

**Bonneville Power Administration
Fish and Wildlife Program FY98 Watershed Proposal Form**

Section 1. General administrative information

Title **Methow River Valley Irrigation Conservation Project**

Bonneville project number, if an ongoing project 9603401

Business name of agency, institution or organization requesting funding
Yakama Indian Nation

Business acronym (if appropriate) YIN

Proposal contact person or principal investigator:

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Subcontractors.

Organization	Mailing Address	City, ST Zip	Contact Name
Washington State Department of Ecology	P.O. Box 47600	Olympia, WA 98504-7600	Ms. Laura Lowe (360-407-7255 of, 360-407-6535 fx)

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

1996 Early Action Watershed Initiative; Council approved in May 1996 and included in the Program by reference.

NMFS Biological Opinion Number(s) which this project addresses.

N/A

Other planning document references.

Subbasin.

Methow River

Short description.

This project will enhance in-stream flows and fish passage in the Methow and Twisp rivers for anadromous and resident fish through funding changes to the Methow Valley Irrigation District’s (MVID) irrigation system.

Section 2. Key words

Mark	Programmatic Categories	Mark	Activities	Mark	Project Types
X	Anadromous fish	X	Construction	X	Watershed
	Resident fish		O & M		Biodiversity/genetics
	Wildlife		Production		Population dynamics
	Oceans/estuaries		Research		Ecosystems
	Climate		Monitoring/eval.		Flow/survival
	Other		Resource mgmt		Fish disease
			Planning/admin.		Supplementation
			Enforcement		Wildlife habitat en-
			Acquisitions		hancement/restoration

Other keywords.

Irrigation systems, in-stream flow, fish diversions

Section 3. Relationships to other Bonneville projects

Project #	Project title/description	Nature of relationship
9604000	Coho Restotion Mid-Columbia Tribs, (Methow and Wenatchee Rivers)	Actions resulting in increased in-stream flows and removal of fish barriers should improve opportunities for Coho enhancement through supplementation

Section 4. Objectives, tasks and schedules

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Improve the efficiency of water use.	a	Identify opportunities for irrigation system water conservation actions.
2	Increase in-stream flows and fish passage for resident and anadromous fish.	b	Propose irrigation system (MVID) with high potential to benefit from conservation measures.
		c	Coordinate with Dept of Ecology (WDOE) and MVID on development of action plan.
		d	Propose action plan for implementation and identify additional funding opportunities (Council and BPA).
		e	Secure environmental analysis
		f	Select alternative for implementation following MVID and WDOE final actions.

Objective schedules and costs

Objective #	Start Date mm/yyyy	End Date mm/yyyy	Cost %
1	5/1996	11/1998	5.00%
2	5/1996	11/1998	95.00%
			TOTAL 0.00%

Schedule constraints.

Eithteen months of environmental analysis completed on 12/9/97 with a final Environmental Assessment (EA) and a Finding of No Significant Impacts on two alternatives - A and C. MVID Board of Directors must decide between two of the alternatives.

Completion date.

FY 1998

Section 5. Budget

FY99 budget by line item

Item	Note	FY98
Personnel		
Fringe benefits		
Supplies, materials, non-expendable property		
Operations & maintenance		
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		
PIT tags	# of tags:	
Travel		
Indirect costs		\$ 0
Subcontracts	This is the FY 1998 incremental funding proposed to fully fund Alt A in Fianl EA (see Proj History)	\$686,535
Other	Note - if Alt C is selected by MVID Board, it is estimated that we will need only \$200,000, or less.	
TOTAL		\$ 0

Outyear costs

Outyear costs	FY99	FY00	FY01	FY03
Total budget	\$ 0	\$ 0	\$ 0	\$ 0
O&M as % of total				

Section 6. Abstract

The implementation of this project, scheduled to begin construction in the spring of 1998, will improve the efficiency of water use and increase in-stream flows and fish passage for resident and anadromous fish in the Methow and Twisp rivers, Okanogan County, Washington. These rivers are heavily diverted for irrigation purposes. The Yakama Indian Nation (YIN) has been pushing to achieve water conservation throughout the irrigation systems within the basin and the Methow Valley Irrigation District represents the most significant of these diversions. The YIN has worked in close cooperation with Washington Department of Ecology in developing this project.

