractor without processing for payment until a corrected invoice is received. Allowable costs shall be determined in accordance with the cost principles of the F&W Contract Management Manual and applicable OMB Circular A-87.

(d) Additionally, invoices will be returned if:

1) The amount exceeds the contract award ceiling;

2) The invoice billing period is for work performed after the last day of the contract performance period;

(e) Adjustments

(1) Refunds, Rebates or Credits. Separate statements to BPA indicating a credit amount to be applied by BPA to offset future payments will no longer be accepted by BPA.

(A) Active/Current Contracts. Refunds or credits to BPA as a result of previous errors in billing, overpayments, or other rebates or refunds shall be applied by the contractor to the invoice submitted immediately following the identification of the need to issue a refund, credit, or rebate to BPA. The invoice where the credit or refund has been applied shall include an explanation of the reason for the refund or credit. Do not submit the refund or credit as a check or cash.

(B) Inactive/Closed Contracts. Refunds or credits to BPA as a result of previous errors in billing, overpayments, or other rebates or refunds shall be returned to BPA in the form of a check. Contact the CO to determine to whom to address the check. An explanation of the reason for the refund or credit shall be included with the check. Please do not submit cash.

(2) Corrected or Revised Invoices. If the contractor needs to correct or revise a previously submitted but not yet paid invoice, the contractor –agency shall note on the corrected or revised invoice: "Corrected/Revised Invoice – Corrects invoice #_____ previously submitted." The revised invoice must have a new date.

(f) Final payment.

The Contractor shall submit an invoice marked "Final Invoice" promptly upon completion of the work. Upon approval of that invoice and upon the Contractor's compliance with all terms of this contract, the BPA shall promptly pay any allowable costs not previously paid.

PAYMENT (22-12)
(JUL 13)(BPI 22.2.5)

(a) Payment Due Date. Payment (including partial payments or progress payments, if authorized, shall be due not later than thirty (30) calendar days after the later of the date on which BPA actually receives a proper invoice in the designated billing office or the date when the items delivered or completed services are accepted by BPA. According to the Prompt Payment Act, a proper invoice to a Federal Agency is to include bank account information requisite to enable Electronic Funds Transfer (EFT) as method of payment. For purposes of payment only, items will be deemed accepted not later than seven (7) calendar days after proper delivery. If delivered items or completed services are found defective, the provisions of this paragraph will be reapplied upon receipt of a corrected item or service.

(b) Billing Instructions.

(1) Invoices must include the contractor's name and address, invoice date, contract number, task order number (if applicable), contract line item number, description of products delivered or work performed, price and quantity of item(s) actually delivered or rendered (amounts billed for work performed under a task order must be separately identified by task order number), and the name and address of the person to whom payment will be made, and name (where practicable), title, phone number, mailing address of person to be notified in event of a defective invoice and bank account information required to enable Electronic Funds Transfer (EFT) as method of payment (Invoices will not require banking information if the contractor has that information on file at BPA). Failure to submit a proper invoice may result in a delay in payment including a rejection of invoice pending receipt of a properly amended invoice.

(2) Contractors may bill monthly, or at more frequent intervals as may be agreed to by the CO. The contractor may submit invoices electronically (e-mail, fax, etc.).

(c) Payment Method. Payments under this contract will be made by electronic funds transfer whenever possible, or by check in very limited circumstances, at the option of BPA.

(d) Prompt Payment Act. This contract is subject to the provisions of the Prompt Payment Act (31 U.S.C. 3901 et seq.), and regulations at 5 CFR Part 1315.

(e) Interest Penalty Payments. If interest penalty payments are determined due under the provisions of the Prompt Payment Act, payment shall be made at the rates determined by the U.S. Treasury Section 611 of the Contract Disputes Act of 1978 (PL 95-56341 U.S.C. § 7109).

CONTRACT CEILING LIMITATION (22-7)
(JUL 13)(BPI 22.1.3)

(a) The Contractor agrees to use its best efforts to perform the work specified in the Schedule and all obligations under this contract within the contract ceiling. The contract ceiling includes all estimated costs (both direct and indirect) and any fee allowance. If this is a cost-sharing contract, the contract ceiling includes both BPA's and the Contractor's share of the cost.

(b) Notification of CO. The Contractor shall notify the CO in writing at the first indication that the total cost for the performance of this contract, exclusive of any fee, will be either greater or substantially less than had been previously estimated.

(c) Revised Estimate. As part of the notification, the Contractor shall provide the CO a revised estimate of the total cost of performing this contract.

(d) Contract Ceiling.

(1) BPA is not obligated to reimburse the Contractor for costs incurred in excess of the contract ceiling specified in the Schedule or, if this is a cost-sharing contract, the estimated cost to BPA specified in the Schedule; and

(2) The Contractor is not obligated to continue performance under this contract (including actions under the Termination clause of this contract) or otherwise incur costs in excess of the contract ceiling specified in the Schedule, until the CO notifies the Contractor in writing that the contract ceiling has been increased.

(e) No notice, communication, or representation, or from any person other than the CO, shall affect this contract's contract ceiling.

(f) If this contract is terminated or the contract ceiling is not increased, BPA and the Contractor shall negotiate an equitable distribution of all property produced or purchased under the contract, based upon the share of costs incurred by each.

INDIRECT COST RATES WITH CARRY FORWARD (22-19)
(JUL 13)(BPI 22.1.3)

Notwithstanding 2 CFR Part 225, Cost Principles for State, Local, and Indian Tribal Governments (OMB Circular A-87), the indirect cost rate for this contract will be established based on the estimate of a future period's cost and is not subject to revision. However, differences between the estimated costs and actual costs when they become known are carried forward and are considered in the negotiation of rates for subsequent periods. If actual indirect costs are more than estimated, the amount of the increase is added to the estimate for the next period to determine the fixed rate for the next period. Conversely, if actual indirect costs are less than estimated, the difference between the fixed rate and the actual cost is subtracted from the estimate of the next period to determine the fixed rate for the next period.

GENRAL CONTRACT ADMINISTRATION

CONTRACT ADMINISTRATION REPRESENTATIVES (14-2)
(SEP 98)(BPI 14.3.2)

(a) In the administration of this contract, the Contracting Officer may be represented by one or more of the following: Contracting Officer's Representative for administrative matters, and Contracting Officer's Technical Representative, Receiving Inspector, and/or Field Inspector for technical matters.

(b) These representatives are authorized to act on behalf of the Contracting Officer in all matters pertaining to the contract, except: (1) contract modifications that change the contract price, technical requirements or time for performance, unless delegated field modification authority (see clause 24-25); (2) suspension or termination of the Contractor's right to proceed, either for default or for convenience of BPA; and (3) final decisions on any matters subject to appeal, as provided in a disputes clause. In addition, Field Inspectors may not make final acceptance under the contract.

STOP WORK ORDER (14-14)
(JUL 13)(BPI 14.12.1)

(a) The Contracting Officer may order the Contractor to suspend all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of BPA.

(b) The contractor shall immediately comply with the Contracting Officer's order and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order.

(c) If a stop work order is issued for the convenience of BPA, the Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, if the order results in a change in the time required for, or the costs properly allocable to, the performance of any part of this contract.

(d) A claim under this clause shall not be allowed (1) for any cost incurred more than 20 days before the Contractor notified the Contracting Officer of the basis of the claim in writing, and (2) unless the claim stating the amount of time or money requested, is asserted in writing as soon as practicable after the termination of the delay or interruption, but not later than the day of final payment under the contract.

PRINTING (6-2)
(OCT 93)(BPI 6.8.3.1)

The contractor shall not engage in, nor subcontract for, any printing (as that term is defined in Title I of the U.S. Government Printing and Binding Regulations in effect on the effective date of this contract) in connection with the performance of work under this contract: Provided, however, that performance of a requirement under this contract involving the duplication of less than 5,000 copies of a single unit, or no more than 25,000 units in the aggregate of multiple units, will not be deemed to be printing. A unit is defined as one sheet, size 8-1/2 by 11 inches, one side only, one color.

(a) The term "printing" includes the following processes: composition, plate making, presswork, binding, microform publishing, silk screening, or the end items produced by such processes.

(b) If fulfillment of the contract will necessitate reproduction in excess of the limits set forth above, the contractor shall notify the Contracting Officer in writing and obtain the Contracting Officer's approval prior to acquiring on BPA's behalf production, purchase, and dissemination of printed matter.

(c) Printing services not obtained in compliance with this guidance may result in the cost of such printing being disallowed.

(d) The contractor shall include in each subcontract hereunder a provision substantially the same as this clause including this paragraph (d)

CHANGES (25-4)
(SEP 98)(BPI 25.4.1)

Any changes in the project objectives, scope, or key personnel, including any proposed transfer of expenditures between all approved budget line items above 5% of the contract total must be approved by the Contracting Officer. All such changes must be submitted in writing through the Contracting Officer's Technical Representative prior to initiating the change.

AUDIT -- INTERGOVERNMENTAL CONTRACT (25-5)
(NOV 08)(BPI 25.1.1)

(a) The contractor-agency shall maintain accounting procedures and practices sufficient to reflect properly all costs claimed to have been incurred in performing this agreement. The Contracting Officer, or representatives of the Contracting Officer, shall have the right to examine books, records, documents and other evidence supporting such claimed costs at all reasonable times at the agency's facilities used in performing this agreement and other locations where records pertaining to this agreement are maintained. Such records shall be retained and made available for examination until 3 years after the budget year in which they were created.

(b) The contractor-agency shall comply with the provisions of OMB Circular A-133. The contractor-agency shall apply provisions of those circulars concerning program levels requiring audits, audit scope, and determinations of this agreement as if it was a Federal assistance program. If an audit is required, a copy of the audit report shall be sent to the BPA Internal Audit Staff, Mail Stop DN-7, Bonneville Power Administration, P.O. Box 3621, Portland, OR 97208 , and other distribution of the report as required by the circular.

PUBLICATION/PRESENTATIONS (25-8)
(SEP 04)(BPI 25.4.1)

All news releases, presentations, publications, or signage and related materials shall acknowledge BPA support for project activities. BPA strongly endorses the publication of project results in scientific journals to facilitate public access and to preserve project data. Copies of news articles, publications, etc. shall be provided to the COTR. When appropriate, Project Managers shall prepare manuscripts for submission to journal editors, giving due credit for BPA's financial support. BPA reserves the right to publish all or part of the reports submitted pursuant to the terms of this contract.

ENDANGERED SPECIES ACT REQUIREMENTS (25-9)
(SEP 98)(BPI 25.1.1)

(a) To the extent requested by BPA, the contractor-agency shall:

(1) Participate in consultations and conferences conducted under Section 7 of the Endangered Species Act (ESA);

(2) Obtain, or assist BPA in obtaining permits under Section 10 of the ESA, and

(3) Provide to BPA all information, materials, documents, records and other assistance requested by BPA for such consultations, conferences, or the acquisition of permits.

(b) The contractor-agency shall not proceed with action/activities in this agreement until completion of requisite consultations and conferences and the acquisition of necessary permits. To the extent requested by BPA, the contractor-agency shall comply with conditions identified during consultations and conferences and with the provisions of any requisite permit.

STANDARDS OF CONDUCT AND BUSINESS PRACTICES

ORGANIZATIONAL CONFLICTS OF INTEREST (3-2)
(JUL 13)(BPI 3.4.2.1)

(a) The offeror or contractor warrants that, to the best of its knowledge and belief, and except as otherwise disclosed, there are no relevant facts which could give rise to organizational conflicts of interest, as defined in BPI 3.4.1, and that the offeror or contractor has disclosed all relevant information to the Contracting Officer.

(b) The offeror or contractor agrees that, if after award, an organizational conflict of interest with respect to this contract is discovered, an immediate and full disclosure in writing shall be made to the Contracting Officer which shall include a description of the action which the contractor has taken, or proposes to take, to avoid or mitigate such conflicts.

(c) In the event that the contractor was aware of an organizational conflict of interest prior to the award of this contract and did not disclose the conflict to the Contracting Officer, BPA may terminate the contract for default.

(d) The provisions of this clause shall be included in all subcontracts for work to be performed in aid of the services provided by the prime contractor, and the terms "contract," "contractor," "Contracting Officer" modified appropriately.

CERTIFICATION, DISCLOSURE, AND LIMITATION REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (3-3)
(JUL 13)(BPI 3.5.5.1)

(a) As used in this clause:

"Covered Federal action" means:

(1) The awarding of any Federal contract.

(2) The extension, continuation, renewal, amendment, or modification of any Federal contract.

"Indian tribe" and "tribal organization" have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and includes Alaskan Natives.

"Influencing or attempting to influence" means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government" means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, includes a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Person" means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation" means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment" means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient" includes all contractors and subcontractors. The term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed" means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State" means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and a multi-State, regional, or interstate entity having governmental duties and powers.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that:

(l) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract or the extension, continuation, renewal, amendment, or modification of any Federal contract.

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, Standard Form-LLL, Disclosure of Lobbying Activities, to the Contracting Officer.

(3) He or she will include the language of this certification in all subcontract awards at any tier and that all sub-recipients of subcontract awards in excess of $150,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, U.S. Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than $10, 000 and not more than $100,000 for each such failure.

(d) A contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using non appropriated funds (to include profits from any covered Federal action), which would be prohibited under this clause if paid for with appropriated funds.

(e) The contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under paragraph (b) of this clause. An event that materially affects the accuracy of the information reported includes--

(1) A cumulative increase of $25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(2) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(3) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(f) The contractor shall require the submittal of a certification, and if required, a disclosure form, by any person who requests or receives any subcontract exceeding $150,000 under the Federal contract.

(g) All subcontractor disclosure forms (but not certifications), shall be forwarded from tier to tier until received by the prime contractor. The prime contractor shall submit all disclosure forms to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding contractor.

(h) Any person who makes an expenditure prohibited under this clause or who fails to file or amend the disclosure form to be filed or amended by this clause shall be subject to a civil penalty as provided by 31 U. S. Code 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

CONTRACTOR POLICY TO BAN TEXT MESSAGING WHILE DRIVING (3-4)
(JUL 13) (BPI 3.7.1.1)

(a) Definitions. As used in this clause--

"Driving"—(1) Means operating a motor vehicle on an active roadway with the motor running, including while temporarily stationary because of traffic, a traffic light, stop sign, or otherwise. (2) Does not include operating a motor vehicle with or without the motor running when one has pulled over to the side of, or off, an active roadway and has halted in a location where one can safely remain stationary.

"Text messaging" means reading from or entering data into any handheld or other electronic device, including for the purpose of short message service texting, e-mailing, instant messaging, obtaining navigational information, or engaging in any other form of electronic data retrieval or electronic data communication. The term does not include glancing at or listening to a navigational device that is secured in a commercially designed holder affixed to the vehicle, provided that the destination and route are programmed into the device either before driving or while stopped in a location off the roadway where it is safe and legal to park.

(b) This clause implements Executive Order 13513, Federal Leadership on Reducing Text Messaging while driving, dated October 1, 2009.

(c) The Contractor should adopt and enforce policies that ban text messaging while driving —(1) Company-owned or -rented vehicles or Government-owned vehicles; or (2) Privately-owned vehicles when on official Government business or when performing any work for or on behalf of the Government.

(d) Subcontracts. The Contractor shall insert the substance of this clause, including this paragraph (d), in all subcontracts that exceed $10,000.

SUBCONTRACTING WITH DEBARRED OR SUSPENDED ENTITIES (11-7)
(JUL 13) (BPI 11.8.1; BPI 25.1.1)

(a) "Commercially available off-the-shelf (COTS) item," as used in this clause means any item of supply (including construction material) that is:

(1) A commercial item (as defined in BPI 1.8);

(2) Sold in substantial quantities in the commercial marketplace; and

(3) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace.

(b) The Government suspends or debars Contractors to protect the Government's interests. Other than a subcontract for a commercially available off-the-shelf item, the Contractor shall not enter into any subcontract in excess of $30,000 with a Contractor that is debarred, suspended, by any executive agency unless there is a compelling reason to do so.

(c) The Contractor shall require each proposed subcontractor whose subcontract will exceed $30,000, other than a subcontractor providing a commercially available off-theshelf item, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principals, is or is not debarred, suspended by the Federal Government.

(d) The Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party (other than a subcontractor providing a commercially available off-the-shelf item) that is debarred, suspended (see www.sam.gov).

(e) Subcontracts. Unless this is a contract for the acquisition of commercial items, the Contractor shall include the requirements of this clause, including this paragraph (e) (appropriately modified for the identification of the parties), in each subcontract that exceed $30,000 in value and is not a subcontract for commercially available off-the-shelf items

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SOCIO-ECONOMIC ISSUES

SOCIO-ECONOMIC REQUIREMENTS (25-6)
(MAR 10)(BPI 25.1.1)

The contractor-agency agrees to comply with the following Federal Laws and Executive Orders:

(a) Laws and Regulations relating to Equal Employment Opportunity

(b) Drug Free Workplace Act of 1988, P.L. 100-690

RESTRICTION ON CERTAIN FOREIGN PURCHASES (9-8)
(JUL 13) (BPI 9.3.2)

(a) Except as authorized by the Office of Foreign Assets Control (OFAC) in the Department of the Treasury, the Contractor shall not acquire, for use in the performance of this contract, any supplies or services if any proclamation, Executive order, or statute administered by OFAC, or if OFAC's implementing regulations at 31 CFR Chapter V, would prohibit such a transaction by a person subject to the jurisdiction of the United States.

(b) Except as authorized by OFAC, most transactions involving Cuba, Iran, and Sudan are prohibited, as are most imports from Burma or North Korea, into the United States or its outlying areas. Lists of entities and individuals subject to economic sanctions are included in OFAC's List of Specially Designated Nationals and Blocked Persons at *http://www.treas.gov/offices/enforcement/ofac/sdn*. More information about these restrictions, as well as updates, is available in the OFAC's regulations at 31 CFR Chapter V and/or on OFAC's website at *http://www.treas.gov/offices/enforcement/ofac*.

(c) The Contractor shall insert this clause, including this paragraph (c), in all subcontracts.

EMPLOYMENT PRACTICES (10-2)
(MAR 10)(BPI 10.4.4)

The Contractor agrees to comply with all applicable Federal, State, local laws, and regulations concerning Equal Employment Opportunity, the payment of minimum wages (including, but not limited to, the Fair Labor Standards Act) and the use of safe practices (including, but not limited to, the Occupational Safety and Health Act).

EMPLOYMENT ELIGIBILITY VERIFICATION (10-18)
(JUL 13)(BPI 10.7.3)

(a) "Employee assigned to the contract," as used in this clause, means an employee who was hired after November 6, 1986, who is directly performing work, in the United States, under a contract that is required to include the clause as prescribed by 10.7.3. An employee is not considered to be directly performing work under a contract if the employee—

(1) Normally performs support work, such as indirect or overhead functions; and

(2) Does not perform any substantial duties applicable to the contract.

(b) E-Verify enrollment and verification requirements.

(1) If the Contractor is not enrolled as a Federal Contractor in E-Verify at the time of the contract award, the Contractor shall:

(i) *Enroll.* Enroll as a Federal Contractor in the E-Verify program within 30 calendar days of contract award;

(ii) *Verify all new employees.* Within 90 calendar days of enrollment in the E-Verify program, begin to use E-Verify to initiate verification of employment eligibility of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b) (3) of this section); and

(iii) *Verify employees assigned to the contract.* For each employee assigned to the contract, initiate verification within 90 calendar days after date of enrollment or within 30 calendar days of the employee's assignment to the contract, whichever date is later (but see paragraph (b)(4) of this section).

