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**PART I - ADMINISTRATIVE**

**Section 1. General administrative information**

**Title of project**

Power Repay Umatilla Basin Project

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**BPA project number:** 8902700

**Contract renewal date (mm/yyyy):**  Multiple actions?

**Business name of agency, institution or organization requesting funding**

Bonneville Power Administration

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**Business acronym (if appropriate)** BPA

**Proposal contact person or principal investigator:**

<b>Name</b>	<u>Jay Marcotte</u>
<b>Mailing Address</b>	<u>P.o. Box 3621, EWN-4</u>
<b>City, ST Zip</b>	<u>Portland, OR 97208</u>
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<b>Email address</b>	<u>jgmarcotte@bpa.gov</u>

**NPPC Program Measure Number(s) which this project addresses**

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**FWS/NMFS Biological Opinion Number(s) which this project addresses**

NMFS Hatchery Operations Biological Opinion - Section IV.C.3.b

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**Other planning document references**

Wy Kan Ush Me Wa Kush Wit Volume II. 1995. CRITFC - Umatilla River, Instream Flow and Passage (II.B.) and Walla Walla River, Instream Flow and Passage (II.B.)

Umatilla Subbasin Plan. 1990. CTUIR - Part II, Habitat Protection Needs, Habitat Protection Objectives and Strategies and Part IV, Anadromous Fish Production Plans, Spring Chinook Actions (IA1,2), Summer Steelhead Actions (IA1,2), Fall Chinook Actions (IA1,2), Coho Specific Considerations

Umatilla Hatchery Master Plan. 1989. CTUIR/ODFW - Facilities Needed to Implement Program, Outplanting Schedule & Coordination

Draft Umatilla Supplemental Hatchery Master Plan. 1993. CTUIR - Present Rehabilitation Efforts, Fish Passage Improvement and Flow Enhancement (III.C.)

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Umatilla Basin and Hatchery Annual Operating Plan. 1997. CTUIR/ODFW - Sections II.- V.

Umatilla Fisheries Restoration Plan. 1986. ODFW - Present and Proposed Flow Enhancement and Fishery Rehabilitation Projects and Costs and Rehabilitation Objectives and Pot

**Short description**

Provide power or reimbursement for power costs for Bureau of Reclamation Umatilla Basin Project pumping plants that exchange Columbia River water for Umatilla River water.

**Target species**

Coho, Spring Chinook, Fall Chinook and Summer Steelhead

**Section 2. Sorting and evaluation**

**Subbasin**

Umatilla

**Evaluation Process Sort**

CBFWA caucus	Special evaluation process	ISRP project type
Mark one or more caucus	If your project fits either of these processes, mark one or both	Mark one or more categories
<input checked="" type="checkbox"/> Anadromous fish <input type="checkbox"/> Resident fish <input type="checkbox"/> Wildlife	<input checked="" type="checkbox"/> Multi-year (milestone-based evaluation) <input type="checkbox"/> Watershed project evaluation	<input type="checkbox"/> Watershed councils/model watersheds <input type="checkbox"/> Information dissemination <input checked="" type="checkbox"/> Operation & maintenance <input type="checkbox"/> New construction <input type="checkbox"/> Research & monitoring <input type="checkbox"/> Implementation & management <input type="checkbox"/> Wildlife habitat acquisitions

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

**Umbrella / sub-proposal relationships.** List umbrella project first.

Project #	Project title/description
20516	Umatilla River Tributary Fish Passage
8802200	Umatilla River Fish Passage Operations (submitted separately)
8902700	Power Repay Umatilla Basin Project (subject proposal)
8343600	Umatilla Passage Facilities O&M (submitted separately)


***Other dependent or critically-related projects***

<b>Project #</b>	<b>Project title/description</b>	<b>Nature of relationship</b>
8403300	Umatilla Hatchery O&M	Provide passage flows for juveniles released
8343500	Umatilla Hatchery Satellite Facilities O&M	Provide passage flows for juveniles released
9000501	Umatilla Basin Natural Production M&E	Provide passage flows for adults and juveniles to and from natural production areas
8902401	Umatilla River/WEID Screens M&E	Provide flows for operation of Umatilla passage facilities
9000500	Umatilla Hatchery M&E	Provide flows for returning adult salmon and steelhead

**Section 4. Objectives, tasks and schedules**

***Past accomplishments***

<b>Year</b>	<b>Accomplishment</b>	<b>Met biological objectives?</b>
1995	Provide power cost reimbursement for Umatilla Basin Project	Yes, biological objectives of providing flows through the Umatilla Basin Project has occurred annually