The Methow River still supports depressed populations of steelhead, bull trout, resident rainbow, westslope cutthroat, and spring and summer chinook salmon. The Twisp River

produces all of these species with the exception summer chinook, and was once a major Coho production area in the basin. Coho were extirpated from the watershed more than a half a century ago. Species of primary concern in this portion of the basin are chinook salmon (summer and spring), summer steelhead, and Bull trout. On August 11, 1997, steelhead in the Methow and other areas were added to the Endangered Species list by the National Marine Fisheries Service. The U.S. Fish and Wildlife Service recently announced that bull trout will be listed under the Endangered Species Act, and is currently finalizing the ruling.

This project was proposed as an “Early Action Watershed Initiative” by YIN to the Council in 1996 and was included in the Fish and Wildlife Program in May 1996 through a Council motion. The project is a cost-share between BPA and Washington Departments of Ecology and Fish and Wildlife. The Washington Department of Ecology (WDOE) is the lead agency. The YIN’s role is in monitoring progress and assisting with technical support/advice as needed. A special note should be made that WDOE agreed to act a lead agency in implementing this project without charging any indirect overhead.

The approach to achieve efficiency of water use and increase in-stream flows and fish passage has focused on irrigation system improvements. This project represents a significant opportunity to improve in-basin salmonid habitat conditions.

Prior to BPA involvement in the project, the MVID Water Supply Facility Plan was completed by WDOE and MVID. The recommend alternative coming out of this plan (identical to the Final EA’s Alternative A) was adopted by the MVID Board of Directors. Once BPA began environmental analysis on this project several additional alternatives were identified. At the completion of the environmental analysis and the issuance of the Final EA and Finding of No Significance, issued on December 9, 1997 (BPA Document DOE/BP-3027), two alternatives were cleared for possible implementation - Alternative A, Proposed Action and Alternative C, MVID Dissolution. The MVID Directors will need to decide among the alternatives cleared for implementation under the Final EA. The selection process may not be complete until as late as April 15, 1998. As a result, BPA contract implementation is not likely to begin until after the MVID Directors take final action on Alternatives A or C.

Under the proposed action - Alternative A, the project will provide for the conversion of MVID’s inefficient surface diversion, gravity canal system to a pressurized groundwater pump system. The district will be reorganized with some members expected to leave while others will remain. A significant funding component of this alternative (see the Final EA for details), as well as with Alternative C, is exclusion compensation for members choosing to leave the district. Funds coming from BPA only would be used for this component of the project under Alternatives A and C (estimated for both alternatives at \$1,345,000). Cost-share funding from WDOE (Ref 38 funding) may not be used for payments to individuals under state law. Therefore, any exclusion compensation offered as part of this project must come from BPA funds.

Alternative C, the second alternative the MVID may choose, is to dissolve the district with all members eligible for the exclusion compensation and ground water wells and water rights based on applications for changes in points of diversion. The MVID is taking steps this winter to determine which of its members desire to be excluded from the district. As noted above, this process is not likely to be complete until April 15, 1998.

The current system's water use is about 67 cubic feet per second (cfs). Under either of the two alternatives available for implementation based on the Environmental Assessment and Finding of No Significant Impacts signed by BPA on December 9, 1997, water use will drop to about 46 cfs and will be all from groundwater wells. An outcome will be the irrigation diversions used to support the two canals will be removed and no longer act as passage problems for fish.

The result from the water conservation and improvement to in-stream flow and fish passage will be monitored annually as part of the YIN's on-going river monitoring program throughout the Mid-Columbia region. These efforts will include spring chinook snorkel surveys, spring chinook smolt production estimates as well as numerous flow measurements within the treatment stream reaches. These efforts will help evaluate the fish habitat value of the project as well ensure that projected benefits are realized.

Section 7. Project description

a. Technical and/or scientific background.