(2) If the Contractor is enrolled as a Federal Contractor in E-Verify at time of contract award, the Contractor shall use E-Verify to initiate verification of employment eligibility of—

(i) All new employees.

(A) *Enrolled 90 calendar days or more*. The Contractor shall initiate verification of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract within 3 business days after the date of hire (but see paragraph (b)(3) of this section); or

(B) *Enrolled less than 90 calendar days*. Within 90 calendar days after enrollment as a Federal Contractor in E-Verify, the Contractor shall initiate verification of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b))(3) of this section); or

(ii) Employees assigned to the contract. For each employee assigned to the contract, the Contractor shall initiate verification within 90 calendar days after date of contract award or within 30 days after assignment to the contract, whichever date is later (but see paragraph (b) (4) of this section).

(3) If the Contractor is an institution of higher education; a state or local government, or the government of a federally recognized Indian tribe; or a surety performing under a takeover agreement entered into with a federal agency pursuant to a performance bond, the Contractor may choose to verify only employees assigned to the contract. The Contractor shall follow the applicable verification requirements at (b)(1) or (b)(2), respectively, except that any requirement for verification of new employees applies only to new employees assigned to the contract.

(4) Option to verify employment eligibility of all employees. The Contractor may elect to verify all existing employees hired after November 6, 1986, rather than just those employees assigned to the contract. The Contractor shall initiate verification for each existing employee working in the United States who was hired after November 6, 1986, within 180 calendar days of—

(i) Enrollment in the E-Verify program; or

(ii) Notification to E-Verify Operations of the Contractor's decision to exercise this option, using the contact information provided in the E-Verify program Memorandum of Understanding (MOU).

(5) The Contractor shall comply, for the period of performance of this contract, with the requirement of the E-Verify program MOU.

(i) The Department of Homeland Security (DHS) or the Social Security Administration (SSA) may terminate the Contractor's MOU and deny access to the E-Verify system in accordance with the terms of the MOU. In such case, the Contractor will be referred to a suspension or debarment official.

(ii) During the period between termination of the MOU and a decision by the suspension or debarment official whether to suspend or debar, the Contractor is excused from its obligations under paragraph (b) of this clause. If the suspension or debarment official determines not to suspend or debar the Contractor, then the Contractor must reenroll in E-Verify.

(c) Web site. Information on registration for and use of the E-Verify program can be obtained via the Internet at the Department of Homeland Security Web site: http://www.dhs.gov/E-Verify.

(d) Individuals previously verified. The Contractor is not required by this clause to perform additional employment verification using E-Verify for any employee—

(1) Whose employment eligibility was previously verified by the Contractor through the E-Verify program;

(2) Who has been granted and holds an active U.S. Government security clearance for access to confidential, secret, or top secret information in accordance with the National Industrial Security Program Operating Manual; or

(3) Who has undergone a completed background investigation and been issued credentials pursuant to Homeland Security Presidential Directive (HSPD) -12, Policy for a Common Identification Standard for Federal Employees and Contractors.

(e) *Subcontracts*. The contractor shall include the requirements of this clause, including this paragraph (d) (appropriately modified for identification of the parties), in each subcontract that—

(1) Is for:

(i) Services other than commercial services that are part of the purchase of a commercial-of-the-shelf (COTS) item, performed by the COTS provider and are normally provided for that COTS item;

(ii) Construction.

(2) Has a value of more than $3,000; and

(3) Includes work performed in the United States.

ENVIRONMENT & SAFETY

SAFETY AND HEALTH – NON-ELECTRICAL CONTRACTOR(S) (15-55)
(MAR 11)(BPI 15.2.1)

(a) General

(1) The Contractor shall assure that no person employed on this contract works in surroundings or under conditions that are unsanitary, hazardous, or dangerous to their health or safety. In fulfilling these requirements, the Contractor shall comply with:

(A) Department of Labor Safety and Health Standards for Construction under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3701 et seq.).

(B) Occupational Safety and Health Act of 1970, (Public Law 91-598) and applicable rules and regulations as may have been delegated to the States.

(C) All Federal and state safety and health rules and regulations applicable to the contract work, as supplemented by BPA safety and health requirements stated below or elsewhere in the contract.

(2) If there are conflicts between any of the requirements referenced in this contract, the more stringent requirement will prevail.

(3) If the Contractor fails or refuses to promptly comply with any safety or health requirement, the Contracting Officer's Technical Representative (COTR) may notify the Contractor of any noncompliance and the Contractor shall take immediate corrective action. Such notice, whether oral or written, when served on the Contractor or any of its employees at the site of the work shall be deemed sufficient. If the Contractor fails or refuses to promptly correct the condition, the COTR may stop all or any portion of the work. When satisfactory corrective action has been taken, the Contractor shall request permission to resume work from the COTR. When all work on a contract has been suspended for a Safety and Health violation, accident, or incident by the Contracting Officer (CO), the Contractor shall meet with representatives of BPA's Contracting Office, and the BPA Safety Office to present a written statement outlining specific changes in work procedures that the contractor will make in order for work to safely resume. BPA must be satisfied that the Contractor is capable of completing the contract in a safe manner before allowing work to resume. No time extension or additional costs, resulting from the directive to stop work shall be allowed. Failure of the COTR to provide notice of noncompliance or to stop work shall not relieve the Contractor of its responsibility for the safe performance of the work.

(4) The Contractor shall maintain an accurate record of, and shall immediately report to the COTR in the manner prescribed by the latter, all cases of death, occupational diseases, and injury arising from, or incident to, performance of work under this contract. The record and report shall include a description of the preventative measures to be taken to avoid recurrence, any restitution or settlement made, or the status thereof. The Contractor shall complete and file with the COTR, BPA form 6410.15e (Contractor's Report of Personal Injury, Illness, or Property Damage Accident) within five (5) working days of such an occurrence. In the case of a Near Miss Incident that does not involve injury, illness, or property damage, the Contractor shall complete and file with the COTR, BPA Form 6410.18e (Contractors Report of Incident/Near Miss) within five (5) working days of such an occurrence.

(5) In case of an injury, the Contractor shall have 30 days to make full restitution or settlement. If the Contractor fails to make full restitution or settlement within 30 days, BPA may:

(A) Make, or cause to be made, the required remedial action or cash settlement to the person or persons who have been injured, and

(B) Charge to the Contractor's account an equitable amount, not to exceed $2,500, for any injury claim. More than one such payment, and charge, can be assessed if more than one injury has occurred.

(6) The Contractor bears sole responsibility for ensuring that all personnel engaged in work related to the contract possess the necessary knowledge and skills to perform their work safely and to otherwise function in compliance with the foregoing criteria. (See also the Material and Workmanship clause)

(7) The Contractor shall hold BPA harmless from any and all suits, actions, and claims for injuries to or death of persons arising from any act or omission of the Contractor, its subcontractors, or any employee of the Contractor or subcontractors, in any way related to the work or operations under this contract.

(8) The Contractor shall indemnify and hold harmless the property owners or parties lawfully in possession against all claims or liabilities asserted by third parties, including all governmental agencies, resulting directly or indirectly from the Contractor's wrongful or negligent acts or omissions.

(9) Nothing stated herein shall be construed to be a limitation on the Contractor's liability. The rights and remedies of BPA provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

(b) Personal Protective Equipment

(1) The Contractor shall furnish non-conductive hard hats and all other required safety and personal protective equipment, except that which has been specified to be furnished by BPA. All persons on all construction projects shall wear non- conductive hard hats meeting the requirements of OSHA/ANSI. Contract employees shall not wear yellow non- conductive hard hats. (A yellow hat signifies a qualified BPA electrical worker.) Only a BPA approved safety watcher may wear orange non-conductive hard hats.

(2) Appropriate footwear that provides adequate support and protection to the foot, toes and ankles for the work being performed shall be worn. Lace-up, over the ankle boots with rigid sole and heel meeting ASTM F 2413-05, Class 75 with EH rating shall be worn in all work areas where hard hats are required and other areas as determined by a supervisor. Supervisors have the responsibility for assuring that appropriate footwear is worn. Employees have the responsibility to wear appropriate footwear for the job.

(3) While BPA's minimum qualifications for protective footwear are identified above, specialized footwear, in accordance with standard industry practice and appropriate for the work being performed, shall be worn at all times while executing the work tasks requiring specialized Personal Protective Equipment (PPE). Supervisors and employees have the responsibility of ensuring appropriate footwear is worn.

PATENTS, DATA, AND COPYRIGHTS

UNAUTHORIZED REPRODUCTION OR USE OF COMPUTER SOFTWARE (23-3) (SEP 98)(BPI 23.2)(BPI 17.4.1.1)

The contractor shall hold BPA harmless for unauthorized reproduction or use of copyrighted or proprietary computer software and/or manuals or other documentation by the contractor’s employees or subcontractors in the performance of the contract.

INSPECTION AND WARRANTY

INSPECTION - SERVICES AND CONSTRUCTION (18-4) (SEP 98)(BPI 18.3.1)

(a) BPA may inspect the work called for by the contract at any time and place. BPA will perform inspections in a manner that will not unduly delay the work.

(b) If any of the services do not conform with contract requirements (including services performed on a cost-reimbursement or time-and-materials basis), BPA may require the Contractor to perform the services again in conformity with the contract at no cost to BPA. When the defects in services cannot be corrected by re-performance, BPA may deduct from the contract payments an amount which reflects the reduced value of the services performed.

(c) Neither inspection, lack of inspection, acceptance, nor payment shall relieve the Contractor of any of its obligations under this contract.

PROPERTY

BPA-FURNISHED/CONTRACTOR-ACQUIRED PROPERTY (19-1) (DEC 12)(BPI 19.4)

(a) The Contractor shall manage BPA-furnished, contractor-acquired property in accordance with BPI Appendix 19-A if that appendix is made a part of this contract. If Appendix 19-A is not made a part of this contract, property should be managed in accordance with ASTM Property Management Standards and/or sound

industry practices. All contractors shall use government furnished and contractor acquired property for official business use only.

(b) BPA shall deliver to the Contractor, at the time and locations stated in this contract, BPA-furnished property described in the Schedule, statement of work, or specifications. If that property, suitable for its intended use, is not delivered to the Contractor, the Contracting Officer shall equitably adjust affected provisions of this contract in accordance with the Changes clause of the contract when--

(1) The Contractor submits a timely written request for an equitable adjustment; and

(2) The facts warrant an equitable adjustment.

(c) Title to BPA-furnished property shall remain with BPA, unless specifically identified elsewhere in this contract. The Contractor shall use BPA-furnished property, except as provided for in BPI subpart 19.3, only in connection with this contract. The Contractor shall maintain adequate property control records in accordance with sound industry practices and will make such records available for BPA inspection at all reasonable times.

(d) Upon delivery of BPA-furnished property to the Contractor, the Contractor assumes the risk and responsibility for its loss or damage, except--

(1) For reasonable wear and tear;

(2) To the extent property is consumed in the performance of this contract; or

(3) As otherwise provided for by the provisions of this contract.

(e) Unless specified elsewhere in this contract, title to all property purchased by the Contractor for which the Contractor is entitled to be reimbursed as a direct item of cost under this contract shall pass to and vest in BPA upon the supplier's delivery of such property to the contractor.

(f) Title to BPA property shall not be affected by its incorporation into or attachment to any property not owned by BPA, nor shall BPA property become a fixture or lose its identity as personal property by being attached to any real property.

(g) Upon completion of this contract, the Contractor shall follow the instructions of the Contracting Officer regarding the disposition of all property, title to which is held by BPA, which was not consumed in the performance of this contract or previously delivered to BPA. For the disposal of electronic property, the Contractor is required to follow all Federal, State, and local laws and regulations. The Contractor shall prepare for shipment, deliver f.o.b. origin, or dispose of BPA property, as may be directed or authorized by the Contracting Officer. The net proceeds of any such disposal shall be credited to the contract price or shall be paid to BPA as directed by the Contracting Officer.

BPA PROPERTY FURNISHED "AS IS" (19-2)
(SEP 98)(BPI 19.7.1)

(a) BPA makes no warranty whatsoever with respect to BPA property furnished "as is", except that the property is in the same condition when placed at the f.o.b. point specified in the solicitation as when inspected by the Contractor pursuant to the solicitation, or if not inspected by the Contractor, as when last available for inspection under the solicitation.

(b) The Contractor may repair any property made available on an "as is" basis. Such repair will be at the Contractor's expense except as otherwise provided in this clause. Such property may be modified at the Contractor's expense, but only with the written permission of the Contracting Officer. Any repair or modification of property furnished "as is" shall not affect the title of BPA.

(c) If there is any change in the condition of BPA property furnished "as is," from the time inspected or last available for inspection under the solicitation to the time placed on board at the location specified in the

solicitation, and such change will adversely affect the Contractor, the Contractor shall, upon receipt of the property, notify the CO detailing the facts, and, as directed by the CO, either (1) return the property at BPA's expense or otherwise dispose of the property, or (2) effect repairs to return the property to its condition when inspected under the solicitation, or if not inspected, its condition when last available for inspection under the solicitation. After completion of the directed action and upon written request of the Contractor, the CO will equitably adjust any contractual provisions affected by the return, disposition or repair, in accordance with the procedures provided for in the Changes clause of this contract. The foregoing provisions for adjustment are the exclusive remedy available to the Contractor and BPA shall not be otherwise liable for any delivery of BPA property furnished "as is" in a condition other than that in which it was originally offered.

CONTRACTOR USE OF GOVERNMENT-OWNED VEHICLES (19-3)
(SEP 98)(BPI 19.8.1)

In those instances where BPA provides access to sources of Government-owned vehicles for the Contractor's use, the Contractor agrees to indemnify and save and hold harmless BPA from any and all claims and damages or other costs where BPA was not at fault.

TERMINATION

TERMINATION FOR CONVENIENCE BY EITHER PARTY (20-1)
(JUL 13)(BPI 20.3.1)

Either party may terminate all or any part of this contract at any time upon 30 days written notice to the other party. Termination costs will be negotiated between the parties. Notwithstanding the Disputes clause of this contract, if the parties are unable to agree upon the termination costs, the parties may use Alternative Dispute Resolution processes (5 U.S.C. 571-584 {1996} or the Administrative Dispute Resolution Act of 1996) or Civilian Board of Contract Appeals if agreement cannot be reached.

DISPUTES

APPLICABLE LAW (21-5)
(JUL 13)(BPI 21.1.2.1 : 25.4.1)

United States law will apply to resolve any claim of breach of this contract.

DISPUTES (21-2)
(JUL 13)(BPI 21.3.15.1 ; 25.4.1)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. § 7101-7109).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) “Claim,” as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding $100,000 is not a claim under the Act until certified. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d) (1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within six years after accrual of the claim to the Contracting Officer for a written decision. A claim by BPA against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)

(A) The Contractor shall provide the certification specified in paragraph (d)(2)(iii) of this clause when submitting any claim exceeding $100,000.

(B) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(C) The certification shall state as follows:

"I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes BPA is liable; and that I am duly authorized to certify the claim on behalf of the Contractor."

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of $100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For contractor-certified claims over $100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by BPA is presented to the Contractor, the parties, by mutual consent, may agree to use alternative dispute resolution (ADR). If the Contractor refuses an offer for ADR, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the offer.

(h) BPA shall pay interest on the amount found due and unpaid from (1) the date that the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if the date is later, until the date of payment. With regard to claims having defective certifications, as defined in BPI 21.3.1, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Secretary of the Treasury during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under or relating to the contract, and comply with any decision of the Contracting Officer.

UNIT 3 — STATEMENT OF WORK, BUDGET AND PROPERTY INVENTORY

Statement of Work Report

Project Title:	Evaluate Status & Limiting Factors of Pacific Lamprey in the lower Deschutes River, Fifteenmile Creek and Hood River Subbasins		
Project #:	2011-014-00		
Contract Title:	2011-014-00 EXP EVAL STATUS/LIMITING FACTORS OF PACIFIC LAMPREY		
Contract #:	62952		
Province:	Columbia Plateau | Columbia Gorge | Columbia Gorge	**Subbasin:**	Deschutes | Hood | Fifteenmile
Workorder ID:	282329	**Task ID:**	1
Perf. Period Budget:	$553,598	**Perf. Period:**	10/1/2013 - 9/30/2014
Contract Type:	Contract (IGC)	**Pricing Type:**	Cost Reimbursement (CNF)
Contractor(s):	Confederated Tribes of Warm Springs (Prime - WARMSPRI00)		
BPA Internal Ref:	62952		
SOW Validation:	Last validated 08/26/2013 with 0 problems, and 0 reviewable items		
Contract Documents:	Property Inventory (08/13/2013)	2013-2014 Inventory	
	Budget - Contract (08/20/2013)	2013-2014 Line Item Budget CR-260300	

Contacts:

Name	Role	Organization	Phone/Fax	Email	Address
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Paul Krueger	F&W Approver	Bonneville Power Administration	(503) 230-5723 / NA	pqkrueger@bpa.gov	905 NE 11th Ave. Portland OR 97232
Jennifer Graham	Contract Manager	Confederated Tribes of Warm Springs	(541) 553-3585 / (541) 553-1994	jgraham@wstribes.org	Post Office Box C Warm Springs OR 97761
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Steven Springston	Interested Party	Oregon Department of Fish and Wildlife	(541) 296-8026 / NA	steve.l.springston@state.or.us	3450 W 10th The Dalles OR 97058
Andrew Wildbill	Technical Contact	Confederated Tribes of Warm Springs	(541) 553-1161 / NA	andrew.wildbill@wstribes.org	
Joel Santos	Technical Contact	Confederated Tribes of Warm Springs	(541) 553-3580 / NA	joel.santos@wstribes.org	
Michelle Guay	Env. Compliance Lead	Bonneville Power Administration	(503) 230-3459 / NA	mxguay@bpa.gov	905 NE 11th Ave KEC-4 Portland OR 97232
Cyndi Baker	Technical Contact	Confederated Tribes of Warm Springs	(541) 553-3586 / NA	cyndi.baker@wstribes.org	Branch of Natual Resources -- Fisheries Post Office Box C Warm Springs OR 97761

Work Element Table of Contents:

Work Element - Work Element Title	EC Needed*	Estimate	(%)
A : 165. Produce Environmental Compliance Documentation - Deschutes, Fifteenmile, Hood - Complete Environmental Compliance Requirements		$7,000	(1 %)
B : 162. Analyze/Interpret Data - Deschutes River (DR): Summarize water temperature data (2008-13) , compare to developmental stage		$4,500	(1 %)

