



**Other planning document references.**

The project type is “flow/survival” and is supported by Oregon Department of Fish and Wildlife , 1995-1997 Biennial Report on Fish Screening Activities, February 1 1997, and the 1994 NMFS Fish and Wildlife program section 7.10.

**Subbasin.**

**Lower Columbia River Subbasin**

**Short description.**

**Protect salmon and steelhead by locating, inspecting, and monitoring water diversion devices, screened and unscreened, in the Lower Columbia River Subbasin.**

**Section 2. Key words**

| Mark                     | Programmatic Categories | Mark                     | Activities       | Mark                     | Project Types               |
|--------------------------|-------------------------|--------------------------|------------------|--------------------------|-----------------------------|
| X                        | Anadromous fish         | <input type="checkbox"/> | Construction     | <input type="checkbox"/> | Watershed                   |
| <input type="checkbox"/> | Resident fish           | <input type="checkbox"/> | O & M            | <input type="checkbox"/> | Biodiversity/genetics       |
| <input type="checkbox"/> | Wildlife                | <input type="checkbox"/> | Production       | <input type="checkbox"/> | Population dynamics         |
| <input type="checkbox"/> | Oceans/estuaries        | <input type="checkbox"/> | Research         | <input type="checkbox"/> | Ecosystems                  |
| <input type="checkbox"/> | Climate                 | X                        | Monitoring/eval. | X                        | Flow/survival               |
| <input type="checkbox"/> | Other                   | <input type="checkbox"/> | Resource mgmt    | <input type="checkbox"/> | Fish disease                |
|                          |                         | <input type="checkbox"/> | Planning/admin.  | <input type="checkbox"/> | Supplementation             |
|                          |                         | <input type="checkbox"/> | Enforcement      | <input type="checkbox"/> | Wildlife habitat en-        |
|                          |                         | <input type="checkbox"/> | Acquisitions     |                          | enhancement/restorati<br>on |

**Other keywords.**

**Compliance Rate Determination**

**Section 3. Relationships to other Bonneville projects**

| Project # | Project title/description | Nature of relationship |
|-----------|---------------------------|------------------------|
|           |                           | Data evaluation        |

|            |                                 |                           |
|------------|---------------------------------|---------------------------|
| ☐☐☐☐<br>☐☐ | Upper Columbia Screening Survey | Inspection and Evaluation |
| ☐☐☐☐<br>☐☐ | ☐☐☐☐☐☐☐☐                        | ☐☐☐☐☐☐☐☐                  |
| ☐☐☐☐<br>☐☐ | ☐☐☐☐☐☐☐☐                        | ☐☐☐☐☐☐☐☐                  |

## Section 4. Objectives, tasks and schedules

### Objectives and tasks

| Obj<br>1,2,<br>3 | Objective   | Task<br>a,b,c | Task  |
|------------------|---|---------------|---|
| 1☐               | Identify diversion devices                                      | a             | Coordinate search teams                               |
| 2☐               | Locate and identify diversion owners                            | b             | Utilize PUD, Assessors, and other records             |
| 3☐               | Inspect diversion devices for Compliance w/ screening Standards | c             | Draw up contract for contractors doing inspections    |
| 4☐               | Assure accountability with Screening Standards                  | d             | Communicate with compliant and non-compliant owners   |
| 5☐               | Prosecute Non-compliant   | e             | Utilize court Systems via civil and criminal statutes |
| ☐<br>☐           | ☐☐☐☐☐☐☐☐  | ☐             | ☐☐☐☐☐☐☐☐  |

### Objective schedules and costs

| Objective # | Start Date<br>mm/yyyy | End Date<br>mm/yyyy | Cost %     |
|-------------|-----------------------|---------------------|------------|
| 1           | 05/1998               | 06/1998             | 61         |
| 2           | 06/1998               | 07/1998             | 24         |
| 3           | 07/1998               | 07/1998             | 5          |
| 4           | 08/1998               | 09/1998             | 5          |
| 5           | 09/1998               | 12/1998             | 5          |
|             |                       |                     | TOTAL 100% |