***Objectives and tasks***

<b>Obj 1,2,3</b>	<b>Objective</b>	<b>Task a,b,c</b>	<b>Task</b>
1	Increase survival of migrating juvenile and adult salmon and steelhead	a	Provide power for operation of Umatilla Basin Project Columbia River pumping plants
		b	Provide reimbursement for power costs for operation of Umatilla Basing Project Columbia River pumping plants

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**Objective schedules and costs**

Obj #	Start date mm/yyyy	End date mm/yyyy	Measureable biological objective(s)	Milestone	FY2000 Cost %
1	10/2000	9/2001			100.00%
				<b>Total</b>	100.00%

**Schedule constraints**

Funding projects 8802200 and 8343600 listed in Section 3 under Umbrella proposals significantly affects the effectiveness of the Umatilla Basin Project. In addition, annual flow conditions in the Umatilla Basin significantly affect the quantity of water t

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**Completion date**

This project is seen as ongoing with no completion date identified.

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**Section 5. Budget**

**FY99 project budget (BPA obligated):**

**FY2000 budget by line item**

Item	Note	% of total	FY2000
Personnel		%0	
Fringe benefits		%0	
Supplies, materials, non- expendable property		%0	
Operations & maintenance		%0	
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		%0	
NEPA costs		%0	
Construction-related support		%0	
PIT tags	# of tags:	%0	
Travel		%0	
Indirect costs		%0	
Subcontractor		%0	
Other	utilities (power)	%0	650,000

<b>TOTAL BPA FY2000 BUDGET REQUEST</b>	<b>\$ 0</b>
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**Cost sharing**

<b>Organization</b>	<b>Item or service provided</b>	<b>% total project cost (incl. BPA)</b>	<b>Amount (\$)</b>
USBOR	Annual O&M and capital cost repayment	%0	
		%0	
		%0	
		%0	
<b>Total project cost (including BPA portion)</b>			<b>\$ 0</b>

**Outyear costs**

	<b>FY2001</b>	<b>FY02</b>	<b>FY03</b>	<b>FY04</b>
<b>Total budget</b>	\$650,000	\$650,000	\$650,000	\$650,000

**Section 6. References**

<b>Watershed?</b>	<b>Reference</b>
<input type="checkbox"/>	Confederated Tribes of the Umatilla Indian Reservation and Oregon Department of Fish and Wildlife. 1989. Umatilla Hatchery Master Plan. Submitted to Northwest Power Planning Council, Portland, Oregon.
<input type="checkbox"/>	Confederated Tribes of the Umatilla Indian Reservation and Oregon Department of Fish and Wildlife. 1990. Columbia Basin System Planning, Umatilla Subbasin, September, 1990. Submitted to Northwest Power Planning Council and Columbia Basin Fish and Wildlife
<input type="checkbox"/>	Confederated Tribes of the Umatilla Indian Reservation and Oregon Department of Fish and Wildlife. 1997. Umatilla Hatchery and Basin Annual Operation Plan, for the period September 1997 to August 1998. Oregon Department of Fish and Wildlife, Pendleton, Or
<input type="checkbox"/>	National Marine Fisheries Service. 1995. Biological Opinion for 1995 to 1998 Hatchery Operations in the Columbia River Basin. National Marine Fisheries Service, Portland, Oregon.
<input type="checkbox"/>	Olson, D.E., et. al. 1990. Trapping and Transportation of Adult and Juvenile Salmon in the Lower Umatilla River in Northeast Oregon, 1989-1990. Project No. 88-022, Contract No. DE-B179-89BP98636. Bonneville Power Administration, Portland, Oregon.
<input type="checkbox"/>	Oregon Department of Fish and Wildlife. 1986. A comprehensive Plan for Rehabilitation of Anadromous Fish Stocks in the Umatilla River Basin. Project No. 84-10, Contract No. DE-AI79-84BP18008, Bonneville Power Administration, Portland, Oregon.
<input type="checkbox"/>	U.S. Bureau of Reclamation. 1998. Umatilla Basin Proejct, Oregon. Planning