Work Element - Work Element Title	EC Needed*	Estimate	(%)
C : 157. Collect/Generate/Validate Field and Lab Data - DR: 2013-2014 Record tributary water temperatures for lamprey life-history	*	$14,000	(3 %)
D : 162. Analyze/Interpret Data - DR: 2013 Generate Pacific lamprey escapement upstream of Sherars Falls		$9,300	(2 %)
E : 157. Collect/Generate/Validate Field and Lab Data - DR: 2014 Field activities to generate Pacific lamprey escapement estimate upstream of Sherars	*	$51,000	(9 %)
F : 158. Mark/Tag Animals - DR: 2014 Tag lamprey to estimate abundance at Sherars Falls	*	$6,200	(1 %)
G : 157. Collect/Generate/Validate Field and Lab Data - DR: Collect data from HDX sites on CTWSRO reservation	*	$36,700	(7 %)
H : 157. Collect/Generate/Validate Field and Lab Data - DR: End of distribution surveys in Warm Springs River and Shitike Creek watersheds	*	$17,800	(3 %)
I : 162. Analyze/Interpret Data - Fifteenmile (FM): Summarize water temperature data (2008-13), compare to developmental stages		$16,600	(3 %)
J : 184. Install Fish Passage Structure - FM: Install lamprey passage system (LPS)	*	$14,200	(3 %)
K : 162. Analyze/Interpret Data - FM: 2013 Generate lamprey escapement upstream of Cushing Falls		$11,000	(2 %)
L : 157. Collect/Generate/Validate Field and Lab Data - FM: 2014 Field activities to generate Pacific lamprey escapement estimate upstream of Cushing	*	$37,000	(7 %)
M : 158. Mark/Tag Animals - FM: Tag lamprey for escapement estimates	*	$12,500	(2 %)
N : 157. Collect/Generate/Validate Field and Lab Data - FM: Collect Movement Data From Fifteenmile PIT Arrays	*	$33,700	(6 %)
O : 157. Collect/Generate/Validate Field and Lab Data - FM: End of distribution surveys in Mill Creek	*	$7,100	(1 %)
P : 157. Collect/Generate/Validate Field and Lab Data - FM: Ammocoete density surveys in Mill Creek	*	$7,100	(1 %)
Q : 191. Watershed Coordination - FM: Collect information on potential limiting factors to lamprey production		$17,800	(3 %)
R : 157. Collect/Generate/Validate Field and Lab Data - Hood River (HR): Collect data from half-duplex site in Hood River	*	$40,500	(7 %)
S : 162. Analyze/Interpret Data - DR, FM & HR: Analyze 2012-2013 larval lamprey surveys (end of distribution and abundance)		$16,200	(3 %)
T : 162. Analyze/Interpret Data - DR, FM & HR: Summarize data collected from HDX Arrays		$17,800	(3 %)
U : 159. Transfer/Consolidate Regionally Standardized Data - DR, FM, & HR: Enter HDX PIT tag information into PTAGIS		$3,400	(1 %)
V : 189. Coordination-Columbia Basinwide - DR, FM, & HR: Participate in regional planning and recovery actions for Pacific lamprey		$20,000	(4 %)

Work Element - Work Element Title	EC Needed*	Estimate	(%)
W : 99. Outreach and Education - DR, FM, & HR Education & Outreach (E&O)		$22,800	(4 %)
X : 132. Produce (Annual) Progress Report - DR, FM, & HR: RM&E Technical Annual Report for CY2013		$36,200	(7 %)
Y : 185. Produce Pisces Status Report - Periodic Status Reports for BPA		$4,100	(1 %)
Z : 119. Manage and Administer Projects - Manage Project		$89,098	(16 %)
	Total:	$553,598	

* Environmental Compliance (EC) needed before work begins.

Contract Description:

Pacific lamprey (Entosphenus tridentatus) populations throughout the Columbia River Basin (CRB) are in decline. Multiple reasons for the decline have been identified including passage at mainstem CRB dams and habitat degradation; however, little is known about limiting factors within CRB tributaries. Declining lamprey populations is of primary concern to the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO) due to their significant cultural and ecological value. Accordingly, the project intent is to expand knowledge of lamprey populations and factors limiting production in the Deschutes and Hood rivers as well as Fifteenmile Creek subbasins . The ultimate project goal is to establish, conserve and/or maintain harvestable populations for perpetuity.

Prior to the project 2002-016-00, little was known about Pacific lamprey in the Deschutes River Subbasin. To date knowledge of Pacific lamprey in lower Deschutes River Subbasin has been greatly expanded including distribution information (overwintering, spawning, juvenile), abundance in the form of yearly escapement estimates, habitat requirements (adult and juvenile); however, key pieces of information are missing such as primary limiting factors to production and causes for decline in juvenile distribution.

Seufert Falls (rkm 0.4) on Fifteenmile Creek is an important Pacific lamprey harvest location for CTWSRO tribal members; yet little information is available on their status. Habitat conditions (e.g., low flows, high water temperatures) in Fifteenmile is likely the largest, in subbasin, factor limiting reproduction.

Likewise, very little is known about historical or current distribution of Pacific lamprey in the Hood River Subbasin. Lamprey were once widely distributed throughout the Hood River basin (USFS 1996); however, lack of adequate passage facilities at Powerdale Dam (rkm 7.2) is believed to have eradicated lamprey from areas upstream. With the removal of Powerdale Dam in summer 2010, we will investigate Pacific lamprey recolonizations upstream of the dam.
This project (2011-014-00) combines projects 2002-016-00 and 2007-007-00. The contract period is 10/1/2013 - 09/30/2014. Project objectives are consistent with those identified by the Columbia Basin Pacific Lamprey Technical Work Group (CBPLTWG) and recommended to the Columbia Basin Fish and Wildlife Authority (CBFWA).

Statement of Work Report

Work Element Details

A: 165. Produce Environmental Compliance Documentation

Title:	Deschutes, Fifteenmile, Hood - Complete Environmental Compliance Requirements
Description:	Provide BPA with information necessary for environmental clearance for all contract activities during 2013 - 2014 contract period. Submit 2014 - 2015 SOW and supporting documents as needed for BPA's Environmental Compliance Group to determine environmental compliance status.
Deliverable Specification:	Environmental compliance requirements complete for 2013 - 2014 work. Submit 2014 - 2015 SOW package to begin Environmental Clearance review for subsequent contract. Subcontract for a cultural resource survey if required.

Planned Metrics:

* Are herbicides used as part of work performed under this contract?: No
* Will water craft, heavy equipment, waders, boots, or other equipment be used from outside the local watershed as part of work performed under this contract?: No

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Obtain BPA's EC Lead sign-off that EC requirements are complete	10/1/2013	9/30/2014	Inactive	The EC column on the contract SOW tab in Pisces must have a "full moon" for each work element requiring environmental compliance before ground-disturbing implementation of that work element can begin. You will receive verbal or email notification from the EC Lead when a work element or, in rare instances, a portion of a work element is approved for implementation.
B. Determine if contract work could adversely affect Pacific lamprey	10/1/2013	9/30/2014	Inactive	Contractor will review work proposed under this contract and determine the following: 1) Will field work take place in any area where lamprey may be present? (Any tributary or subbasin where anadromous fish exist is also accessible Pacific lamprey habitat.) 2) Are there any stream disturbing activities or instream activities that could adversely impact Pacific lamprey? Examples of activities posing a threat to lamprey may include (this list is not intended to be all-inclusive): aquatic habitat improvements, fish passage improvements, culvert replacements, water diversions, altered management of water flows, dewatering of any portions of streams, or alteration of irrigation practices. If the answer is yes to BOTH 1 and 2, the contractor must implement USFWS Best Management Practices to Minimize Adverse Effects to Pacific Lamprey (Entosphenus tridentatus) http://www.fws.gov/pacific/Fisheries/sphabcon/lamprey/pdf/Best%20Management%20Practices%20for%20Pacific%20Lamprey%20April%202010%20Version.pdf (BMPs).
C. Report lamprey observation and catch data to USFWS	10/1/2013	9/30/2014	Inactive	All contractors doing instream work in anadromous fish areas (e.g., surveys, habitat improvements, electrofishing, screwtraps, etc.) are required to report annually, by Feb 15 each year, on lamprey observations or catch, including zero, during the previous calendar year to christina_luzier@fws.gov at US Fish and Wildlife Service. A data template is available (http://www.efw.bpa.gov/contractors/docs/Lamprey_Database_Template.xls) and should include the following information: 1) BPA project, 2) BPA contract number, 3) observation or catch date, 4) location (river mile or GPS), 5) species, 6) species id confidence, 7) photo taken, 8) a "sample taken" field such as genetic sample, fin clip, other biological sampling done, 9) sampling technique, 10) sampling effort, 11) number of ammocoetes (larval stage with undeveloped eyes, found burrowed in substrate), 12) number of macropthalmia (free-swimming juvenile stage with developed eyes) and 13) number of adults. See page 10 of USFWS Best Management Practices to Minimize Adverse Effects to Pacific Lamprey (Entosphenus tridentatus) http://www.fws.gov/pacific/Fisheries/sphabcon/lamprey/pdf/Best%20Management%20Practices%20for%20Pacific%20Lamprey%20April%202010%20Version.pdf (BMPs) for life stage pictures.
D. Inspect water craft, waders, boots, etc. to be used in or near water for aquatic invasive species	10/1/2013	9/30/2014	Inactive	Aquatic invasive Species Guidance: Uniform Decontamination Procedures: http://www.aquaticnuisance.org/wordpress/wp-content/uploads/2009/01/Recommended-Protocols-and-Standards-for-Watercraft-Interception-Programs-for-Dreissenid-Mussels-in-the-Western-United-States-September-8.pdf -- Best management guidance for boaters: http://www.coastal.ca.gov/ccbn/bmp-boaters.pdf -- Aquatic Nuisance Species newsletter: http://www.aquaticnuisance.org/newsletters -- State Aquatic Invasive Species Management Plans: Oregon: http://www.clr.pdx.edu/publications/files/OR_ANS_Plan.pdf -- Washington: http://www.wdfw.wa.gov/publications/pub.php?id=00105 -- Montana: http://www.anstaskforce.gov/Montana-FINAL_PLAN.pdf -- Idaho: http://www.idahoag.us/Categories/Environment/InvasiveSpeciesCouncil/documents/Idaho%20Aquatic%20Nuisance%20Species%20Plan.pdf
E. Inspect and, if necessary, wash vehicles and equipment infested with terrestrial invasive species	10/1/2013	9/30/2014	Inactive	Prevent spread of invasive species
F. Complete and document public involvement activities and provide to EC Lead	10/1/2013	9/30/2014	Inactive	Public involvement is any outreach to the public or landowners about specific actions that are proposed. This could be public letters, meetings, newspaper notices, posted notices at local facilities, or information booths at local events.

Milestone Title	Start Date	End Date	Status	Milestone Description
G. Participate in ESA Consultation	10/1/2013	9/30/2014	Inactive	Work may include drafting BA, completing HIP III BO Project Notification Form, submitting high risk project designs to Restoration Review Team (RRT), providing copy of Section 10, 4(d), or 6 permit, etc., or submitting Hatchery Genetic Management Plan to BPA for ESA consultation initiation, and providing input for the ensuing consultation.
H. Participate in Cultural/Historic Resource Consultation	10/1/2013	9/30/2014	Inactive	Examples include providing maps and detailed project descriptions, contracting for an archaeological survey, etc.
I. Obtain/Renew applicable local, state, federal and tribal environmental permits	10/1/2013	9/30/2014	Inactive	Work done to obtain permits such as Sec. 401 or 404 (including RGP process), shoreline, NPDES, or any other required federal, state, or local permits.
J. Obtain sampling permit to collect lamprey via passive trap nets in Fifteenmile Creek and Hood River	10/1/2013	9/30/2014	Inactive	In order to capture and handle adult lamprey to implant with half-duplex PIT tags, additional sampling methods must be used. In Fifteenmile Creek, the only method of capture currently allowed is by hand as the adult lamprey ascend Cushing Falls. While this has been successful to the extent that a Lincoln-Peterson mark-recapture abundance estimate is possible, tagging additional fish would improve the estimate by reducing confidence interval widths. Additional tagged lamprey would also provide an opportunity for detections at HDX antenna sites, thereby increasing understanding of movement patterns. In Hood River, the only opportunity for detecting HDX tagged lamprey is from the maximum of 2% of the total adult lamprey run through Bonneville PIT tagged by University of Idaho. In 2012, one HDX tagged lamprey from Bonneville Dam passed the mouth of Hood River and so far in 2013 (late July), three have passed. Because of the unexpectedly speedy recolonization of lamprey in Hood River (prior to removal of Powerdale Dam fall 2010 distribution ended at rkm 7.2; in 2012, distribution extended into the East Fork Hood River to rkm 3.6, which is an increase of 19.3 km), the CTWSRO would like to capture and tag adult lamprey entering Hood River to increase understanding of movement patterns and further document distribution. Due to ESA listed salmonids in Hood River, obtaining permits for using passive trap nets may prove challenging. However, trapping would occur in July and August, after steelhead have passed and before spring Chinook migrate.
Deliverable: K. Ensure environmental compliance requirements are complete		9/30/2014	Inactive	*See the Deliverable Specification above*

B: 162. Analyze/Interpret Data

Title: Deschutes River (DR): Summarize water temperature data (2008-13) , compare to developmental stage

Description: With the beginning of the Accords in 2008, water temperature data from this year through 2013 at all data collection sites in the Deschutes River up to river kilometer (rkm) 161 and tributaries within Reservation boundaries will be summarized and related to thermal requirements of Pacific lamprey by developmental stage, including egg, larvae, and spawner.

Deliverable Specification: Summary of water temperature data from 2008 through 2013 in the Deschutes River up to rkm 161 and tributaries within Reservation boundaries, at all data collection sites, will provide a description of one of the main controlling factors for lamprey distribution on an intra- and inter-annual basis across much of the range of lamprey in the lower Deschutes River Subbasin. A comparison with temperature preferendum by developmental stage will indicate potential areas expected to support lamprey habitat use. By combining other environmental data onto this template, such as substrate, upper limits of distribution, etc., important areas for rearing and spawning may be identified.

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations:

Primary Focal Species: Lamprey, Pacific

Country: | **NPCC Subbasin:**

State: | **HUC5 Watershed:**

County: | **HUC6 Name:**

Salmonid ESUs Present:

Data Repositories: NONE - No data repository or not electronically available (N/A)

Protocol: CTWS RM&E - Multiple Species - Multiple Subbasins - Water Temperature Monitoring

Protocol Owner: Jen Graham | **Protocol State:** Proposed

Area of Inference:	Name	Value
	HUC4 - Sub Basin	LOWER DESCHUTES

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Manage water temperature data	10/1/2013	5/16/2014	Inactive	Water temperature data will be downloaded from recorders twice per year. Data will be uploaded onto server database for long-term storage and convenient data retrieval. Data may be retrieved in raw or summary form (e.g., daily average, minimum, maximum, 7-day running average).
B. Summarize and interpret water temperature data relative to developmental stages of lamprey	10/1/2013	5/16/2014	Inactive	Water temperature data, by year and by site, will be summarized by graph with respect to ranges of preferred water temperatures for developmental stages of lamprey, including egg, larvae, and spawners for appropriate times of year that the developmental stage may be present. Maps will be developed that display water temperature recording sites, upper limits of lamprey distribution through time, sites that fall outside preferred ranges, and sites that are within preferred temperature ranges by developmental stage by time of year.
C. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: D. Summarize water temperature data (2008-13), compare to developmental stages		9/30/2014	Inactive	*See the Deliverable Specification above*

C: 157. Collect/Generate/Validate Field and Lab Data

Title: DR: 2013-2014 Record tributary water temperatures for lamprey life-history

Description: Monitor water temperatures in all streams with lamprey present or that have the potential for lamprey spawning and rearing habitat. This includes sites in the mainstem Deschutes River and perennial tributaries to the lower Deschutes River.

Deliverable Specification: This work element is part of a long-term established monitoring program. A total of 47 calibrated, continuously recording thermographs (Onset Computer Corporation, Hobo Water Temp ProTM) are located in the mainstem lower Deschutes River and it's perennial tributaries. Temperatures will be monitored all year to assist in describing temperatures within all potential lamprey habitats in the lower Deschutes River Subbasin. Thermograph data will be downloaded and redeployed in the fall. Thermographs will be set to record stream temperatures hourly. Data will be summarized as daily maximum, minimum, average, and 7-day average high stream temperatures will be determined for each monitoring location.

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations: 10

Primary Focal Species: Lamprey, Pacific

Country:	US	**NPCC Subbasin:**	DESCHUTES
State:	OR	**HUC5 Watershed:**	Multiple
County:	WASCO | WASCO | WASCO | WASCO | SHERMAN | WASCO | JEFFERSON | JEFFERSON | WASCO | WASCO	**HUC6 Name:**	Multiple

Salmonid ESUs Present: Middle Columbia River Steelhead DPS (accessible)

Data Repositories: NONE - No data repository or not electronically available (N/A)

Protocol: CTWS RM&E - Multiple Species - Multiple Subbasins - Water Temperature Monitoring

Protocol Owner: Jen Graham **Protocol State:** Proposed

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	10/1/2013	9/30/2014	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. DR: Deploy thermographs for 2013-2014	10/1/2013	9/30/2014	Inactive	Up to 47 calibrated, continuously recording thermographs (Onset Computer Corporation, Hobo Water Temp ProTM) will be located throughout the mainstem lower Deschutes River and it's perennial tributaries. Temperatures will be monitored during 12 months of the year to assist in describing temperatures within all potential lamprey habitats in the lower Deschutes subbasin.
C. DR: Download and manage thermograph data for 2013-2014	10/1/2013	9/30/2014	Inactive	Data from each site will be downloaded a minimum of once per year. Data will be uploaded onto a network server for long-term storage and easy retrieval. Data can be retrieved in summary form including daily average, minimum and maximum and 7-day moving average.
D. DR: Water temperature data collection 2013-2014	10/1/2013	9/30/2014	Inactive	Thermographs will collect temperature data 12 months/year.
E. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: F. DR: Collect water temperature data		9/30/2014	Inactive	*See the Deliverable Specification above*

D: 162. Analyze/Interpret Data

Title: DR: 2013 Generate Pacific lamprey escapement upstream of Sherars Falls

Description: Estimate adult Pacific lamprey escapement above Sherars Falls for 2014. Escapement will be calculated based on a mark-recapture abundance estimate minus an expanded creel estimate from tribal harvest at Sherars Falls.

Deliverable Specification: Adult Pacific lamprey abundance will be estimated using Chapman's modification of the Petersen estimate.

The following assumptions must be met:
1. All Pacific lamprey have an equal probability of being marked at Sherars Falls fish ladder; or
2. All Pacific lamprey have an equal probability of being inspected for marks; or
3. Marked fish mix completely with unmarked fish between sampling events; and
4. No recruitment into the population between sampling events; and
5. No sampling-induced behavior or mortality; and
6. Fish do not lose their marks and marks are recognizable.

95% confidence intervals and variance will be calculated as well.

Creel numbers will be expanded to estimate total harvest with 95% confidence intervals generated.