## **Section 6. Abstract**

**The project goal is to provide stream passage and inspect protective screens on water diversion devices. Objectives are to identify and locate diversion devices, locate and identify diversion owners, inspect diversion devices for regulation compliance, assure accountability with screening standards, and prosecute non-compliant diversion owners. The project is relevant to Section 7.10 of the 1994 Fish and Wildlife Program in that it addresses salmon and steelhead losses, and provides flow data, as a result of failed screens on Lower Columbia River Subbasin. Partnering with biologists and Enforcement personnel all identified critical salmonid habitat rivers and streams will be surveyed during peak water withdrawal periods. Sites shall be evaluated based upon Washington State Criterion for Screening Standards. By the end of November 1998 it is expected that a prioritized data base of diversion devices within the Lower Columbia River Subbasin will be available to Fisheries biologist and Enforcement supervisors to monitor construction of diversion devices, compliance with screening standards, determine flow requirements for sensitive streams, and conduct periodic reinspection of sites to insure compliance. A two phase evaluation plan utilizing an enforcement supervisor to assure site location data is accurate followed by diversion inspection results being rechecked by an expert within the Screening Oversight committee.**

## **Section 7. Project description**

### **a. Technical and/or scientific background.**

**In 1992, over 44,000 fall chinook salmon in Oregon's Umatilla River were killed by a powerful irrigation pump. Then again in 1994, on the same river, 44,400-88,800 fall chinook were killed when screens failed on a hydroelectric project. Following a survey of water intakes on the shores of the Columbia River between Bonneville and McNary Dams, 83% (Oregon, Storment-Ray 1993) and 77% (Washington, Bates 1994) of the intakes were out of compliance with screening standards. Reynolds 1996 did an initial survey of Lower Columbia River( Washington shoreline) water diversion and discovered a non compliance rate of 62.5%. Reynolds 1996 estimated that between 576,000 and 1.1 million juvenile salmon could be lost instantaneously due to inadequately screened water diversions. The unscreened or poorly screened diversions represent a substantial threat to the survival juvenile salmon and steelhead.**

**This project would encompass the Lower Columbia Basin in Washington State with particular emphasis on critical salmonid habitat streams and rivers.**

The following 1994 Fish and Wildlife Program goals and objectives are addressed within the project.

- A. Make certain private landowner and Public concerns are addressed.
- B. Develop/maintain a priority list of tributaries water diversions.
- C. Monitor operations and maintenance phases in compliance criteria and recommend corrective actions
- D. Conduct periodic inspections of water diversion devices to assure compliance.
- E. See that the necessary permit process are carried out.

Project objectives address the above FWP objectives and develops information useful to more than one subbasin. FWP objective A is addressed in project objective #4 concerning partnerships with the public to solicit inputs to protect salmon and steelhead. FWP objective B is addressed by project objective #1 and #2. FWP objective C is covered by project objective #3 assuring that operations and maintenance complies with local, state, tribal, and federal laws. FWP objective D is included in project objective #3 addressing watershed objectives in decreasing documented mortality factors. FWP objective E is mutually covered by project objectives #4 and #5. Specific mechanisms of how these objectives will work will be outlined in section b below.

**b. Proposal objectives.**

| <b>Obj<br/>1,2,<br/>3</b> | <b>Objective</b>  | <b>Outcome</b>   |
|---------------------------|---|--|
| 1                         | Identify diversion devices                                      | Map and location of intakes pinpointed for watershed review                                      |
| 2                         | Locate and identify diversion owners                            | Database of private and public diversion owners for input on screening regulations and solutions |
| 3                         | Inspect diversion devices for Compliance w/ screening Standards | Determination of screen status and flow data   |
| 4                         | Assure accountability with                                      | Dialog developed with compliant  |

|   |                         |  |
|---|-------------------------|--|
|   | Screening Standards     | and non-compliant owners, recommend corrective actions                       |
| 5 | Prosecute Non-compliant | Gain compliance with Washington State Screening Criteria and permit process. |