This project responds to the need to increase the efficiency of water use, improve in-stream flows, and correct fish passage problems that have been identified in several recent studies of fish and water issues in the Methow Basin. The Columbia Basin System Planning Salmon and Steelhead Production Plan, Methow and Okanogan Rivers (WDW et al., 1990), prepared for the Northwest Power Planning Council, discusses fish production constraints for the anadromous species currently present in the Methow. While overharvest in the ocean and downstream fisheries, and dam-related mortality of smolts and adults, are cited as the significant limitations for all of the stocks, in-basin limitations cited included the following:

Steelhead - slow juvenile growth rates and losses from winter icing, spring flooding, lack of in-stream inter cover, and unscreend irrigation diversions;

Spring chinook - loss of rearing habitat from dewatering and low flows resulting from irrigation diversions; loss of juveniles as a result of substandard irrigation diversions and winter icing conditions; and habitat losses from riparian development.

One of the recommended strategies for correcting in-basin limitations on spring chinook is to implement water conservation and acquisition measures, including conversion to

sprinkler systems. The proposed conversion of the MVID canal system to individual groundwater wells is specifically mentioned.

The draft Methow River Basin Plan (Methow Valley Water Pilot Planing Project Planning Committee, 1994) included in its major conclusions, “4. Instream flow must be increased to improve fish and wildlife habitat and preserve and enhance the unique quality of the Methow Valley while allowing for growth.” (page vii) They also state, “...the Committee recognized that existing in-stream flow levels are well below those needed to meet regional fish management objectives, and that significant opportunities exist to improve stream flows.” (Ibid., page vii) Appendix D, which discusses Agricultural Conservation Alternatives, states, “While there are a host of factors contributing to the poor status of these stocks, irrigated agriculture is a significant contributing factor.” (Appendix A, p. D.1) The MVID east and west canals are identified as having the highest potentials of the irrigation systems listed for increasing in-stream flows at the points-of-diversion through conversion to wells and/or enclosed pipe (Appendix A, Table A, p. D.2).

The Tribal Columbia River Anadromous Fish Restoration Plan, WY-KAN-USH-MI WA-KISH-WIT Spirit of the Salmon (CRITFC, 1995) also states as its first recommendation for the Methow River System, “Irrigation diversions in combination with natural low flow occurrences and channel realignment in the basin create dewatering problems and upstream passage problems and significantly reduce available habitat. Instream flows will be significantly improved by implementing the recommendations of the “Draft Methow Basin Plan.” (page 83).

b. Proposal objectives.

The first objective of this proposal is to improve the efficiency of water use within the MVID service area. The second objective is to increase in-stream flows and fish passage for resident and anadromous fish.

Based on the environmental analysis that was recently completed for this project (BPA Document No. DOE/BP-3027), either one of the two alternatives that were cleared for implementation under the Finding of No Significant Impacts should result in increases in in-stream flows. The existing canal system uses about 67 cfs. The proposed system, under either of the two alternatives, should result in water usage of about 46 cfs. In addition, two irrigation diversion structures would be removed - one each on the Methow and Twisp.

c. Rationale and significance to Regional Programs.

The proposed project directly support the Columbia River Basin-wide watershed approach for the enhancement of anadromous habitat. The project will improve in-stream flows in a significant subbasin within the Mid-Columbia reach.

The project will directly aid in developing a healthy Columbia River Basin, that is consistent with goals of the fish and wildlife agencies and tribes. The project seeks to balance the social, agricultural and fish and wildlife needs of the project area with water conservation system that supports irrigation and flows for fish. The project will affect one segment of subbasin, the Methow River, that is a building block for salmon enhancement. Finally, the project is a cost-share by the Washington Departments of Ecology and Fish and Wildlife and BPA, consistent with Council guidance..

d. Project history

The project was developed by the YIN in coordination with WDOE and proposed to the Northwest Power Planning Council for consideration for funding on a cost-share basis with the State of Washington. Approval to implement the project as part of the Council's Fish and Wildlife Program was granted by the Council in the spring of 1996. BPA initiated an environmental analysis for the project in 1996 and began scoping. Following eighteen months of scoping, comment analysis, development and review of an Environmental Assessment in June of 1997, a Final Environmental Assessment and a Finding of Significant Impact was issued on December 9, 1997.