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations:

Primary Focal Species: Lamprey, Pacific

Country: **NPCC Subbasin:**

State: **HUC5 Watershed:**

County: **HUC6 Name:**

Salmonid ESUs Present:

Data Repositories: NONE - No data repository or not electronically available (N/A)

Protocol: CTWS RM&E - Pacific Lamprey - Deschutes River - Escapement Estimate

Protocol Owner: Jen Graham **Protocol State:** Draft

Area of Inference:

Name	Value
HUC4 - Sub Basin	LOWER DESCHUTES

Milestone Title	Start Date	End Date	Status	Milestone Description
A. DR - Estimate Pacific lamprey abundance for 2013	10/1/2013	5/16/2014	Inactive	Use a mark-recapture methodology to estimate adult lamprey population numbers using Chapman's modification of the Petersen estimate.
B. DR - Estimate Pacific lamprey tribal harvest for 2013	10/1/2013	5/16/2014	Inactive	Creel numbers will be expanded to estimate tribal harvest.
C. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: D. Estimate adult lamprey escapement for 2013		9/30/2014	Inactive	*See the Deliverable Specification above*

E: 157. Collect/Generate/Validate Field and Lab Data

Title: DR: 2014 Field activities to generate Pacific lamprey escapement estimate upstream of Sherars

Description: Collect escapement and harvest data for adult Pacific lamprey in the Deschutes River at Sherars Falls for 2014.

Deliverable Specification: Estimating abundance of lamprey in the Deschutes River is essential for monitoring population status and trends. During FY 2003, CTWSRO investigated the feasibility of conducting a mark-recapture experiment to estimate adult Pacific lamprey escapement. The site selected for lamprey collection was Sherars Falls, located at rkm 71, which is downstream of all perennial tributaries to the Deschutes River. The fish ladder at Sherars Falls provides a suitable location to conduct a mark-recapture experiment to estimate adult escapement above the falls because it is utilized by adult lamprey during their spawning migration. Methods of collecting and marking adult lamprey were developed. Additional logistics of conducting an escapement estimate such as run timing, marking protocols and recapture rates were determined. We have estimated annual escapement since 2004.

During summer 2014, we will implement an adult lamprey mark-recapture estimate experiment at Sherars Falls. Lamprey will be systematically collected from the Sherars Falls fish ladder using a long-handled dip net from mid-June through mid-September, or as water conditions allow. To collect adult lamprey, we will fish each pool of the fish ladder once per hour for 5-6 hours per night, 4 nights per week. We will use an elapsed time dipping protocol to standardize effort.

Collected adult Pacific lamprey will be inspected for tags and measured to the nearest 0.5 cm. Unmarked lamprey will then be fitted with an external numbered half--duplex (HDX) tag and a fin clip. Once marked, lampreys will be transported downstream approximately 1.5 Rkm and released.

In conjunction with the mark-recapture escapement estimation project, a statistical creel survey will be conducted at Sherars Falls to estimate harvest of adult Pacific lamprey. Tribal fishers collect adult lamprey at Sherars Falls for subsistence and ceremonial purposes during late-June through early September. A simple, random, site creel survey will be conducted by the CTWSRO to estimate harvest in the tribal fishery. Four days will be selected to sample each week. Samplers will check all harvested fish for marks and record total lengths. The number of unmarked and marked fish harvested (non expanded numbers) will be recorded. Creel numbers will be expanded to estimate total harvest.

All lamprey collected by tribal harvest and dipnetting will be examined for a tag and fin clip. Recaptured lamprey will be recorded. The use of sequentially numbered tags will allow us to calculate a mean movement rate for upstream migrating lamprey in the lower Deschutes River. The use of an additional mark (i.e. fin clip) will allow us to calculate floy tag retention in adult Pacific lamprey.

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations: 1

Primary Focal Species: Lamprey, Pacific

Country: US | **NPCC Subbasin:** DESCHUTES

State: OR | **HUC5 Watershed:** MIDDLE DESCHUTES RIVER

County: WASCO | **HUC6 Name:** SHERARS BRIDGE

Salmonid ESUs Present: Middle Columbia River Steelhead DPS (accessible)

Data Repositories: NONE - No data repository or not electronically available (N/A)

Protocol: CTWS RM&E - Pacific Lamprey - Deschutes River - Escapement Estimate

Protocol Owner: Jen Graham | **Protocol State:** Draft

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	10/1/2013	6/15/2014	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Collect adult lamprey at Sherars Falls in 2014	6/16/2014	9/30/2014	Inactive	Using established sampling protocol, collect adult lamprey from fish ladder at Sherars Falls with dip nets.
C. Conduct creel survey 2014	6/16/2014	9/30/2014	Inactive	Use simple, random, site creel survey to estimate harvest in the tribal fishery.
D. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: E. Collect data associated with estimating escapement for Pacific lamprey in 2014		9/30/2014	Inactive	*See the Deliverable Specification above*

F: 158. Mark/Tag Animals

Title: DR: 2014 Tag lamprey to estimate abundance at Sherars Falls

Description: Tag adult Pacific lamprey at Sherars Falls for WE "2014 Field activities to generate Pacific lamprey abundance at Sherars Falls".

Deliverable Specification: Collected adult lamprey will be inspected for tags. Unmarked fish will be fin clipped and tagged with floy and half duplex (HDX) Passive Integrated Transponders (PIT) tags. Tags will be applied in proportion to the number of fish running through the fish ladder. Tagged fish will be released downstream. Recaptured fish will be released upstream of the sampling area.

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Focal Strategy : Tributary Habitat
* # fish tagged with CWT: 0
* # fish tagged with PIT: 400
* # fish marked with ad clip: 0
* # fish tagged with acoustic tags: 0
* # fish tagged with radio tags: 0
* # fish marked with scute removal: 0
* # fish marked by otolith: 0
* # of "other" tag/marks applied to fish: 400

Locations: 1

Primary Focal Species: Lamprey, Pacific

Country: US | **NPCC Subbasin:** DESCHUTES

State: OR | **HUC5 Watershed:** MIDDLE DESCHUTES RIVER

County: WASCO | **HUC6 Name:** SHERARS BRIDGE

Salmonid ESUs Present: Middle Columbia River Steelhead DPS (accessible)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	10/1/2013	6/15/2014	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. HDX tag adult Pacific lamprey	6/16/2014	9/30/2014	Inactive	Collected adult lamprey will be inspected for tags. Unmarked fish will be HDX PIT tagged. Newly HDX tagged fish will be released downstream. Recaptured fish will be released upstream of the sampling area.
C. Floy tag adult Pacific lamprey	6/16/2014	9/30/2014	Inactive	Collected adult lamprey will be inspected for floy tags. All unmarked fish will be fin clipped and tagged with floy tags. Newly tagged fish will be released downstream. Recaptured fish will be released upstream of the sampling area.
Deliverable: D. Tag adult lamprey at Sherars Falls		9/30/2014	Inactive	*See the Deliverable Specification above*

G: 157. Collect/Generate/Validate Field and Lab Data

Title:	DR: Collect data from HDX sites on CTWSRO reservation		
Description:	Lamprey HDX tagged at Sherars Falls will be monitored moving into the Warm Springs River and Shitike Creek. O&M will be shared between this project and 2007-157-00.		
Deliverable Specification:	Operate, maintain, and collect data using HDX PIT arrays in the Warm Springs River and Shitike Creek.		
Planned Metrics:	* Primary R, M, and E Focal Strategy : Population Status * Primary R, M, and E Type : Uncertainty Research * Secondary R, M, and E Type : Status and Trend Monitoring * Secondary R, M, and E Focal Strategy : Tributary Habitat		
Locations:	4		
Primary Focal Species:	Lamprey, Pacific		
Country:	US	**NPCC Subbasin:**	DESCHUTES
State:	OR	**HUC5 Watershed:**	Multiple
County:	WASCO | JEFFERSON | WASCO | JEFFERSON	**HUC6 Name:**	Multiple
Salmonid ESUs Present:	Middle Columbia River Steelhead DPS (accessible)		
Data Repositories:	NONE - No data repository or not electronically available (N/A)		
Protocol:	CTWS RM&E - Multiple Species - Multiple Subbasin - Monitoring using PIT tag Arrays		
Protocol Owner:	Jen Graham	**Protocol State:**	Proposed

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	10/1/2013	9/30/2014	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Log movement through HDX arrays in the Warm Springs River	10/1/2013	9/30/2014	Inactive	Log fish movement through the HDX arrays in the Warm Springs River.
C. Download & transfer Warm Springs River data to CTWSRO database	10/1/2013	9/30/2014	Inactive	Information recorded from the HDX arrays in the Warm Springs River will be downloaded a minimum of once per month. Antennae detections will be matched with tag numbers inserted in lamprey (or bull trout also HDX tagged) by CTWSRO. If tag numbers were not those inserted by CTWSRO, these detections will be uploaded onto PTAGIS database so that other researchers may find detections of their fish.
D. Maintain Warm Springs River arrays	10/1/2013	9/30/2014	Inactive	In order to verify temporal and spatial operation of HDX antennae and electromagnetic fields, marker tags will be used to confirm continuous operation and a PIT tag will be positioned, by hand, at various positions throughout the field. A marker tag consists of a waterproof case, AAA batteries, a circuit board and HDX PIT tag. A HDX PIT tag is concealed from the antenna other than timed intervals when the signal is uncovered. Marker tags were set to read every half hour. A gap in the detection record would indicate a failure of the reader, antenna or battery supplying reader or marker tag (i.e., temporal extent). Testing the spatial extent of the electromagnetic field of antennae will occur every two to four weeks. The height of the field (from substrate to the extent of the range) will be recorded at 25%, 50% and 75% from shoreliine. As the tag is detected at the positions tested, a piezo buzzer connected to the reader will be audible, indicating the integrity of the field.
E. Log movement through HDX arrays in Shitike Creek	10/1/2013	9/30/2014	Inactive	Log fish movement through the HDX arrays in Shitike Creek.
F. Download & transfer Shitike Creek data to CTWSRO database	10/1/2013	9/30/2014	Inactive	Information recorded from the HDX arrays in Shitike Creek will be downloaded a minimum of once per month. Antennae detections will be matched with tag numbers inserted in lamprey (or bull trout also HDX tagged) by CTWSRO. If tag numbers were not those inserted by CTWSRO, these detections will be uploaded onto PTAGIS database so that other researchers may find detections of their fish.
G. Maintain Shitike Creek arrays	10/1/2013	9/30/2014	Inactive	In order to verify temporal and spatial operation of HDX antennae and electromagnetic fields, marker tags will be used to confirm continuous operation and a PIT tag will be positioned, by hand, at various positions throughout the field. A marker tag consists of a waterproof case, AAA batteries, a circuit board and HDX PIT tag. A HDX PIT tag is concealed from the antenna other than timed intervals when the signal is uncovered. Marker tags were set to read every half hour. A gap in the detection record would indicate a failure of the reader, antenna or battery supplying reader or marker tag (i.e., temporal extent). Testing the spatial extent of the electromagnetic field of antennae will occur every two to four weeks. The height of the field (from substrate to the extent of the range) will be recorded at 25%, 50% and 75% from shoreliine. As the tag is detected at the positions tested, a piezo buzzer connected to the reader will be audible, indicating the integrity of the field.
H. Data Verification	10/1/2013	9/30/2014	Inactive	Verify downloaded data is complete, accurate, and address any identified issues.
I. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: J. Operate HDX arrays in Warm Springs River and Shitike Creek		9/30/2014	Inactive	*See the Deliverable Specification above*

H: 157. Collect/Generate/Validate Field and Lab Data

Title: DR: End of distribution surveys in Warm Springs River and Shitike Creek watersheds

Description: Monitoring of Pacific lamprey ammocoete distribution in lower Deschutes River Subbasin, lamprey bearing streams, is necessary for understanding population dynamics and assessing limiting factors. Evidence from samples collected during recent surveys suggest upper distributions and/or densities of ammocoetes in the Warm Springs River and its tributaries may have changed since surveys completed in 2005. Surveys were conducted during the 2011 - 2012 contract period. Due to changes in distribution, surveys will be conducted yearly to update distribution maps.

Deliverable Specification: Pacific lamprey ammocoete distribution surveys will be conducted in tributaries to the lower Deschutes River in which presence has been previously determined (Graham and Brun 2004, 2005, 2006). Surveys will begin approximately 2 rkms downstream of previously established upper-distribution and continue upstream until ammocoetes are no longer found. All suitable ammocoete habitat will be sampled using an AbP-2 Wisconsin electrofishing unit specifically designed for ammocoete capture (O'Neal 1987). The electrofisher unit will be set to deliver a constant 125 V at a rate of 3 pulse/s with a pulse train of 3:1 (Pajo and Weise 1994).

Captured lampreys will be anesthetized with MS-222, measured to the nearest millimeter, and weighed to the nearest hundredth gram. Lampetra species will be identified using caudal pigmentation (Richards et al. 1982). Fish will be released at the sampling location after recovery from anesthesia.

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations: 5

Primary Focal Species: Lamprey, Pacific

Country: US | **NPCC Subbasin:** DESCHUTES

State: OR | **HUC5 Watershed:** Multiple

County: WASCO | WASCO | JEFFERSON | WASCO | WASCO | **HUC6 Name:** Multiple

Salmonid ESUs Present: Middle Columbia River Steelhead DPS (accessible)

Data Repositories: NONE - No data repository or not electronically available (N/A)

Protocol: CTWS RM&E - Pacific Lamprey Larval Lamprey Surveys

Protocol Owner: Jen Graham | **Protocol State:** Draft

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	10/1/2013	9/30/2014	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Beaver Creek larval lamprey surveys	10/1/2013	9/30/2014	Inactive	Update end of distribution information in Beaver Creek.
C. Badger Creek larval lamprey surveys	10/1/2013	9/30/2014	Inactive	Update end of distribution information in Badger Creek.
D. Warm Springs River larval lamprey surveys	10/1/2013	9/30/2014	Inactive	Update end of distribution information in Warm Springs River.
E. Shitike Creek larval lamprey surveys	10/1/2013	9/30/2014	Inactive	Update end of distribution information in Shitike Creek.
F. Mill Creek larval lamprey surveys	10/1/2013	9/30/2014	Inactive	Update end of distribution information in Mill Creek.
G. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: H. Conduct end of distribution surveys		9/30/2014	Inactive	*See the Deliverable Specification above*

I: 162. Analyze/Interpret Data

Title: Fifteenmile (FM): Summarize water temperature data (2008-13), compare to developmental stages

Description: With the beginning of the Accords in 2008, water temperature data from this year through 2013 at all sites with available data in Fifteenmile Creek and its tributaries will be summarized and related to thermal requirements of Pacific lamprey by developmental stage, including egg, larvae, and spawner. Data collection sites have been established by the U.S. Forest Service and Oregon Department of Fish and Wildlife and they have kindly shared data. The CTWSRO will determine whether additional water temperature recording sites will be necessary.

Deliverable Specification: Summary of water temperature data from 2008 through 2013 in Fifteenmile Creek and tributaries at all data collection sites will provide a description of one of the main controlling factors for lamprey distribution on an intra- and inter-annual basis across much of the range of lamprey in Fifteenmile Subbasin. A comparison with temperature preferendum by developmental stage will indicate potential areas expected to support lamprey habitat use. By combining other environmental data onto this template, such as substrate, upper limits of distribution, etc., important areas for rearing and spawning may be identified.

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations:

Primary Focal Species: Lamprey, Pacific

Country: **NPCC Subbasin:**

State: **HUC5 Watershed:**

County: **HUC6 Name:**

Salmonid ESUs Present:

Data Repositories: NONE - No data repository or not electronically available (N/A)

Protocol: CTWS RM&E - Multiple Species - Multiple Subbasins - Water Temperature Monitoring

Protocol Owner: Jen Graham **Protocol State:** Proposed

Area of Inference:

Name	Value
NPPC Subbasins	FIFTEENMILE

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Manage water temperature data	10/1/2013	9/30/2014	Inactive	Data collected from other agencies will be uploaded onto server database for long-term storage and convenient data retrieval. Data may be retrieved in raw or summary form (e.g., daily average, minimum, maximum, 7-day running average).
B. Summarize and interpret water temperature data relative to developmental stages of lamprey	10/1/2013	9/30/2014	Inactive	Water temperature data, by year and by site, will be summarized by graph with respect to ranges of preferred water temperatures for developmental stages of lamprey, including egg, larvae, and spawners for appropriate times of year that the developmental stage may be present. Maps will be developed that display water temperature recording sites, upper limits of lamprey distribution through time, sites that fall outside preferred ranges, and sites that are within preferred temperature ranges by developmental stage by time of year.
C. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: D. Summarize water temperature data (2008-13), compare to developmental stages		9/30/2014	Inactive	*See the Deliverable Specification above*

J: 184. Install Fish Passage Structure

Title: FM: Install lamprey passage system (LPS)

Description: A salmonid fish ladder at Cushing Falls (rkm 0.8), appears to hinder or block lamprey passage during a portion of the upstream migration period. Building a lamprey passage system (LPS) would help lamprey passage and allow for an additional techniques to monitor and collect adult migrants for abundance and temporal distribution analysis. This work element will continue to be adapted to address the Cushing Falls passage issues.

Installation of any improvements for passage are difficult in Fifteenmile Creek as stream conditions need to be at summer low flows to work in or near the fish ladder.

Passage systems at mainstem Columbia River Dams and in the Umatilla River have proven effective for improving lamprey passage by diverting them over fish ladders or over diversion structures.

Deliverable Specification: Develop site specific structure specifications using current standards and criteria (M. Moser, NOAA Fisheries, unpublished data), subcontract design and fabrication, and installation of LPS in Fifteenmile Creek at Cushing Falls

Planned Metrics: * # of miles of habitat accessed to the next upstream barrier(s) or likely limit of habitable range: 0.00
* If installing a ladder, does the ladder meet NOAA specifications for attraction flow, pool dimensions, jump height, etc?: No
* # of fish ladders installed in the freshwater non-tidal zone: 1

Locations: 1
Primary Focal Species: Lamprey, Pacific
Country: US **NPCC Subbasin:** FIFTEENMILE
State: OR **HUC5 Watershed:** FIFTEENMILE CREEK
County: WASCO **HUC6 Name:**
Salmonid ESUs Present: Middle Columbia River Steelhead DPS (accessible) | Outside legal Columbia River Chum Salmon ESU boundary (Accessible)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	10/1/2013	6/30/2014	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Discuss HIP3 ESA coverage with BPA EC lead; obtain risk determination	10/1/2013	6/30/2014	Inactive	EC Lead will determine if work under this work element may be able to have full ESA-coverage (NMFS & USFWS) under the 2013 Habitat Improvement Program Biological Opinion (HIP3). The HIP3 programmatic BiOp has expanded coverage for projects that are moderate to high risk that would normally require a BA. For work that qualifies, HIP3 requires projects to undergo a review by an internal review team called the Restoration Review Team (RRT) in lieu of conducting a stand-alone ESA consultation. To begin this process, contact the EC lead for HIP3 Risk Determination and instruction on information needs and requirements to be eligible for coverage.
C. Install LPS	7/1/2014	9/30/2014	Inactive	Install LPS.
D. Maintain LPS installed in 2013	10/1/2013	9/30/2014	Inactive	Maintain existing LPS.
Deliverable: E. Install LPS		9/30/2014	Inactive	*See the Deliverable Specification above*

K: 162. Analyze/Interpret Data

Title: FM: 2013 Generate lamprey escapement upstream of Cushing Falls
Description: Estimate adult Pacific lamprey escapement above Cushing Falls for 2013. Escapement will be calculated based on a mark-recapture abundance estimate minus an expanded creel estimate from tribal harvest.
Deliverable Specification: Adult Pacific lamprey abundance will be estimated using Chapman's modification of the Petersen estimate.