**Objective number 1, identification of diversion devices, will entail the locating, mapping and photography. Waterways will be survey using vehicles, boats and planes. Located diversion devices will be mapped using global positioning System units. Those data in conjunction with GIS personnel will be mapped for interagency and infra agency use. This list of site will be maintained and prioritized based on volume of water diverted. Objective number 2, the identification diversion site owners, will entail locating the owners of diversion site and the responsible contacts for the site. These data couple with objective 1 will together provide a prioritized list of Lower Columbia River Basin intake diversions.**

**Objective number 3, compliance with screening standards, will entail the contracting out to contractors specializing in diving and inspecting of Diversion devices. The inspections will be done according to Washington State Screening Criterion (Bates 199?). The results of the inspections shall be transmitted electronically to Yakima Screening Shop Supervisor for evaluation and storage in a developed database. Objective number 4, assure accountability with screening standards, will communicate with the diversion owners via letters of compliance and letters on non-compliance which will be sent to owners addressing screening concerns and Department rules and regulations. Opportunities for the diversion owner to express concerns are provided during this communication period. Personal contact from a Screening technician to advise of corrective actions or request for information. Objective number 5, prosecute non-compliant diversion owners, shall proceed only after repeated contacts with non-compliant diversion owners via Compliance Letters and direct contact have failed. Objective 5 will also proceed if there is a knowing violation of permits necessary to complete construction and a disregard for recommended corrective action is documented over a three month period of Compliance communications**

**The benefits to the FWP would be the realization of the FWP objectives outlined above. This project will promote habitat and fisheries biologist to interconnect in a watershed context, the obtaining of strategic biological flow information, promote communication with diversion owners making room for constructive dialog, and benefitting naturally producing salmon and steelhead by reducing a known mortality source.**

**c. Rationale and significance to Regional Programs.**

As indicated the above FWP objectives are fulfilled in the proposed project. Of the eight listed objectives the proposed project satisfies 5 specifically (listed above) and incorporates the remainder (i.e. Establish written operating criteria, develop preliminary designs, and review detailed designs...criteria are met) as part of the review process. Screen operations at the Bonneville Dam and other BPA facilities has become critical in the survival of juvenile salmon and steelhead. These operations can be compromised if the numerous unscreened or poorly screened diversions result in the loss of fish saved in the ongoing screening and Barging programs. Further, FWP funds the Fish Screening Oversight Committee, the proposed project would supply strategic biological information critical to the committee making watershed based decisions regarding salmon and steelhead. Lastly, the prioritized list of tributary water diversions directly addresses FWP priority 7.10A.3 regarding fisheries managers. This list will be critically important on weak stocks petition or listed under the Endangered Species Act.

**d. Project history**

The proposed project is a new project to be considered.

**e. Methods.**

The project will be broken down according to the above project objectives with specific methods.

**Objective 1: Identify Diversion Devices**

**PHASE 1. Aerial flights utilizing Global Positioning System (G.P.S.) to locate intake sites and record the coordinates along the Lower Columbia River.**

**PHASE 2. Instream verification utilizing enforcement personnel.**

**Objective 2: Locate and identify diversion owners.**

**Using PUD records, land assessments, and interviews officers will locate the diversion owners and advise them of the Inspection program.**

**Objective 3: Inspect diversion Devices for compliance with screening standards.**

**PHASE 1: Establish request for bid based upon Washington State screening Criterion for qualified inspection contractors.**

**PHASE 2: Letters of introduction will go out to all owners of Diversion sites advising them of the Screening program and requesting contact with the Department representative to arrange mutually agreed upon inspection dates.**

**PHASE 3: The successful contractor will then inspect the site according to Bates (1994) and as outlined in the Purchase Services Contract. Results of the inspection are then sent to Screening technicians in Yakima for evaluation.**

**Objective 4: Assure accountability with screening Standard**

**PHASE 1: Yakima screen technicians will send a compliance/non-compliance letters to diversion owners depending whether the screens passed/failed the inspection. The compliance letter advises the diversion owner that the screens are within screen standards. The non-compliance letter advises the diversion owner that the screens failed the inspection and the diversion owner must submit, within 30 days, a compliance plan and schedule to bring the diversion screens into compliance.**