	Report - Final Environmental Statement. U.S. Department of the Interior, Northwest Region, U.S. Bureau of Reclamation, Boise, Idaho.
<input type="checkbox"/>	U.S. Fish and Wildlife Service. 1981. Instream Flow Study of the Umatilla River. U.S. Department of the Interior, Fisheries Assistance Office, U.S. Fish and Wildlife Service, Vancouver, Washington.
<input type="checkbox"/>	Zimmerman, B.C., et. al. 1991 and 1992. Trapping and Transportation of Adult and Juvenile Salmon in the Lower Umatilla River in Northeast Oregon, 1990-1991 and 1991-1992. Project No. 88-022, Contract No. DE-BI79-89BP98636. Bonneville Power Administration,
<input type="checkbox"/>	Zimmerman, B.C., and B.B. Duke. 1993-1998. Trapping and Transportation of Adult and Juvenile Salmon in the Lower Umatilla River in Northeast Oregon, 1992-1993 through 1997-1998. Project No. 88-022, Contract No. DE-BI79-89BP98636. Bonneville Power Admini
<input type="checkbox"/>	

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## **PART II - NARRATIVE**

### **Section 7. Abstract**

In the 1980's, CTUIR and ODFW began implementing the Umatilla Fisheries Restoration Plan. An integral part of that effort was to address the inadequate flow and migration conditions (which led to salmon extirpation) by constructing fish passage facilities, initiating a trap and haul program, and implementing the Umatilla Basin flow enhancement project.

The Power Repay objective is to increase adult and juvenile migrant survival in the Umatilla Basin. The project produces survival benefits for both hatchery and natural production by providing power or reimbursement of power costs for operation of the Umatilla Basin Project Columbia River pumping plants. These pumping plants provide water for irrigation usage in exchange for instream natural Umatilla River flows and storage water designated for fish passage use. This is the key component of the Umatilla Subbasin instream flow enhancement effort.

The project began in 1995 with the completion of Phase I of the Umatilla Basin Project. Since then, project costs have increased as Phase II of the Umatilla Basin Project has been implemented. Increases in juvenile and adult survival associated with the flow enhancement effort contribute directly to the NPPC rebuilding goal. The project is viewed as a long term O&M project required for maintaining passage survival advantages achieved through the Umatilla Basin Project flow enhancement effort.

## **Section 8. Project description**

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

The lower 30 miles of the Umatilla River is heavily diverted for agricultural use. Historically, inadequate flow conditions in this river reach during critical portions of both adult and juvenile migration periods was the primary contributor to the extirpation of salmon and decline of summer steelhead populations in the Umatilla River.

Beginning in the early 1980's, CTUIR and ODFW began implementing a comprehensive plan to supplement steelhead and reestablish salmon runs in the Umatilla River Basin. A key component of the Umatilla Fisheries Restoration Plan was a threefold approach to addressing the inadequate migration conditions. The three ingredients included construction of fish passage facilities in the lower river, trapping and transportation of adults and juveniles, and implementation of the Umatilla Basin flow enhancement project.

The project is currently responsible for supplying power or reimbursement of the power costs associated with the Umatilla Basin Project Columbia River pumping plants. Operation of these pumping plants is the key component of the Umatilla Basin Project which exchanges pumped Columbia River water with basin irrigation interests in order to provide instream flows in the Umatilla River. The actual implementation of the Umatilla Basin Project is conducted and coordinated under project number 8802200, Umatilla River Fish Passage Operations.

The exchange program with basin irrigation interests provides instream flows in two manners: 1) Exchange of Columbia River water for natural instream flows and 2) Exchange of Columbia River water for reservoir storage capacity in McKay Reservoir which can be released for fish passage during critical migration periods.

It is assumed that the Umatilla Basin Project will provide more adequate flow conditions in the Umatilla River which will increase the survival of migrating juvenile and adult salmon and steelhead. This should, in turn, assist in the overall restoration effort in the basin by ensuring that flow conditions are not a limiting factor. In addition, the flow enhancement effort funded by this project has been identified by NMFS in their Hatchery Biological Opinion as being necessary to reduce straying of Umatilla fall chinook into the Snake River.

The project began in 1995 with the completion of Phase I of the Umatilla Basin Project. Funding under the project has increased significantly since inception with completion of the Hermiston and Stanfield Irrigation District components under Phase II of the Basin Project. The project leader is the Contracting Officer Technical Representative (COTR) for BPA for this project as well as COTR for the other BPA funded fish restoration projects in the Umatilla Basin. The project leader participates in the following related forums; Umatilla Technical Work Group, Umatilla River Operations Group, and Umatilla Management Oversight Committee.

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

As stated in Section 8.a., inadequate passage conditions for both upstream and downstream migrants was the primary contributor to the extirpation of salmon and decline of steelhead in the Umatilla Basin. The Umatilla Basin Project is a key component of the Umatilla Fisheries Restoration plan by providing instream flows to enhance passage conditions during critical migration periods. The objective of the project is directly related to the Umatilla Fisheries Restoration Program goal of restoring salmon and steelhead in the Umatilla River by providing flows to increase the tributary survival of migrating adults and juveniles.