The following assumptions must be met:
1. All Pacific lamprey have an equal probability of being marked at collection site in Fifteenmile Creek or
2. All Pacific lamprey have an equal probability of being inspected for marks; or
3. Marked fish mix completely with unmarked fish between sampling events; and
4. No recruitment into the population between sampling events; and
5. No sampling-induced behavior or mortality; and
6. Fish do not lose their marks and marks are recognizable.

95% confidence intervals and variance will be calculated as well.

Creel numbers will be expanded to estimate total harvest with 95% confidence intervals generated.

Planned Metrics: * Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations:
Primary Focal Species: Lamprey, Pacific
Country: **NPCC Subbasin:**
State: **HUC5 Watershed:**
County: **HUC6 Name:**
Salmonid ESUs Present:
Data Repositories: NONE - No data repository or not electronically available (N/A)
Protocol: CTWS RM&E - Estimate abundance of Pacific lamprey in Fifteenmile Creek (2007-007-00)
Protocol Owner: Jen Graham **Protocol State:** Draft

Area of Inference:	Name	Value
	NPPC Subbasins	FIFTEENMILE

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Describe temporal distribution of adult lamprey	10/1/2013	5/16/2014	Inactive	Describe temporal distribution
B. Estimate lamprey abundance in Fifteenmile Creek for summer 2013	10/1/2013	5/16/2014	Inactive	Using data collected in 2013, we will estimate the adult lamprey population in Fifteenmile Creek using Chapman's modification of the Petersen estimate.
C. Complete estimate of tribal harvest for summer 2013	10/1/2013	5/16/2014	Inactive	Creel numbers will be expanded to estimate tribal harvest for summer 2013. This is a continuation of work in the previous contract year.
D. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: E. Fifteenmile Creek adult Pacific lamprey escapement estimate for summer 2013		9/30/2014	Inactive	*See the Deliverable Specification above*

L: 157. Collect/Generate/Validate Field and Lab Data

Title: FM: 2014 Field activities to generate Pacific lamprey escapement estimate upstream of Cushing

Description: Since 2009, we have been developing a method to estimate escapement of adult Pacific lamprey at Cushing Falls. The falls is located just upstream from the mouth of Fifteenmile Creek at rkm 0.8. Numerous small waterfalls and chutes present multiple adult lamprey collection opportunities during their spring/summer migration. The location of the falls is downstream of all known spawning habitat therefore it is a good location for estimating adult Pacific lamprey escapement to the entire Fifteenmile Subbasin. High water in the spring and extreme low water conditions in the summer coupled with increased knowledge of Pacific lamprey entrance timing into Fifteenmile has lead our efforts to establish protocols that are suitable for the Cushing Falls site.

Tribal fishers collect adult lamprey at Seufert Falls (rkm 0.3) and Cushing Falls (rkm 0.8) for subsistence and ceremonial purposes during late-spring; however little is known about tribal harvest rates and effort. A statistical creel survey will be conducted at Seufert and Cushing falls in conjunction with the mark-recapture escapement estimate to estimate tribal harvest of adult lamprey.

Deliverable Specification: We will determine escapement by estimating abundance and subtracting a harvest estimate generated through a creel. Logistics of this study such as run timing, marking protocols and recapture rates will be determined in order to generate escapement estimates within an acceptable range of precision (+/-30%).

Abundance Estimate:
We will conduct a mark-recapture feasibility study at Cushing Falls to estimate the escapement of adult Pacific lamprey to Fifteenmile Creek.

Lamprey will be collected using 24-inch diameter hoop nets and eight 12-inch diameter pot traps. Trap nets and pots are fished from April through October from 1900 to 0700. Gear is checked for lamprey at 0700. Any collected lamprey are tagged and held in net pens to be released that evening (1900) at which time gear is re-deployed.

Creel Survey:
A simple, random site creel survey will be conducted by the CTWSRO to estimate harvest in the tribal fishery. Four days will be randomly selected to sample each week. Samplers will check all harvested fish for marks and record total lengths. The number of unmarked and marked fish harvested (non expanded numbers) will be recorded. Creel numbers will be expanded to estimate total harvest.

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations: 1

Primary Focal Species: Lamprey, Pacific

Country:	US	**NPCC Subbasin:**	FIFTEENMILE
State:	OR	**HUC5 Watershed:**	FIFTEENMILE CREEK
County:	WASCO	**HUC6 Name:**	

Salmonid ESUs Present: Middle Columbia River Steelhead DPS (accessible) | Outside legal Columbia River Chum Salmon ESU boundary (Accessible)

Data Repositories: NONE - No data repository or not electronically available (N/A)

Protocol: CTWS RM&E - Estimate abundance of Pacific lamprey in Fifteenmile Creek (2007-007-00)

Protocol Owner: Jen Graham **Protocol State:** Draft

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	10/1/2013	3/16/2014	Inactive	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Coordinate with interested parties	10/1/2013	9/30/2014	Inactive	Work with interested parties including but not limited to Oregon Water Resources, Wasco County Soil and Water Conservation District, Fifteenmile Watershed Council, Oregon Department of Fish and Wildlife, and private landowners to increase awareness about the project, inform people of lamprey importance and research results, gain access to private lands, coordinate project objectives to meet Tribal and basin goals (e.g., Fifteenmile Subbasin Plan) and request/provide assistance where pertinent.
C. Determine lamprey temporal distribution in Fifteenmile Creek at Seufert and Cushing Falls	3/17/2014	9/30/2014	Inactive	Determine the run timing for adult Pacific lamprey in Fifteenmile Creek. Initially, run timing was based on visual observations at Seufert and Cushing Falls. Once HDX antennae were operational and CTWSRO began inserting HDX tags in lamprey, antenna detections became the method for recording passage timing. The lowermost antenna is upstream of Seufert Falls (rkm 0.3) at rkm 0.45.
D. Conduct creel survey	4/1/2014	9/30/2014	Inactive	Use a simple, random, site creel survey to estimate harvest in the tribal fishery.
E. Collect lamprey for tagging, and release downstream	3/17/2014	9/30/2014	Inactive	Collected adult lamprey will be inspected for tags and total length measured. Unmarked lamprey will then be fitted with an external, uniquely numbered floy tag, an internal half duplex PIT tag and fin clipped. Fin clips will be preserved and cataloged for genetic analysis to be performed at a later date (Jon Hess, Ph.D., Conservation Geneticist, CRITFC, Haggerman Lab in ID). Once marked, lampreys will be transported downstream to rkm 0.35 and released.
F. Database Development, Entry, and Verification	10/1/2013	9/30/2014	Inactive	A database will be developed for collected data to be entered. All data will be verified for completeness and accuracy.
G. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: H. Conduct mark-recapture to estimate escapement		9/30/2014	Inactive	*See the Deliverable Specification above*

M: 158. Mark/Tag Animals

Title: FM: Tag lamprey for escapement estimates

Description: Floy tag:
Collected adult lamprey will be inspected for tags and total length measured. Unmarked lamprey will then be fitted with an external, uniquely numbered floy tag, an internal half duplex (HDX) PIT tag and fin clipped. Fin clips will be preserved and cataloged for genetic analysis to be performed at a later date (Jon Hess, Ph.D., Conservation Geneticist, CRITFC, Haggerman Lab in ID). Once marked, lampreys will be transported to rkm 0.35 and released.

Half Duplex Tag:
Mainstem Columbia River dam passage is commonly referred to as one of the largest limiting factors for lamprey production in the CRB. The mouth of Fifteenmile Creek is directly downstream from The Dalles Dam. We theorize Fifteenmile Creek may act as refuge and/or alternative spawning location for fish unable to ascend the dam. In order to assess the use of Fifteenmile Creek, we will inserting HDX PIT tags in adult lamprey.

Deliverable Specification: Tag adult Pacific lamprey with floy and half duplex tags.

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Focal Strategy : Tributary Habitat
* # fish tagged with CWT: 200
* # fish tagged with PIT: 0
* # fish marked with ad clip: 0
* # fish tagged with acoustic tags: 0
* # fish tagged with radio tags: 0
* # fish marked with scute removal: 0
* # fish marked by otolith: 0
* # of "other" tag/marks applied to fish: 200

Locations: 1
Primary Focal Species: Lamprey, Pacific
Country: US | **NPCC Subbasin:** FIFTEENMILE
State: OR | **HUC5 Watershed:** FIFTEENMILE CREEK
County: WASCO | **HUC6 Name:**
Salmonid ESUs Present: Middle Columbia River Steelhead DPS (accessible) | Outside legal Columbia River Chum Salmon ESU boundary (Accessible)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	10/1/2013	3/16/2014	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. HDX PIT tag lamprey	3/17/2014	9/30/2014	Inactive	HDX tag lamprey
C. Floy tag lamprey	3/17/2014	9/30/2014	Inactive	Floy tag lamprey.
Deliverable: D. Tag lamprey		9/30/2014	Inactive	*See the Deliverable Specification above*

N: 157. Collect/Generate/Validate Field and Lab Data

Title: FM: Collect Movement Data From Fifteenmile PIT Arrays
Description: HDX arrays will be used to monitor lamprey movement into Fifteenmile Creek and select tributaries. Data will be downloaded on a regular basis (minimum monthly).
Deliverable Specification: Activate, maintain, and collect data using HDX PIT arrays in Fifteenmile Creek Subbasin

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations: 7
Primary Focal Species: Lamprey, Pacific
Country: US | **NPCC Subbasin:** Multiple
State: OR | **HUC5 Watershed:** Multiple
County: WASCO | WASCO | WASCO | WASCO | WASCO | WASCO | WASCO | **HUC6 Name:** LOWER FIFTEENMILE CREEK
Salmonid ESUs Present: Middle Columbia River Steelhead DPS (accessible) | Outside legal Columbia River Chum Salmon ESU boundary (<multiple>)
Data Repositories: PTAGIS Website (http://www.ptagis.org/ptagis/index.jsp)
Protocol: CTWS RM&E - Multiple Species - Multiple Subbasin - Monitoring using PIT tag Arrays
Protocol Owner: Jen Graham | **Protocol State:** Proposed

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	10/1/2013	9/30/2014	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).

Milestone Title	Start Date	End Date	Status	Milestone Description
B. Log movement through Fifteenmile established arrays	10/1/2013	9/30/2014	Inactive	Log lamprey movement through established HDX arrays, including: 15Mile 1, Rkm 0.5 15Mile 2, Rkm 0.7 15Mile 3, Rkm 4.8 15Mile 4, Rkm 39 15Mile 5, Rkm 47 15Mile 6, Rkm 59.
C. Download & transfer data collected at established HDX arrays in Fifteenmile Creek	10/1/2013	9/30/2014	Inactive	Information recorded from the HDX arrays in Fifteenmile Creek will be downloaded a minimum of once per month. Antennae detections will be matched with tag numbers inserted in lamprey (or bull trout also HDX tagged) by CTWSRO. If tag numbers were not those inserted by CTWSRO, these detections will be uploaded onto PTAGIS database so that other researchers may find detections of their fish.
D. Maintain established arrays in Fifteenmile Creek	10/1/2013	9/30/2014	Inactive	In order to verify temporal and spatial operation of HDX antennae and electromagnetic fields, marker tags will be used to confirm continuous operation and a PIT tag will be positioned, by hand, at various positions throughout the field. A marker tag consists of a waterproof case, AAA batteries, a circuit board and HDX PIT tag. A HDX PIT tag is concealed from the antenna other than timed intervals when the signal is uncovered. Marker tags were set to read every half hour. A gap in the detection record would indicate a failure of the reader, antenna or battery supplying reader or marker tag. Testing the extent of the electromagnetic field of antennae will occur every two to four weeks. The height of the field (from substrate to the extent of the range) will be recorded at 25%, 50% and 75% from shoreliine. As the tag is detected at the positions tested, a piezo buzzer connected to the reader will be audible, indicating the integrity of the field.
E. Log movement through Eightmile established arrays	10/1/2013	9/30/2014	Inactive	Log lamprey movement through established HDX arrays, including: 8Mile 1, Rkm 1.6 8Mile 2, Rkm 19 8Mile 3, Rkm 29
F. Download & transfer data collected at established HDX arrays in Eightmile Creek	10/1/2013	9/30/2014	Inactive	Information recorded from the HDX arrays in Eightmile Creek will be downloaded a minimum of once per month. Antennae detections will be matched with tag numbers inserted in lamprey (or bull trout also HDX tagged) by CTWSRO. If tag numbers were not those inserted by CTWSRO, these detections will be uploaded onto PTAGIS database so that other researchers may find detections of their fish.
G. Maintain established arrays in Eightmile Creek	10/1/2013	9/30/2014	Inactive	In order to verify temporal and spatial operation of HDX antennae and electromagnetic fields, marker tags will be used to confirm continuous operation and a PIT tag will be positioned, by hand, at various positions throughout the field. A marker tag consists of a waterproof case, AAA batteries, a circuit board and HDX PIT tag. A HDX PIT tag is concealed from the antenna other than timed intervals when the signal is uncovered. Marker tags were set to read every half hour. A gap in the detection record would indicate a failure of the reader, antenna or battery supplying reader or marker tag. Testing the extent of the electromagnetic field of antennae will occur every two to four weeks. The height of the field (from substrate to the extent of the range) will be recorded at 25%, 50% and 75% from shoreliine. As the tag is detected at the positions tested, a piezo buzzer connected to the reader will be audible, indicating the integrity of the field.
H. Log movement through Mill Creek established array	10/1/2013	9/30/2014	Inactive	Log lamprey movement through established HDX array in Mill Creek at Rkm 1.3.
I. Download & transfer data collected at established HDX array in Mill Creek	10/1/2013	9/30/2014	Inactive	Information recorded from the HDX arrays in Mill Creek will be downloaded a minimum of once per month. Antennae detections will be matched with tag numbers inserted in lamprey (or bull trout also HDX tagged) by CTWSRO. If tag numbers were not those inserted by CTWSRO, these detections will be uploaded onto PTAGIS database so that other researchers may find detections of their fish.

Milestone Title	Start Date	End Date	Status	Milestone Description
J. Maintain array in Mill Creek	10/1/2013	9/30/2014	Inactive	In order to verify temporal and spatial operation of HDX antennae and electromagnetic fields, marker tags will be used to confirm continuous operation and a PIT tag will be positioned, by hand, at various positions throughout the field. A marker tag consists of a waterproof case, AAA batteries, a circuit board and HDX PIT tag. A HDX PIT tag is concealed from the antenna other than timed intervals when the signal is uncovered. Marker tags were set to read every half hour. A gap in the detection record would indicate a failure of the reader, antenna or battery supplying reader or marker tag. Testing the extent of the electromagnetic field of antennae will occur every two to four weeks. The height of the field (from substrate to the extent of the range) will be recorded at 25%, 50% and 75% from shoreliine. As the tag is detected at the positions tested, a piezo buzzer connected to the reader will be audible, indicating the integrity of the field.
K. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: L. Operation of HDX PIT Tag Arrays In Fifteenmile Creek Subbasin		9/30/2014	Inactive	*See the Deliverable Specification above*

O: 157. Collect/Generate/Validate Field and Lab Data

Title: FM: End of distribution surveys in Mill Creek

Description: Monitoring of Pacific lamprey ammocoete distribution in Mill Creek, a lamprey bearing stream, is necessary for understanding population dynamics and assess limiting factors. This monitoring will be used to continue collection of baseline and maintain an up-to-date GIS layer to access changes in distribution.

Deliverable Specification: Pacific lamprey ammocoete distribution surveys will be conducted in Creek in areas/tributaries which presence has been previously determined. Surveys will begin approximately 2 Rkms downstream of previously established upper-distribution limits and continue upstream until ammocoetes are no longer found. All suitable ammocoete habitat will be sampled using an AbP-2 Wisconsin electrofishing unit specifically designed for ammocoete capture (O'Neal 1987). The electrofisher unit will be set to deliver a constant 125 V at a rate of 3 pulse/s with a pulse train of 3:1 (Pajo and Weise 1994). Streams previously sampled but lamprey were absent will be sampled again. These samples will start at the mouth of the stream and proceed upstream. If no lamprey are detected at the mouth of the stream, no further surveying will be completed.

Captured lampreys will be anesthetized with MS-222, measured to the nearest millimeter, and weighed to the nearest hundredth gram. Lampetra species will be identified using caudal pigmentation (Richards et al. 1982). Fish will be released at the sampling location after recovery from anesthesia.

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations: 1

Primary Focal Species: Lamprey, Pacific

Country: US | **NPCC Subbasin:** COLUMBIA GORGE

State: OR | **HUC5 Watershed:** MIDDLE COLUMBIA/MILL CREEK

County: WASCO | **HUC6 Name:**

Salmonid ESUs Present: Outside legal Columbia River Chum Salmon ESU boundary (Accessible)

Data Repositories: NONE - No data repository or not electronically available (N/A)

Protocol: CTWS RM&E - Pacific Lamprey Larval Lamprey Surveys

Protocol Owner: Jen Graham | **Protocol State:** Draft

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	10/1/2013	9/30/2014	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Mill Creek Creek larval lamprey surveys	10/1/2013	9/30/2014	Inactive	Conduct end of distribution surveys in Mill Creek.
C. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: D. Conduct end of distribution surveys		9/30/2014	Inactive	*See the Deliverable Specification above*

P: 157. Collect/Generate/Validate Field and Lab Data

Title: FM: Ammocoete density surveys in Mill Creek

Description: Information gained through a project funded by Portland General Electric to determine the efficiency of the AbP-2 larval lamprey electrofisher efficiency will be used extrapolate larval relative densities to an estimated actual density.

Deliverable Specification: The AbP-2 backpack electro-shocker (Engineering Technical Services, University of Wisconsin, Madison, WI) will be used to capture lamprey ammocoetes. Sampling involved two stages, in which 125 V direct current (25% duty cycle) will be delivered at three pulses•s-1 to induce ammocoete emergence from substrates (Moser et al. 2007; Pajos and Weise 1994). After emerging, larvae will be stunned with a current of 30 pulses•s-1 for collection (Slade et al. 2003). A 0.56m2 (0.75m x 0.75m) pvc pipe will be used as a visual boundary for shocking. Five electro-shocking passes over the boundary will be delivered, according to capture-efficiency model protocol (Table 1). Ammocoetes will be netted as they emerge from the sediment within the boundary. Missed fish will be noted so that an average length, based on measured fish from that pass, will be assigned to the missed fish in that pass for analysis. Fish from each pass will be held in separate containers.

Table 1. Electroshocking pass shock duration and rest periods.

Electroshocking pass	Shock duration (seconds)	Cummulative shock duration (seconds)	Rest period after pass (seconds)
1	45	45	45
2	45	90	45
3	45	135	45
4	45	180	60
5	180	360	
Recovery pass			

After shocking, ammocoetes will be anesthetized with 60 ppm eugenol, the active ingredient in clove oil, measured to length, and returned to the stream. Habitat measurements will be recorded after fish are sampled. Habitat measurements and other variables are required to adjust number of ammocoetes shocked in a sample unit to abundance (Baker and Graham 2009). Sediment depth (cm) were measured using a depth gage in three transects within the shock boundary with three points per transect. Conductivity will be measured with a multi-probe (Model G, Quanta Inc., Loveland, Colorado). Wind speed will be measured using a hand-held portable wind meter (Dwyer Instruments, Inc., Michigan City, IN). The categorical variable 'visibility' will be used to indicate the degree to which the observer could see to net stunned lamprey, from capture efficiency model development. The categories are high, medium and low. Visibility will be recorded 'high' when substrate is clearly visible throughout the water column, wind or water velocity does not cause surface ripples on the water, and shade and/or sun glare does not obscure visibility. Medium visibility will be registered when the substrate is visible but the water surface is partially (>30% of surface) disturbed by wave action, and/or shade and/or sun glare partially impairs visibility (>30% of surface). Visibility will be considered low when the substrate is not clearly visible due to turbidity, and/or when the majority (>70%) of the water surface is broken, and/or when shade and/or sun glare largely obscures visibility (>70% of surface).