**PHASE 2: Non-compliant diversion owners failing to respond to the non-compliance letter will be sent an Enforcement Letter restating the problems with the diversion screens and re-advising the Owner that he must submit a compliance plan and schedule within 30 days to bring the diversion screens into compliance.**

**Objective 5: Prosecute Non-compliant diversion Owners**

**PHASE 1: Contact the diversion owner and request that the owner comply submit a compliance plan and schedule to bring the diversion screens into compliance with the screening standards. Make certain that the diversion owners concerns are addressed to gain voluntary compliance**

**PHASE 2: Actively prosecute repeatedly non-compliant diversion owners utilizing civil and criminal penalties.**

**This plan continues the effort to locate and inspect diversion screens within the Columbia Basin. Mitchell Act monies have been used to survey the Upper Columbia River, the Lower Columbia River mainstem, and a partial survey of**

**tributaries within the Lower Columbia Basin. The survey would be in cooperation with the Mitchell Act funded screening program. The proposed program will prioritize streams where salmon and /or steelhead are being proposed or are listed under the Endangered Species Act.**

**f. Facilities and equipment.**

**There are no major facilities or equipment needs.**

**g. References.**

Bates, K. 1994. Washington Department of Fish and Wildlife (WDFW) Columbia/Snake river screen compliance program. Internal report. Olympia , Washington. December 13, 1994.

Storment, D., and M. Ray. 1993. Oregon Department of Fish and Wildlife. Columbia River screen compliance program. Internal report. Portland, Oregon. 1993.

Reynolds, R. 1996. Potential Lower Columbia River instantaneous Economic and smolt loss due to screen failure. Washington Department of Fish and Wildlife. Staff Report. Vancouver, Washington. December, 1996.

Washington Department of Fish and Wildlife. Screening requirements for Water Diversions. Internal Report. Olympia, Washington. March 15, 1993.

## **Section 8. Relationships to other projects**

**This project compliments Washington Department of Fish and Wildlife Wild Salmonid Policy which will require firm flow data to protect salmon and steelhead which may be listed under the Endangered Species Act. The proposed program also supplies critical data to Streamnet program for use by other State, tribal, and Federal agencies.**

## Section 9. Key personnel

| NAMES          | TITLES    | FTE/hours |
|----------------|-----------|-----------|
| R. REYNOLDS    | Detective | .33 FTE   |
| L. NELSON      | Captain   | .10 FTE   |
| J. EASTERBROOK | Biologist | .10 FTE   |

**REY REYNOLDS**  
**7202 NE 120TH AVENUE**  
**VANCOUVER, WASHINGTON, 98682**  
**(360) 260-3141**

**EMPLOYMENT OBJECTIVE:**

**To cultivate and complete comprehensive programs leading to advancement and higher career goals.**

**WORK HISTORY:**

10/15/85- PRESENT Department of Fish and Wildlife  
600 N. Capitol Way  
Olympia, Washington 98504

Developed complex habitat restoration and mitigation programs during investigations

04/10/85- 10/15/85 IDAHO FISH AND GAME  
BOISE, IDAHO

Operated independently as a fisheries biologist for a remote hatchery designing studies and maintaining facilities.

07/01/84- 01/85 DEPARTMENT OF NATURAL RESOURCES  
BOX 5000  
MADISON, WISCONSIN

Intern biologist designing studies for growth analysis of muskellunge then promoted to Special Warden investigating violations of State and Federal law.

**EDUCATION:**

UNIVERSITY OF WISCONSIN, STEVENS POINT 1979-1983  
DEGREES: B.S. FISHERIES SCIENCE A.A. BIOLOGY  
Degrees emphasized research and application.

**EXPERTISE:**

Investigation of complex environmental crime and habitat mitigation.

**Section 10. Information/technology transfer**

**The information gathered from the proposed study shall be communicated via Streamnet and through agency publications.**