The goal of the Umatilla Fisheries Restoration Program is directly related to the Council's mandate to protect, mitigate, and enhance fish and wildlife affected by development and operation of the hydropower system. By increasing survival of adult and juvenile migrants in the Umatilla River, the project addresses the Councils' goals as listed in the 1994 Fish and Wildlife Program. Providing passage flows in the basin assists in the attempt to halt the decline of the summer steelhead population and allows rebuilding of the steelhead population and restoration of salmon populations to continue.

The project objective of increasing survival of juvenile and adult migrants by providing passage flows is specifically outlined in Section 7.9B of the 1994 Fish and Wildlife Program. The project provides in place, in kind mitigation for historical losses associated with water diversions in the Umatilla Basin.

The Umatilla Fisheries Restoration Plan is a comprehensive effort which involves many different projects. This not only includes the umbrella sub-proposals and other related BPA projects listed in Section 3 but public and private habitat enhancement efforts as well. The success of these many projects and the overall Umatilla Fisheries Restoration Plan is directly dependent on the ability of the Umatilla Basin Project to ensure that tributary passage flows are no longer

limiting factor affecting salmon and steelhead survival in the basin.

**c. Relationships to other projects**

The Power Repay Project is a cooperative project with Bureau of Reclamation to supply power or power cost reimbursement for the Umatilla Basin Project. The Umatilla Basin Project is coordinated under project number 8802200, Umatilla Fish Passage Operations. The Umatilla Fish Passage Operations Project actually coordinates daily operations of the Bureau of Reclamation Umatilla Basin Project with the Oregon Department of Water Resources and local irrigation districts to provide adequate flow conditions.

**d. Project history (for ongoing projects)**

The Power Repay Project has been ongoing since 1995 and has retained the same project number over that period. Project costs have averaged \$XXX,XXX over the last four years with a maximum annual cost of \$414,003 in FY97. It is anticipated that project costs will remain at the high end of that range in the future now that Phase I and II of the Umatilla Basin Project are both complete.

These costs are all associated with power repayment for operation of the Columbia River pumping plants. Actual operation of the Umatilla Basin Project is conducted under project number 8802200, Umatilla Fish Passage Operations. The Umatilla Fish Passage Operations Project conducts the exchange program by coordinating exchanges with the irrigation districts and calling for storage passage flows.

**e. Proposal objectives**

The project has one objective: To increase the survival of migrating juvenile and adult salmon and steelhead in the Umatilla River. There are two project tasks associated with this objective, to provide power or reimbursement of power costs associated with operation of the Umatilla Basin Project Columbia River pumping plants.

**f. Methods**

The two tasks associated with the project objective are only related to providing power for operation of the Umatilla Basin Project. There are no scientific or technical methods associated with these tasks.

A critical assumption in the passage program is that natural, volitional migration of upstream and downstream migrants is preferable to transportation and that higher

overall survival will result if adequate natural passage conditions exist. Based on that assumption, attempts are made to maximize the time periods and optimize conditions for natural migration.

Environmental conditions are the overriding factor in the cost of the project. During drought years, low water flows extend the period when inadequate flows exist and increase the period when flows need to be exchanged. This results in higher pumping costs for exchanges. Low flow years also result in less water being available in storage for flow enhancement although this does not result in increased pumping costs.

**g. Facilities and equipment**

This project does not specifically have, or require, any facilities or equipment. The major pumping facilities needed for Phase I and II of the Umatilla Basin Project are adequate for those purposes and the projects required to conduct and coordinate the enhancement effort are also in place.

**h. Budget**

(Replace this text with your response in paragraph form)

**Section 9. Key personnel**

Jay G. Marcotte  
Contracting Officer Technical Representative

Employment

1991 - Present  
Bonneville Power Administration  
Portland, Oregon  
Contracting Officer Technical Representative (1.0FTE)  
Oversee all BPA funded project statements of work and budgets for the Umatilla Basin. Activities include  
XX.  
Serves on Umatilla Management Oversight Committee, Umatilla Technical Work Group, and Umatilla River Operations Group.

Other job/employment history

Publications

Education

**Section 10. Information/technology transfer**

The amount of water supplied through the exchange program is detailed in annual reports to the Council by Oregon Water Resources Department. Power cost figures are generated by the Bureau of Reclamation and directly distributed to Bonneville Power. Detailed technical information related to daily operation of the exchange program and flow enhancement effort is detailed in the Umatilla River Fish Passage Operations (formerly Umatilla Trap and Haul) annual reports.

**Congratulations!**