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations: 1

Primary Focal Species: Lamprey, Pacific

Country: US

State: OR

County: WASCO

NPCC Subbasin: COLUMBIA GORGE

HUC5 Watershed: MIDDLE COLUMBIA/MILL CREEK

HUC6 Name:

Salmonid ESUs Present: Outside legal Columbia River Chum Salmon ESU boundary (Accessible)

Data Repositories: NONE - No data repository or not electronically available (N/A)

Protocol: CTWS RM&E - Pacific Lamprey Larval Lamprey Surveys

Protocol Owner: Jen Graham **Protocol State:** Draft

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	10/1/2013	9/30/2014	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Mill Creek larval lamprey surveys	10/1/2013	9/30/2014	Inactive	Conduct larval density surveys
C. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: D. Conduct end of distribution surveys		9/30/2014	Inactive	*See the Deliverable Specification above*

Q: 191. Watershed Coordination

Title: FM: Collect information on potential limiting factors to lamprey production

Description: The CTWSRO will work with a variety of agencies in the Fifteenmile Subbasin to develop maps to be compared with lamprey distribution and available habitat to identify factors limiting production. These factors include:

Passage Barriers
With assistance from ODFW and USFS, we will use existing culvert inventories to map culvert locations within the Fifteenmile Subbasin. Information from larval lamprey distribution and redd surveys will be used to determine lamprey presence upstream of the culverts.

Screening
Use existing information to locate irrigation diversions. Methods used during larval lamprey surveys will be employed to determine if lamprey are present in irrigation ditches. If lamprey are found in the diversions determine their distribution within the diversion.

Stream Flow and Temperature
Stream flow and temperature data will be compared with distribution surveys to determine relationships between presence and a variety of life stages. This information will also be compared with published literature about life history needs (e.g., egg development, hatch timing) to determine if temperature is a limiting factor. If relationships are found it will allow us to identify suitable habitat which is currently un-occupied, and work towards re-establishment of lamprey in that area.

Deliverable Specification: Continued coordination to further gather data on limiting factors.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Identify passage barriers	10/1/2013	9/30/2014	Inactive	Work with various agencies and private interest in the basin to identify passage barriers to lamprey.
B. Inventory screens and water diversions	10/1/2013	9/30/2014	Inactive	Work with various agencies and private interest to inventory screens and water diversions in the basin.
Deliverable: C. Compile information on potential limiting factors to lamprey production		9/30/2014	Inactive	*See the Deliverable Specification above*

R: 157. Collect/Generate/Validate Field and Lab Data

Title: Hood River (HR): Collect data from half-duplex site in Hood River

Description: HDX arrays will be used to monitor lamprey movement into Hood River. Data will be downloaded on a regular basis (minimum monthly).

Deliverable Specification: Install, maintain, and collect data using HDX PIT arrays in Hood River

Planned Metrics: * Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations: 3

Primary Focal Species: Lamprey, Pacific

Country: US **NPCC Subbasin:** HOOD

State: OR **HUC5 Watershed:** HOOD RIVER

County: HOOD RIVER | HOOD RIVER | HOOD RIVER **HUC6 Name:** LOWER HOOD RIVER

Salmonid ESUs Present: Columbia River Chum Salmon ESU (Accessible) | Lower Columbia River Chinook Salmon ESU (Accessible) | Lower Columbia River Coho Salmon ESU (Accessible) | Lower Columbia River Steelhead DPS (Accessible)

Data Repositories: NONE - No data repository or not electronically available (N/A)

Protocol: CTWS RM&E - Multiple Species - Multiple Subbasin - Monitoring using PIT tag Arrays

Protocol Owner: Jen Graham **Protocol State:** Proposed

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Environmental compliance requirements complete	10/1/2013	9/30/2014	Completed	On-the-ground work associated with this work element cannot proceed until this milestone is complete. Milestone is complete when final documentation is received from BPA environmental compliance staff (completion can be based on pre-existing environmental documentation from BPA).
B. Log movement of lamprey into Hood River at the existing mainstem site	10/1/2013	9/30/2014	Inactive	Log lamprey movement through HDX array near the mouth of Hood River, Tucker Park and East Fork Hood River.
C. Download data from existing mainstem array and enter data in database	10/1/2013	9/30/2014	Inactive	Information recorded from the HDX array in Hood River will be downloaded a minimum of once per month. Antennae detections will be matched with tag numbers inserted in lamprey (or bull trout also HDX tagged) by CTWSRO. If tag numbers were not those inserted by CTWSRO, these detections will be uploaded onto PTAGIS database so that other researchers may find detections of their fish.
D. Maintain existing HDX site in the mainstem Hood River	10/1/2013	9/30/2014	Inactive	In order to verify temporal and spatial operation of HDX antennae and electromagnetic fields, marker tags will be used to confirm continuous operation and a PIT tag will be positioned, by hand, at various positions throughout the field. A marker tag consists of a waterproof case, AAA batteries, a circuit board and HDX PIT tag. A HDX PIT tag is concealed from the antenna other than timed intervals when the signal is uncovered. Marker tags were set to read every half hour. A gap in the detection record would indicate a failure of the reader, antenna or battery supplying reader or marker tag. Testing the extent of the electromagnetic field of antennae will occur every two to four weeks. The height of the field (from substrate to the extent of the range) will be recorded at 25%, 50% and 75% from shoreliine. As the tag is detected at the positions tested, a piezo buzzer connected to the reader will be audible, indicating the integrity of the field.
E. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/13/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: F. Install, operate, maintain and collect data from HDX arrays in the Hood River Subbasin		9/30/2014	Inactive	*See the Deliverable Specification above*

S: 162. Analyze/Interpret Data

Title: DR, FM & HR: Analyze 2012-2013 larval lamprey surveys (end of distribution and abundance)

Description:

Distribution:
Monitoring of Pacific lamprey ammocoete distribution in the The Deschutes River, Fifteenmile Creek, and Hood River subbasin, a lamprey bearing stream, is necessary for understanding population dynamics and assess limiting factors. This monitoring will be used to continue collection of baseline and maintain an up-to-date GIS layer to access changes in distribution.

Captured lampreys will be anesthetized with MS-222, measured to the nearest millimeter, and weighed to the nearest hundredth gram. Lampetra species will be identified using caudal pigmentation (Richards et al. 1982). Fish will be released at the sampling location after recovery from anesthesia.

Relative Abundance:
Previous surveys conducted under project 2002-016-00 included collection of larval relative densities. As part of a contract with Portland General Electric an electrofisher efficiency study was conducted to determine how effective the AbP-2 was at capturing lamprey under a variety of environmental conditions. The results of this study coupled with measured habitat variables will allow us to extrapolate larval relative densities to an estimated actual density.

The AbP-2 backpack electro-shocker (Engineering Technical Services, University of Wisconsin, Madison, WI) will be used to capture lamprey ammocoetes. Sampling involved two stages, in which 125 V direct current (25% duty cycle) will be delivered at three pulses•s-1 to induce ammocoete emergence from substrates (Moser et al. 2007; Pajos and Weise 1994). After emerging, larvae will be stunned with a current of 30 pulses•s-1 for collection (Slade et al. 2003). A 0.56m2 (0.75m x 0.75m) pvc pipe will be used as a visual boundary for shocking. Five electro-shocking passes over the boundary will be delivered, according to capture-efficiency model protocol (Table 1). Ammocoetes will be netted as they emerge from the sediment within the boundary. Missed fish will be noted so that an average length, based on measured fish from that pass, will be assigned to the missed fish in that pass for analysis. Fish from each pass will be held in separate containers.

Table 1. Electroshocking pass shock duration and rest periods.

Electroshocking pass	Shock duration (seconds)	Cummulative shock duration (seconds)	Rest period after pass (seconds)
1	45	45	45
2	45	90	45
3	45	135	45
4	45	180	60
5	180	360	
Recovery pass			

After shocking, ammocoetes will be anesthetized with 60 ppm eugenol, the active ingredient in clove oil, measured to length, and returned to the stream. Habitat measurements will be recorded after fish are sampled. Habitat measurements and other variables are required to adjust number of ammocoetes shocked in a sample unit to abundance (Baker and Graham 2009). Sediment depth (cm) were measured using a depth gage in three transects within the shock boundary with three points per transect. Conductivity will be measured with a multi-probe (Model G, Quanta Inc., Loveland, Colorado). Wind speed will be measured using a hand-held portable wind meter (Dwyer Instruments, Inc., Michigan City, IN). The categorical variable 'visibility' will be used to indicate the degree to which the observer could see to net stunned lamprey, from capture efficiency model development. The categories are high, medium and low. Visibility will be recorded 'high' when substrate is clearly visible throughout the water column, wind or water velocity does not cause surface ripples on the water, and shade and/or sun glare does not obscure visibility. Medium visibility will be registered when the substrate is visible but the water surface is partially (>30% of surface) disturbed by wave action, and/or shade and/or sun glare partially impairs visibility (>30% of surface). Visibility will be considered low when the substrate is not clearly visible due to turbidity, and/or when the majority (>70%) of the water surface is broken, and/or when shade and/or sun glare largely obscures visibility (>70% of surface).

Deliverable Specification: A map of the upper extent of larval lamprey distribution in the the Deschutes, Fifteenmile, and Hood subbasins will be developed from presence/absence surveys. After geographic distribution of lamprey has been documented, larval densities will be recorded within the geographic range. A comparison of larval density by stream reach will indicate areas of production and rearing. These data will be used to make comparisons over time.

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations:

Primary Focal Species: Lamprey, Pacific

Country: **NPCC Subbasin:**

State: **HUC5 Watershed:**

County: **HUC6 Name:**

Salmonid ESUs Present:

Data Repositories: NONE - No data repository or not electronically available (N/A)

Protocol: CTWS RM&E - Determine larval lamprey distribution in Fifteenmile Creek (2007-007-00)

Protocol Owner: Jen Graham **Protocol State:** Draft

Area of Inference:	Name	Value
	HUC4 - Sub Basin	LOWER DESCHUTES
	HUC4 - Sub Basin	MIDDLE COLUMBIA-HOOD
	HUC5 - Watershed	Fifteenmile Creek

Milestone Title	Start Date	End Date	Status	Milestone Description
A. DR: Map 2012-2013 larval distribution	10/1/2013	5/16/2014	Inactive	A map indicating the upper extent of larval distribution in Shitike Creek, Warm Springs River and tributaries will be produced from presence/absence surveys.
B. FM: Map 2012-2013 larval distribution	10/1/2013	5/16/2014	Inactive	A map indicating the upper extent of larval distribution in Fifteenmile Creek and tributaries will be produced from presence/absence surveys.
C. HR: Map 2012-2013 larval distribution	10/1/2013	5/16/2014	Inactive	A map indicating the upper extent of larval distribution in Hood River and tributaries will be produced from presence/absence surveys.
D. DR: Caclulate larval lamprey densities in 2012-2013	10/1/2013	5/16/2014	Inactive	In 2009, CTWSRO developed a model relating ammocoete density to environmental variables in Shitike Creek. The original study design included stratified random sampling of Shitike Creek and Warm Springs River but ammocoete densities were too low in Warm Springs River to provide a signal of ammocoete response to environmental variables. Since this study, an extensive floodplain restoration project in lower Shitike Creek has been completed by CTWSRO Habitat Restoration Department. Given lamprey preference for low velocity habitats dominated by silt and organic matter substrate (Graham and Brun 2007; Stone and Barndt 2005; Torgersen and Close 2004), the restored floodplain area would be expected to have been colonized by ammocoetes. In 2012, CTWSRO will repeat ammocoete density surveys of 2009 in Warm Springs River and Shitike Creek. The following null hypotheses will be tested: 1) H0: ammocoete densities in non-restored areas of Shitike Creek = ammocoete densities in restoration areas of Shitike Creek 2) H0: ammocoete densities in Warm Springs River = ammocoete densities Shitike Creek Further, in the habitat restoration area of Shitike Creek, patterns of ammocete densities with respect to habitat type and engineered large wood structure will be explored. Upper limits of lamprey distribution, determined from presence of ammocoetes, were determined during lamprey habitat surveys on Reservations streams from 2003 through 2006 (Graham and Brun 2007) and verified in 2008. In 2012, upper limits of ammocoetes will be validated in Shitike Creek and Warm Springs River. Geographic distribution of lamprey in Shitke Creek, Warm Springs River, Badger and Beaver creeks were divided into 10m segments in GIS and assigned numbers according to reach length. Using a random number generator (www.random.org), four 10m segments per reach will be selected for electrofishing surveys to record ammocoete densities. Environmental data including water temperature substrate type, depth, flow, canopy cover, dissolved oxygen, pH and conductivity will also be recorded during ammocoete sampling. Multiple linear regression will be used to model the mean response of juvenile lamprey densities (abundance estimate/sampling area) as a function of environmental variables (Statgraphics Centurian XV, Statpoint Technologies, Inc., Warrenton, VA).
E. FM: Caclulate larval lamprey densities in 2012-2013	10/1/2013	5/16/2014	Inactive	After documenting the geographic range of lamprey ammocoetes in Fifteenmile Creek, a study design to record larval densities will be designed. The design will depend on what is determined as the range and whether stratification of the range is recommended. Habitat surveys will also be sought from ODFW and the U.S. Forest Service that details preferred substrate of ammocoetes, silt and organic matter and to a lesser extent, sand. The likely approach will be a stratification scheme based on land use and/or dominant substrate, thermal regime and random sites within strata will be sampled for larval density.
F. HR: Caclulate larval lamprey densities in 2012-2013	10/1/2013	5/16/2014	Inactive	After documenting the geographic range of lamprey ammocoetes in Hood River, a study design to record larval densities will be designed. The design will depend on what is determined as the range and whether stratification of the range is recommended. Habitat surveys will also be sought from ODFW and the U.S. Forest Service that details preferred substrate of ammocoetes, silt and organic matter and to a lesser extent, sand. The likely approach will be a stratification scheme based on land use and/or dominant substrate, thermal regime and random sites within strata will be sampled for larval density.

Milestone Title	Start Date	End Date	Status	Milestone Description
G. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: H. Analyze distribution & relative abundance data in the Deschutes, Fifteenmile, and Hood subbasins		9/30/2014	Inactive	*See the Deliverable Specification above*

T: 162. Analyze/Interpret Data

Title: DR, FM & HR: Summarize data collected from HDX Arrays

Description: Data recorded from HDX antenna arrays includes PIT tag numbers from fish that pass through the electromagnetic field and marker tags. Marker tags are devices that house a HDX PIT tag that is concealed from the antenna other than timed intervals when the signal is uncovered. It is used to confirm continuous operation of antenna systems, and are incorporated into the antenna circuit. Marker tags are set to read every half hour. A gap in the detection record would indicate a failure of the reader, antenna or battery supplying reader or marker tag. Associated databases store PIT tag information from lamprey tagged with HDX tags (date, location, tag number, fish length, weight, etc). Data from tag information database will be related to the detection database to find when and where the detected fish was first tagged. Marker tag data (collected every 30 min.; 48 records per day) can be summarized by day and site to determine whether there were continuous operation of the antennae (should be 48 records per day). Marker tag data is important to describe potential detection efficiency. In concert with testing the spatial extent of the electromagnetic field by positioning a PIT tag in the field across the channel (25%, 50% and 75%) and measuring the maximum height of the field relative to the water stage, the spatial and temporal extent of antenna arrays can be described. For each site, the spatial and temporal extent of the field will be characterized and fish passage (detections) will be reported. In addition to lamprey tagged by CTWSRO, lamprey are tagged at Bonneville Dam and may be detected in CTWSRO antenna arrays. Lamprey migration timing and movement patterns will be documented by HDX PIT tags and antenna arrays. In addition, HDX antenna detections at Cushing Falls on Fifteenmile Creek is used for the mark-recapture estimate in Fifteenmile Creek.

Deliverable Specification: Lamprey migration timing and movement patterns in Deschutes, Fifteenmile and Hood subbasins will be documented by HDX PIT tags and antenna arrays. Antenna detections by site through the year will indicate timing of adult immigration. Time and location of PIT tag insertion (including those tagged at Bonneville Dam or other locations) and antennae detections in Deschutes, Fifteenmile and Hood subbasins will indicate patterns in adult lamprey movement.

Planned Metrics:
* Primary R, M, and E Focal Strategy : Population Status
* Primary R, M, and E Type : Status and Trend Monitoring
* Secondary R, M, and E Type : Uncertainty Research
* Secondary R, M, and E Focal Strategy : Tributary Habitat

Locations:

Primary Focal Species: Lamprey, Pacific

Country: **NPCC Subbasin:**

State: **HUC5 Watershed:**

County: **HUC6 Name:**

Salmonid ESUs Present:

Data Repositories: NONE - No data repository or not electronically available (N/A)

Protocol: CTWS RM&E - Multiple Species - Multiple Subbasin - Monitoring using PIT tag Arrays

Protocol Owner: Jen Graham **Protocol State:** Proposed

Area of Inference:

Name	Value
HUC4 - Sub Basin	MIDDLE COLUMBIA-HOOD
HUC4 - Sub Basin	LOWER DESCHUTES
NPPC Subbasins	FIFTEENMILE

Milestone Title	Start Date	End Date	Status	Milestone Description
A. DR: Summarize HDX Data	10/1/2013	5/16/2014	Inactive	Summarize PIT tag detections and relate to initial tagging information (date, location, tag number, fish length, weight, etc). Marker tag data (collected every 30 min.; 48 records per day) will be summarized by day and site to determine whether there were continuous operation of the antennae (should be 48 records per day). Spatial extent of antenna fields will be summarized (e.g., % of cross sectional area of stream channel through time). Fish that were detected at multiple locations will be described. Annual adult immigration timing will be graphed and described.
B. FM: Summarize HDX Data	10/1/2013	5/16/2014	Inactive	Summarize PIT tag detections and relate to initial tagging information (date, location, tag number, fish length, weight, etc). Marker tag data (collected every 30 min...48 records per day) will be summarized by day and site to determine whether there were continuous operation of the antennae (should be 48 records per day). Spatial extent of antenna fields will be summarized (e.g., % of cross sectional area of stream channel through time). Fish that were detected at multiple locations will be described. Annual adult immigration timing will be graphed and described.
C. HR: Summarize HDX Data	10/1/2013	5/16/2014	Inactive	Summarize PIT tag detections and relate to initial tagging information (date, location, tag number, fish length, weight, etc). Marker tag data (collected every 30 min...48 records per day) will be summarized by day and site to determine whether there were continuous operation of the antennae (should be 48 records per day). Spatial extent of antenna fields will be summarized (e.g., % of cross sectional area of stream channel through time). Fish that were detected at multiple locations will be described. Annual adult immigration timing will be graphed and described.
D. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	The Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: E. Lamprey migration timing and movement patterns in Deschutes, Fifteenmile and Hood subbasins		9/30/2014	Inactive	*See the Deliverable Specification above*

U: 159. Transfer/Consolidate Regionally Standardized Data

Title: DR, FM, & HR: Enter HDX PIT tag information into PTAGIS

Description: Enter HDX PIT tagged fish at HDX sites in the Deschutes, Fifteenmile and Hood Subbasins into PTAGIS.

Deliverable Specification: Enter HDX PIT tagged fish in the Deschutes, Fifteenmile and Hood Subbasins into PTAGIS. If CTWSRO antenna arrays detect fish PIT tagged by other entities, these detections will be reported in PTAGIS.

Primary Focal Species: Lamprey, Pacific

Data Repositories: NONE - No data repository or not electronically available (N/A)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Enter HDX Tag information for Deschutes Subbasin	10/1/2013	9/30/2014	Inactive	Enter tag numbers from adult Pacific lamprey tagged at Sherars Falls into the PTAGIS database.
B. Enter HDX detections at HDX arrays in the Deschutes Subbasin	10/1/2013	9/30/2014	Inactive	Submit detections of non-CTWSRO tagged fish by CTWSRO HDX arrays in the lower Deschutes River Subbasin into PTAGIS.
C. Enter HDX tag information for Fifteenmile Creek Subbasin	10/1/2013	9/30/2014	Inactive	Enter tag numbers from adult Pacific lamprey tagged in Fifteenmile Subbasin into the PTAGIS database.
D. Enter HDX detections at HDX arrays in Fifteenmile Creek Subbasin	10/1/2013	9/30/2014	Inactive	Submit detections of non-CTWSRO tagged fish by CTWSRO HDX arrays in Fifteenmile Subbasin into PTAGIS.
E. Hood River detections at HDX array in Hood River	10/1/2013	9/30/2014	Inactive	Submit detections of non-CTWSRO tagged fish by CTWSRO HDX arrays in Hood River Subbasin into PTAGIS.
F. Review, revise, and Publish protocol, study design, and methods in monitoringmethods.org	10/1/2013	9/30/2014	Inactive	Protocol (including temporal and spatial design) and Methods for this work element are stored at monitoringmethods.org and need to be finalized (i.e., "Published" through monitoringmethods.org), preferably prior to data collection. Preparations for contract renewals must include reviewing any previously published Protocols/Methods to ensure that they are consistent with how work will be done in any subsequent contract.
Deliverable: G. Enter HDX Tag information into PTAGIS.		9/30/2014	Inactive	*See the Deliverable Specification above*

V: 189. Coordination-Columbia Basinwide

Title: DR, FM, & HR: Participate in regional planning and recovery actions for Pacific lamprey

Description: There are multiple agencies and groups currently working to recovery lamprey through development of recovery plans, compiling information, and expanding research efforts. This work element will cover attending meetings and assisting other agencies with activities that advocate lamprey recovery. These activities include but are not limited to attending Army Corp of Engineer meetings, meeting with USFWS, the Pacific Lamprey Technical Working Group through CBFWA, working with researchers at OSU and assisting when appropriate with other agencies projects and training.

Deliverable Specification: Participate with multiple agencies and private interest working towards lamprey recovery.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Participate in the Pacific Lamprey Technical Working Group through CBFWA	10/1/2013	9/30/2014	Inactive	Participate in the CBLTWG.
B. Gather information and assist with region wide research efforts through other agencies	10/1/2013	9/30/2014	Inactive	Work with other researchers to develop methods and assist with research projects as a training opportunity. Example: Working with NOAA and University of Idaho staff HDX tagging lamprey at Bonneville Dam.
C. Participate in CRITFC meetings related to Pacific lamprey recovery	10/1/2013	9/30/2014	Inactive	Interact and present information to CRITFC and Commissioners to assist with recovery planning and setting protocols for mainstem Columbia River lamprey research and monitoring efforts.
D. Particpate in regional training opportunities for Pacific lamprey recovery	10/1/2013	9/30/2014	Inactive	Attend training that will expand our knowledge of lamprey. Examples from 2010-2011 include juvenile fish identification class, lamprey propagation seminars, and Oregon AFS.
E. Attend ACOE lamprey specific meetings	10/1/2013	9/30/2014	Inactive	Attend and participate in regional discussions about lamprey recovery and needed mainstem improvements with the ACOE as well as work with ACOE funded researchers.
Deliverable: F. Participate in regional lamprey research and recovery forums		9/30/2014	Inactive	*See the Deliverable Specification above*

W: 99. Outreach and Education

Title: DR, FM, & HR Education & Outreach (E&O)

Description: Work with students, public, interest groups, private organizations (e.g., museums, interpretive centers) , Local/State/Federal government agencies, to educate people about lamprey biology/management and cultural significance.

Deliverable Specification: Complete education and outreach with the public in a variety of settings about lamprey.

Planned Metrics: # of students reached: 250

Locations: 4

Country: US

State: OR

County: WASCO | MULTNOMAH | JEFFERSON | GRANT

NPCC Subbasin: Multiple

HUC5 Watershed: Multiple

HUC6 Name:

Salmonid ESUs Present: Columbia River Chum Salmon ESU (Accessible) | Lower Columbia River Chinook Salmon ESU (Accessible) | Lower Columbia River Coho Salmon ESU (Accessible) | Lower Columbia River Steelhead DPS (Accessible) | Middle Columbia River Steelhead DPS (accessible)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Provide education and outreach to the public about Pacific lamprey	10/1/2013	9/30/2014	Inactive	Educate public, local governments, and private organizations about lamprey biology, values, needs, cultural significance, and project objectives/goals/accomplishments. Short-term goals of this effort is to increase and enhance awareness of stakeholders and local management and to develop lamprey curriculum in local schools. Long-term goals are to increase stakeholder involvement, enhance management programs/decisions, and increase education opportunities. Activities will involve holding meetings, hands on/electronic presentations, interviews, pamphlets, trainings, posters, demonstrations, small group, and public events. Intended audience is stakeholders, K-12 schools, federal/state/local agencies or governments, watershed councils, local higher education. The CTWSRO hopes to involve 150-200 students and 300-500 adults.
Deliverable: B. Lamprey Education and Outreach (E&O)		9/30/2014	Inactive	*See the Deliverable Specification above*

X: 132. Produce (Annual) Progress Report

Title: DR, FM, & HR: RM&E Technical Annual Report for CY2013

Description: Projects with RM&E work elements 70, 156, 157, 158, 159, 160 or 162 will complete a technical RM&E annual report based on the template found at http://www.cbfish.org/Project.mvc/Publications/2011-014-00/2013/RmeTechnicalReport . After you log in to Taurus and go to this template, you can complete the report using the template, or use your own MS Word document that includes all the same information requested in the template.

Procedural guidance can be found at http://www.cbfish.org/Link.mvc/To/RMETechnicalReportProceduralGuidance The new reporting schedule calls for a draft annual report for the previous calendar year (1/1/13 - 12/31/13) to be submitted by 1/15/14 and a final to be submitted by 3/1/14. The last submitted annual report covered through 10/1/2012. To avoid a gap in coverage as we transition from the contract year reporting to the calendar year reporting, for this year only, the annual report should cover 10/1/2012 through 12/31/2013.

Deliverable Specification: Attach RM&E CY2013 Technical Report in Pisces

Planned Metrics:
* Start date of reporting period : 10/1/2012
* End date of reporting period : 12/31/2013

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Prepare for calendar year 2013 RM&E reporting	10/1/2013	1/15/2014	Inactive	Updated reporting requirements apply to BPA fish and wildlife project sponsors who have the following work elements in their contract(s): 70 Install Equipment, 156 Develop RM&E Methods and Designs, 157 Collect/Generate/Validate Field and Lab Data, 158 Mark and Tag Animals, 159 Transfer/Consolidate Regionally Standardized Data, 160 Create/Manage/Maintain Database, and/or 162 Analyze/Interpret Data. Attend training. Due to regulatory reporting requirements, BPA needs all sponsors to have draft reports submitted in January and final reports completed in March to align with BPA's BiOp reporting timelines. Review all documentation and training materials in Taurus (www.cbfish.org) and create the report template for your technical report so you will know whether, or how much, your report will need to change to meet the new requirements. http://www.cbfish.org/Content/tutorials/ Sponsor_Reporting_Procedural_Guidance_Final%202-14.docx.
B. Draft calendar year 2013 RM&E Technical Report and email MS Word version for BPA review	10/1/2013	1/15/2014	Inactive	Use to create a template for your technical Annual Progress Report. Building off last year's report, develop a draft report on RM&E and data management actions and discuss relevancy of results to the Fish and Wildlife Program. Your report should include the data, analyses, and data management completed by your project by December 31st. Any activity after the last day of the Calendar Year should be included in a subsequent report. For example, if you have completed redd surveys, but have not completed the analyses, you will report the preliminary data (# of redds). You do not need to rush your analyses; they may be reported in the subsequent report. Upon completion, email a draft to your COTR and RMEsupport@bpa.gov for BPA review of the draft.
C. Upload MS Word calendar year 2013 RM&E Technical Report	1/16/2014	3/15/2014	Inactive	Address BPA comments and upload Calendar Year Report into Pisces Attachments tab as an MS Word document as a "Technical, Draft." Upon completion, email draft to COTR and RMEsupport@bpa.gov (Note: This MS Word format is a change in policy. BPA staff will now convert it to a PDF).
Deliverable: D. Attach RM&E CY2013 Technical Report in Pisces		9/30/2014	Inactive	*See the Deliverable Specification above*

Y: 185. Produce Pisces Status Report

Title: Periodic Status Reports for BPA

Description: The Contractor shall report on the status of milestones and deliverables in Pisces. Reports shall be completed either monthly or quarterly as determined by the BPA COTR. Additionally, when indicating a deliverable milestone as COMPLETE, the contractor shall provide metrics and the final location (latitude and longitude) prior to submitting the report to the BPA COTR.

Deliverable Specification:

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Oct-Dec 2013 (10/1/2013 - 12/31/2013)	1/1/2014	1/15/2014	Inactive	
B. Jan-Mar 2014 (1/1/2014 - 3/31/2014)	4/1/2014	4/15/2014	Inactive	
C. Apr-Jun 2014 (4/1/2014 - 6/30/2014)	7/1/2014	7/15/2014	Inactive	
D. Final Jul-Sep 2014 (7/1/2014 - 9/30/2014)	9/16/2014	9/30/2014	Inactive	

Z: 119. Manage and Administer Projects

Title: Manage Project

Description: Covers work to manage on-the-ground efforts associated with the project. This also covers management of the administrative details of the project, which includes coordinating efforts of other project cooperators, support of BPA's programmatic requirements such as financial reporting, and development of the 2012-2013 contract package (includes draft SOW, budget and property inventory). Sponsor may be requested to attend BPA, Council, CBFWA conferences and workshops.

Deliverable Specification: Submit next year's SOW, Budget, and Property Inventory to the BPA COTR. The SOW should include location information (latitude and longitude) for those work elements that require it. If contractor or contractor's organization takes longer than 30 days to sign the contract, the contractor will need to send this funding package to BPA more than 90 days before the end of the current contract.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Accrual - Submit September estimate to BPA	9/1/2014	9/10/2014	Inactive	Provide BPA with an estimate of contract work that will occur prior to September 30 but will not be billed until October 1 or later. Data must be input in to Pisces by September 10 (begins Aug 10, ends Sep 10).
B. Facilitate inputting Cost Share information into Pisces at the Project level	10/1/2013	11/15/2013	Inactive	As the sole contractor under this project, enter previous federal FY's Cost Share information on the Project's Cost Share tab by Nov 15. (Milestone starts Sep. 30 and ends Nov. 15)
C. Manage On The Ground Efforts	10/1/2013	9/30/2014	Inactive	Manage on the ground efforts associated with the project.
D. Track Budget	10/1/2013	9/30/2014	Inactive	Track budget spending.
E. Equip Personnel	10/1/2013	9/30/2014	Inactive	The following equipment will be pursed or lease per Tribes standards; a GSA leased 4-wheel drive vehicle; computer, cellular phone, standard furnishings, and other necessary field equipment.
F. Train Personnel & Training Opportunities	10/1/2013	9/30/2014	Inactive	Training that may be required for project personnel. Attend necessary training needed to accomplish work.
G. Develop Draft SOW	6/1/2014	6/30/2014	Inactive	Develop SOW in Pisces.
H. Draft Line Item Budget For 2014	6/1/2014	6/30/2014	Inactive	Submit draft budget, upload as an attachment in Pisces.
I. Draft Inventory List For 2014	6/1/2014	6/30/2014	Inactive	Submit inventory list, upload as an attachment in Pisces.
Deliverable: J. Submit Funding Package To COTR		9/30/2014	Inactive	*See the Deliverable Specification above*

Inadvertent Discovery Instructions

BPA is required by section 106 of the National Historic Preservation Act (NHPA) to consider the effects of its undertakings on historic properties (16 USC 470). Prior to approving the expenditure of funds or conducting a federal undertaking, BPA must follow the section 106 process as described at 36 CFR 800. Even though BPA has completed this process by the time an undertaking is implemented, if cultural materials are discovered during the implementation of a project, work within the immediate area must stop and the significance of the materials must be evaluated and adverse effects resolved before the project can continue (36 CFR 800.13(b)(3)). The Inadvertent Discovery of Cultural Resources Procedure form outlines the steps to be taken and notifications to be made. If the undertaking takes place on tribal lands (16 USC 470w), BPA must also "comply with applicable tribal regulations and procedures and obtain the concurrence of the Indian tribe on the proposed action" (36 CFR 800.13(d)).

Inadvertent Discovery of Cultural Resources Procedure form:
http://www.efw.bpa.gov/IntegratedFWP/InadvertentDiscoveryProcedure.pdf

The Confederated Tribes of the Warm Springs Reservation of Oregon									
Project 2011-014-00									
Pacific Lamprey - Deschutes, Fifteenmile and Hood Subbasins Contract 62952									
10/01/2013-09/30/2014									
			Qty2		Qty1			Unit Cost		
1	**PERSONNEL**									**$283,688**
Full Time										
	Project Manager (Jen Graham)				11	pp	@	$2,757	/pp	$30,330
	Biometrician (Cyndi Baker)				6	pp	@	$2,333	/pp	$13,999
	Fisheries Biologist (Matt Fox)				26	pp	@	$2,048	/pp	$53,235
	Fisheries Biologist (Andrew Wildbill)				26	pp	@	$1,709	/pp	$44,434
	Fisheries Tech II (Joel Santos)				22	pp	@	$1,476	/pp	$32,478
	Fisheries Tech III (Lyman Jim)				3	pp	@	$1,767	/pp	$5,301
Limited Duration										
	Fisheries Tech I				12	pp	@	$960	/pp	$11,520
	Fisheries Tech I				12	pp	@	$920	/pp	$11,040
	Fisheries Tech II				11	pp	@	$1,200	/pp	$13,200
					Subtotal Salaries					***$215,537***
	Fringe:				Full Time		@	34.64%		$62,282
					Limited Duration		@	16.41%		$5,870
					Subtotal Benefits					***$68,152***
2	**TRAVEL**									**$2,872**
		Lamprey Technical Working Group Mtgs (J. Graham) Portland	1	person	2	days	@	$179	/day	$358
		Oregon AFS, Eugene, OR, Per Diem (M. Fox, A. Wildbill, C. Ba	3	people	4	days	@	$148	/day	$1,776
		Army Corp of Engineers Coord. Mtgs (J. Graham) Walla Walla	1	person	6	days	@	$123	/day	$738
3	**PROFESSIONAL MEETINGS & TRAINING**									**$2,080**
		Oregon AFS Registration/Workshop Fees (M. Fox, A. Wildbill, C	3	people				360	/person	$1,080
		Misc. Professional Training (M. Fox, A. Wildbill, J. Graham)								$1,000
4	**VEHICLES**									**$37,188**
		GSA pickup lease (Deschutes)			12	mo.	@	$221	/mo.	$2,652
		GSA pickup mileage	12	mo.	3,100	mi./mo.	@	$0.210	/mi	$7,812
		Insurance (includes liability, collision, and comprehensive)			12	mo.	@	49	mo.	$588
		GSA pickup lease (Fifteenmile)			12	mo.	@	$313	/mo.	$3,756
		GSA pickup mileage	12	mo.	3,100	mi./mo.	@	$0.310	/mi	$11,532
		Insurance (includes liability, collision, and comprehensive)			12	mo.	@	49	mo.	$588
		GSA pickup lease (Hood)			12	mo.	@	$221	/mo.	$2,652
		GSA pickup mileage	12	mo.	3,100	mi./mo.	@	$0.175	/mi	$6,510
		Insurance (includes liability, collision, and comprehensive)			12	mo.	@	49	mo.	$588
		Personal Vehicle Mileage (Travel from Warm Springs to The Dalles & Mtgs)			1,000	miles		0.51	/mi	$510
5	**SUPPLIES/EQUIPMENT**									**$90,688**
		Headlamps					4	@	$50	$200
		Flashlights					4	@	$125	$500
		Boots					2	@	$225	$450
		Waders					2	@	$165	$330
		Batteries (for headlamps, flashlights)								$1,000
		Safety Equipment (life vests, multitool, rope)								$500
		Fish work-up supplies (scissors, tagging equipment, tape measures)								$500

		Project 2011-014-00								
		Pacific Lamprey - Deschutes, Fifteenmile and Hood Subbasins Contract 62952								
		10/01/2013-09/30/2014								
			Qty2		**Qty1**			**Unit Cost**		
		Half Duplex tags (not available through BPA PIT tag contract)					800	@	$4	$3,200
		Floy tags					####	@	$1	$650
		Handheld PIT tag readers					4	@	$750	$3,000
		Update/maintain PIT tag readers								$20,000
		Solar panels and associated equipment for HDX fixed sites					8	@	$4,500	$36,000
		Electrical cable for HDX array development								$1,500
		Misc. hardware for HDX array development								$2,500
		Deep cycle batteries					16	@	$250	$4,000
		LAPS materials								$1,000
		Misc. hardware for project implementation								$750
		Thermographs					10	@	$110	$1,100
		Misc. office supplies								$758
		Equipment Repair								$5,000
		Tools (e.g., hand tools & power tools)								$2,000
		Welder and associated safety equipment								$1,500
		Mac Computer								$1,700
		Monitor								$900
		Printer								$750
		Software for Mac								$900
6	**RENT/UTILITIES**									**$17,460**
		Storage	1	ea	12	mos	@	$200	/mo	$2,400
		Office space (The Dalles)	1	ea	12	mos	@	$400	/mo	$4,800
		Utilities (The Dalles -Electricity)	1	ea	12	mos	@	$250	/mo	$3,000
		Utilities (The Dalles - Sewage)	1	ea	12	mos	@	$75	/mo	$900
		Untilities (The Dalles - Basic Phone)	1	ea	12	mos	@	$65	/mo	$780
		Untilities (The Dalles - Long Distance Phone)	1	ea	12	mos	@	$150	/mo	$1,800
		Utilities (The Dalles - Internet)	1	ea	12	mos	@	$75	/mo	$900
		Untilities (Warm Springs - Basic Phone)	1	ea	12	mos	@	$40	/mo	$480
		Untilities (Warm Springs - Long Distance Phone)	1	ea	12	mos	@	$15	/mo	$180
		Utilities (Warm Springs - Internet)	1	ea	12	mos	@	$10	/mo	$120
		Cell phone (project biologist, M. Fox)	1	ea	12	mos	@	$70	/mo	$840
		Cell phone (project biologist, A. Wildbill)	1	ea	12	mos	@	$70	/mo	$840
		Cell phone (for project manager)	1	ea	6	mos	@	$70	/mo	$420
8	**SUBCONTRACTS***									**$8,350**
		Gaging Station Maintenance (yearly maintenance associated with the install of the gaging station by Oregon Water Resources)								$8,350
9	**OVERHEAD / INDIRECT**			**25.64%**	**of Items 1 thru 6:**			**$433,976**		**$111,272**
	TOTAL THIS CONTRACT PERIOD									**$553,598**

Capital and Non-capital BPA Owned Equipment Inventory

Form Revised: 6 Oct 2009 stb/sdg

BPA Project Number: 2011-014-00 *e.g., 1989-098-45*
Date Updated: 7/24/2013
Contract Number: From 58343 to Contract 62952
Person Who updated: M. Fox and C. Baker
Contractor: CTWSRO

					Type of Acquisition (check one)				Cost/Owner			Current Condition (Check one)						Disposition (R, A, T) (BPA decision only)			
	Item Description (Each item must have a separate line)	Model #	Serial Number (if applicable)	Date Acq'd	Purchased	From Surplus	Shop Built	Transferred in (from BPA contract #)	at time of purchase	% ownership this project	Excellent	Good	Fair	Inoperable	Missing	Physical Location	Disp Code	Contract #	Other Comments	Ownership
1	HOBO Waterproof Shuttle	U-DTW-1	9707098	30-Mar-10	x				58343	$230		x					Research Office				
2	HOBO Thermograph WaterTemp Pro V2	U22-001	9711758	30-Mar-10	x				58343	$111		x					In Field				
3	HOBO Thermograph WaterTemp Pro V2	U22-001	9711759	30-Mar-10	x				58343	$111		x					In Field				
4	HOBO Thermograph WaterTemp Pro V2	U22-001	9715417	30-Mar-10	x				58343	$111		x					In Field				
5	HOBO Thermograph WaterTemp Pro V2	U22-001	9715418	30-Mar-10	x				58343	$111		x					In Field				
6	HOBO Thermograph WaterTemp Pro V2	U22-001	9715419	30-Mar-10	x				58343	$111		x					In Field				
7	HOBO Thermograph WaterTemp Pro V2	U22-001	9715420	30-Mar-10	x				58343	$111		x					In Field				
8	HOBO Thermograph WaterTemp Pro V2	U22-001	9715421	30-Mar-10	x				58343	$111		x					In Field				
9	HOBO Thermograph WaterTemp Pro V2	U22-001	9715422	30-Mar-10	x				58343	$111		x					In Field				
10	HOBO Thermograph WaterTemp Pro V2	U22-001	9715423	30-Mar-10	x				58343	$111		x					In Field				
11	HOBO Thermograph WaterTemp Pro V2	U22-001	9715424	30-Mar-10	x				58343	$111		x					In Field				
12	HOBO Thermograph WaterTemp Pro V2	U22-001	9715425	30-Mar-10	x				58343	$111		x					In Field				
13	HOBO Thermograph WaterTemp Pro V2	U22-001	9715426	30-Mar-10	x				58343	$111		x					In Field				
14	HOBO Thermograph WaterTemp Pro V2	U22-001	9715427	30-Mar-10	x				58343	$111		x					In Field				
15	HOBO Thermograph WaterTemp Pro V2	U22-001	9715428	30-Mar-10	x				58343	$111		x					In Field				
16	HOBO Thermograph WaterTemp Pro V2	U22-001	9715429	30-Mar-10	x				58343	$111		x					In Field				
17	HOBO Thermograph WaterTemp Pro V2	U22-001	9715430	30-Mar-10	x				58343	$111		x					In Field				
18	HOBO Thermograph WaterTemp Pro V2	U22-001	9715431	30-Mar-10	x				58343	$111		x					In Field				
19	HOBO Thermograph WaterTemp Pro V2	U22-001	9715432	30-Mar-10	x				58343	$111		x					In Field				
20	Thermograph	U22-001		23-Mar-09	x				58343	$110			x				Warm Springs Office				
21	Thermograph	U22-001		23-Mar-09	x				58343	$110			x				Warm Springs Office				
22	Thermograph	U22-001		23-Mar-09	x				58343	$110			x				Warm Springs Office				
23	Thermograph	U22-001		23-Mar-09	x				58343	$110			x				Warm Springs Office				
24	Thermograph	U22-001		23-Mar-09	x				58343	$110			x				Warm Springs Office				

					Type of Acquisition (check one)				Cost/Owner			Current Condition (Check one)						Disposition (R, A, T) (BPA decision only)			
	Item Description (Each item must have a separate line)	**Model #**	**Serial Number** (if applicable)	**Date Acq'd**	**Purchased**	**From Surplus**	**Shop Built**	**Transferred in (from BPA contract #)**		**at time of purchase**	**% ownership this project**	**Excellent**	**Good**	**Fair**	**Inoperable**	**Missing**	**Physical Location**	**Disp Code**	**Contract #**	**Other Comments**	**Ownership**
25	ABP-2 Electroshocker		534	14-Mar-11	x				58343	$5,895			x				Research Office				
26	ABP-2 Electroshocker		535	14-Mar-11	x				58343	$5,895			x				Research Office				
27	HDX Mulitplexor	D1084IS		1-Feb-10	x				58343	$2,495		x					Research Office				
28	HDX Mulitplexor	D1084IS		1-Feb-10	x				58343	$2,495		x					Research Office				
29	Meazure Palm Reader	MEZ1000		1-Feb-10	x				58343	$395				x			Research Office				
30	Go-Pro Underwater Camera	YHDC5170		27-Apr-11	x				58343	$279		x					Research Office				
31	TVT Color Monitor	V-LCD5-6		9-Sep-11	x				58343	$300		x					Research Office				
32	EZ Cam Underwater IR Camera	4036		9-Sep-11	x				58343	$1,427		x					Instream/Research Office				
33	DVR	NDT 200	771304	9-Sep-11	x				58343	$1,048		x					Instream/Research Office				
34	DVR	NDT 200	771305	9-Sep-11	x				58343	$1,048		x					Research Office				
35	Chest Freezer	GE 8.8CU			x				58343	$389		x					Research Office				
36	Elastomer Marking System			1-Mar-04	x				58343	$495	100%			x			Warm Springs Office				
37	Powersots Digital Camera			1-Mar-03	x				58343	$442	100			x			Warm Springs Office				
38	Camera Baterry Charger			1-Mar-03	x				58343	$33	100			x			Warm Springs Office				
39	Camera Waterproof case			1-Mar-03	x				58343	$154	100			x			Warm Springs Office				
40	Flashcard for camera			1-Mar-03	x				58343	$62	100			x			Warm Springs Office				
41	ABP-2 Electrofisher			1-Feb-03	x				58343	$4,265	100			x			Warm Springs Office				
42	ABP-2 Electrofisher			1-Feb-03	x				58343	$4,265	100			x			Warm Springs Office				
43	Zip Drive			1-Sep-02	x				58343	$99	100			x			Warm Springs Office				
44	Computer printer			1-Sep-02	x				58343	$2,100	100		x				Warm Springs Office				
45	Water Quality meter			1-Sep-02	x				58343	$1,700	100			x			Warm Springs Office				
46	Lotek Receiver			1-Mar-07	x				58343	$5,500	100		x				Warm Springs Office				
47	Printer			1-Jan-09	x				58343	$235	100	x					Warm Springs Office				
48	HOBO Thermograph WaterTemp Pro V2	U22-001	2320413	11-Mar-07	x				58343	$110	100		x				In Field				
49	HOBO Thermograph WaterTemp Pro V2	U22-001	2389760	11-Mar-07	x				58343	$110	100		x				In Field				
50	HOBO Thermograph WaterTemp Pro V2	U22-001	2320418	11-Mar-07	x				58343	$110	100		x				In Field				
51	HOBO Thermograph WaterTemp Pro V2	U22-001	2443012	11-Mar-07	x				58343	$110	100		x				In Field				
52	HOBO Thermograph WaterTemp Pro V2	U22-001	2443013	11-Mar-07	x				58343	$110	100		x				In Field				
53	HOBO Thermograph WaterTemp Pro V2	U22-001	2389758	11-Mar-07	x				58343	$110	100		x				In Field				
54	HOBO Thermograph WaterTemp Pro V2	U22-001	9790404	11-Mar-07	x				58343	$110	100		x				In Field				
55	HOBO Thermograph WaterTemp Pro V2	U22-001	2443011	11-Mar-07	x				58343	$110	100		x				In Field				
56	HOBO Thermograph WaterTemp Pro V2	U22-001	2443009	11-Mar-07	x				58343	$110	100		x				In Field				

					Type of Acquisition (check one)					Cost/Owner		Current Condition (Check one)						Disposition (R, A, T) (BPA decision only)			
	Item Description (Each item must have a separate line)	Model #	Serial Number (if applicable)	Date Acq'd	Purchased	From Surplus	Shop Built	Transferred in (from BPA contract #)		at time of purchase	% ownership this project	Excellent	Good	Fair	Inoperable	Missing	Physical Location	Disp Code	Contract #	Other Comments	Ownership
57	HOBO Thermograph WaterTemp Pro V2	U22-001	2389780	11-Mar-07	x				58343	$110	100		x				In Field				
58	HOBO Thermograph WaterTemp Pro V2	U22-001	2389772	11-Mar-07	x				58343	$110	100		x				In Field				
59	HOBO Thermograph WaterTemp Pro V2	U22-001	2320415	11-Mar-07	x				58343	$110	100		x				In Field				
60	HOBO Thermograph WaterTemp Pro V2	U22-001	9790394	11-Mar-07	x				58343	$110	100		x				In Field				
61	HOBO Thermograph WaterTemp Pro V2	U22-001	2320425	11-Mar-07	x				58343	$110	100		x				In Field				
62	HOBO Thermograph WaterTemp Pro V2	U22-001	2443008	11-Mar-07	x				58343	$110	100		x				In Field				
63	HOBO Thermograph WaterTemp Pro V2	U22-001	9790409	11-Mar-07	x				58343	$110	100		x				In Field				
64	HOBO Thermograph WaterTemp Pro V2	U22-001	2443017	11-Mar-07	x				58343	$110	100		x				In Field				
65	HOBO Thermograph WaterTemp Pro V2	U22-001	2443015	11-Mar-07	x				58343	$110	100		x				In Field				
66	HOBO Thermograph WaterTemp Pro V2	U22-001	9715425	11-Mar-07	x				58343	$110	100		x				In Field				
67	HOBO Thermograph WaterTemp Pro V2	U22-001	2320421	11-Mar-07	x				58343	$110	100		x				In Field				
68	HOBO Thermograph WaterTemp Pro V2	U22-001	1177301	11-Mar-07	x				58343	$110	100		x				In Field				
69	HOBO Thermograph WaterTemp Pro V2	U22-001	2443018	11-Mar-07	x				58343	$110	100		x				In Field				
70	Hitachi 500GB HD		X7GR9G5A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
71	Hitachi 500GB HD		B7FPLRJA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
72	Hitachi 500GB HD		X7GR9EHA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
73	Hitachi 500GB HD		X7GR9V2A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
74	Hitachi 500GB HD		X7GR9VXA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
75	Hitachi 500GB HD		X7GR9GNA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
76	Hitachi 500GB HD		X7GR9UVA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
77	Hitachi 500GB HD		X7GR8WHA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
78	Hitachi 500GB HD		X7GR9TAA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
79	Hitachi 500GB HD		X7GNHV4A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
80	Hitachi 500GB HD		X7GR8S1A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
81	Hitachi 500GB HD		X7GR926A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
82	Hitachi 500GB HD		X7GR8X6A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
83	Hitachi 500GB HD		X7GRA6LA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
84	Hitachi 500GB HD		X7GR9VAA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
85	Hitachi 500GB HD		X7GRA68A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
86	Hitachi 500GB HD		X7GR94TA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
87	Hitachi 500GB HD		X7GR92AA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
88	Hitachi 500GB HD		X7GR99ZA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
89	Hitachi 500GB HD		X7GRN3PJA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
90	Hitachi 500GB HD		X7GR94NA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
91	Hitachi 500GB HD		X7GPKMRA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
92	Hitachi 500GB HD		X7GNHYEA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
93	Hitachi 500GB HD		X7GR927A	9-Sep-11	x				58343	$104.86	100	x					Research Office				

					Type of Acquisition (check one)				Cost/Owner			Current Condition (Check one)						Disposition (R, A, T) (BPA decision only)			
	Item Description (Each item must have a separate line)	Model #	Serial Number (if applicable)	Date Acq'd	Purchased	From Surplus	Shop Built	Transferred in (from BPA contract #)	at time of purchase		% ownership this project	Excellent	Good	Fair	Inoperable	Missing	Physical Location	Disp Code	Contract #	Other Comments	Ownership
94	Hitachi 500GB HD		X7GR9NBA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
95	Hitachi 500GB HD		X7GR908A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
96	Hitachi 500GB HD		X7GPKP8A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
97	Hitachi 500GB HD		X7GPKHHA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
98	Hitachi 500GB HD		X7GR9J9A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
99	Hitachi 500GB HD		X7GGB2YA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
100	Hitachi 500GB HD		X7GR90HA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
101	Hitachi 500GB HD		X7GLVPUA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
102	Hitachi 500GB HD		X7GPKE1A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
103	Hitachi 500GB HD		X7GRA8AA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
104	Hitachi 500GB HD		X7GR8RAA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
105	Hitachi 500GB HD		X7GPK5EA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
106	Hitachi 500GB HD		X7GNHUMA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
107	Hitachi 500GB HD		X7GR9SVA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
108	Hitachi 500GB HD		X7GR8LVA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
109	Hitachi 500GB HD		X7GRA1HA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
110	Hitachi 500GB HD		X7GRA4HA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
111	Hitachi 500GB HD		X7GRA4VA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
112	Hitachi 500GB HD		X7GLR4LA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
113	Hitachi 500GB HD		X7GRA86A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
114	Hitachi 500GB HD		X7GPWW4A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
115	Hitachi 500GB HD		B7FPL95A	9-Sep-11	x				58343	$104.86	100	x					Research Office				
116	Hitachi 500GB HD		B7FN6DSA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
117	Hitachi 500GB HD		B7FPM5VA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
118	Hitachi 500GB HD		B7FPM2KA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
119	Hitachi 500GB HD		X7GRA2NA	9-Sep-11	x				58343	$104.86	100	x					Research Office				
120	Thermograph Shuttle	U-DTW-1	1269779	11-Mar-07	x				58343	$219	100	x					Research Office				
121	Hydrolab Mini Sonde	MS5	100500049213	4-May-10	x				58343	$5,988	100	x					Research Office				
122	Hydrolab Mini Sonde	MS5	100500049212	4-May-10	x				58343	$5,988	100	x					Warm Springs Office				
123	Oregon RFID Single Reader		5111-015576	19-Mar-12	x				58343	$1,995	100	x					In Field				
124	Oregon RFID Single Reader		5111-015430	19-Mar-12	x				58343	$1,995	100	x					In Field				
125	Oregon RFID Single Reader		5111-015572	19-Mar-12	x				58343	$1,995	100	x					In Field				
126	Oregon RFID Single Reader		3011-015106	19-Mar-12	x				58343	$1,995	100	x					In Field				
127	Oregon RFID Multi Reader		5211-015703	19-Mar-12	x				58343	$2,495	100	x					In Field				
128	Metal Strong Box			12-Apr-12	x				58343	$460	100	x					In Field				
129	Metal Strong Box			12-Apr-12	x				58343	$460	100	x					In Field				
130	Metal Strong Box			12-Apr-12	x				58343	$460	100	x					In Field				
131	Metal Strong Box			12-Apr-12	x				58343	$460	100	x					In Field				
132	Oregon RFID HDX portable antenna			23-Apr-12	x				58343	$880	100	x					Research Office				
133	Apple MacBook Pro		C02HK181DV7N	3-May-12	x				58343	$1,799	100	x					Research Office				
134	Design Analysis Data Logger	H350XL	5173	21-May-12	x				58343	$2,193	100	x					In Field				

					Type of Acquisition (check one)					Cost/Owner		Current Condition (Check one)						Disposition (R, A, T) (BPA decision only)			
	Item Description (Each item must have a separate line)	**Model #**	**Serial Number** (if applicable)	**Date Acq'd**	**Purchased**	**From Surplus**	**Shop Built**	**Transferred in (from BPA contract #)**		**at time of purchase**	**% ownership this project**	**Excellent**	**Good**	**Fair**	**Inoperable**	**Missing**	**Physical Location**	**Disp Code**	**Contract #**	**Other Comments**	**Ownership**
135	Design Analysis Gas Purge System	H3551	1852	21-May-12	x				58343	$2,193	100	x					In Field				
136	Design Analysis Air Dryer	H355-DES-2		21-May-12	x				58343	$4,850	100	x					In Field				
137	Design Analysis GOES Transmitter	H2221	3039	21-May-12	x				58343	$2,595	100	x					In Field				
138	Design Analysis GOES antenna	H223		21-May-12	x				58343	$410	100	x					In Field				
139	Oregon RFID Single Reader				x				58343	$1,995	100	x					Research Office				
140	HT200 Electrofisher	HT200B-NK	B253MK5		x				58343	$6,156	100	x					Research Office				
141	Meazure Palm Reader	MEZ1000	0E025ELA0011	29-Oct-12	x				58343	$410	100%	x					Research Office				
142	Meazure Palm Reader	MEZ1000	0E025EKE0004	29-Oct-12	x				58343	$410	100%	x					Research Office				
143	Oregon RFID Single Reader		5111-015492	28-Jun-13	x				58343	$1,995	100%	x					In Field				
144	Oregon RFID Single Reader		5111-015452	28-Mar-13	x				58343	$1,995	100%	x					In Field				
145	Oregon RFID Single Reader		5111-015485	28-Mar-13	x				58343	$1,995	100%	x					In Field				
146	Oregon RFID Single Reader		5111-011603	29-Oct-12	x				58343	$1,995	100%	x					In Field				
147	Oregon RFID Single Reader		5111-015132	29-Oct-12	x				58343	$1,995	100%	x					In Field				
148	Oregon RFID Single Reader		5111-015235	29-Oct-12	x				58343	$1,995	100%	x					In Field				
149	Oregon RFID Single Reader		5111-015433	29-Oct-12	x				58343	$1,995	100%	x					In Field				
150	Dewalt Hammer Drill	DW511	516693	27-Mar-13	x				58343	$89	100%	x					Research Office				
151	Hitachi Miter Saw	C10FCE2	CD23838	27-Mar-13	x				58343	$195	100%	x					Research Office				
152	Dewalt Jig Saw	DW317	997538	27-Mar-13	x				58343	$89	100%	x					Research Office				
153																					
154																					
155																					