When the project was initially reviewed for implementation, the total cost was estimated at \$3,999,400. By June of 1996, WDOE revised the budget to \$4,268,000. As a result of the information learned in the development of the Final EA, the proposed budget for Alternative A is \$4,614,735 and the proposed budget for Alternative C is \$2,683,808. The revised budget for Alternative A reflects minor changes in project design and the inclusion of several cost items not previously identified but considered necessary. In addition, recent discussion between the MVID and Barkley Ditch Directors have identified additional costs not originally anticipated.

A significant component of Alternative A's (and Alternative C's) budget assumption is the cost of rehabilitation of the Barkley Ditch. Without going into details here, the estimate for this component is \$50,000. Just before the Final EA was approved, but too late to be reflected in the document other than through a note in the table, the Barkley Ditch estimate was recalculated by the project engineer to reflect a change in scope of the rehabilitation. At this time it is not clear if Okanogan County is willing to cost-share this element of the project. Therefore, full funding is assumed as part of the FY 1998 budget request. The Barkley Ditch rehabilitation is now estimated at \$375,000, resulting in a net increase in the total project budget of \$325,000.

A second additional cost not included in either Alternative A or Alternative C is cultural resource mitigation. It is estimated that \$15,000 will be needed carry out the mitigation required as a result of implementing either of the two alternatives. The canal is considered historically significant and as such, will require special documentation.

The net effect of the increases associated with the Barkley Ditch rehabilitation and cultural resource mitigation is \$340,000. In addition, the increase in total construction costs between the early estimate of \$4,268,200 and the Final EA estimate of \$4,614,735 is \$346,535. This results in a total increase of \$686,535 for a revised, total project cost of \$4,954,735. Of this total, it is proposed that BPA fund \$2,847,535 and WDOE, in combination with WDFW funding, cost-share balance, \$2,107,200. WDOE has indicated that they do not have additional funds to contribute to the net increase of the total revised project cost. Therefore the BPA is being requested to fully fund the net increase of \$686,535.

e. Methods.

The WDOE entered into an agreement with the engineering firm Montongramry Water Group of Kirkland, Washington, to prepare a water conservation facility plan for the MVID. This plan was prepared in cooperation with Board of the MVID and was completed in June 1996. The facility plan identified a preferred alternative which became the proposed action alternative - Alternative A - in BPA's Final Environmental Assessment (EA). Following completion of the facility plan, the YIN, in coordination with WDOE, proposed this project to the Northwest Power Planning Council for co-funding under the Early Action Watershed Projects. Once BPA became involved with this project, it was determined environmental analysis would be necessary. Scoping began in 1996 and based on comments received during scoping for the EA, two other alternatives were also identified and presented in the EA. Alternative B proposed a partial upgrade to the existing canal system (retaining in-stream diversions). The third alternative - Alternative C - proposed MVID dissolution. Alternative D is the no action alternative.

The two alternatives determined cleared for possible implementation are Alternatives A and C. The MVID Board of Directors will have to work with the membership to determine which of the two alternatives they will recommend for adoption - and ultimate implementation by WDOE and BPA. One of the first steps the MVID has to take (expected to begin in January 1997) is determine how many members want to be excluded from the district. Once this step is completed, the Directors will know if a sufficient number of members choose to remain and if not, the dissolution of the district would proceed. This process spelled out in Washington Administrative Code and through rules adopted by WDOE. This process is also explained in BPA's Final EA

The details of the proposed action alternative, Alternative A and the dissolution alternative - Alternative C, are too complex to be discussed in this program proposal. The reader is encouraged to review the Final Environmental Assessment, available through BPA's Public Involvement Office. Ask for publication number DOE/BP-3027.

The next steps in identifying the tasks for implementing this project, as noted above, are dependent on the actions by the MVID Board of Directors.

f. Facilities and equipment.

Groundwater wells will be developed as described in the Final EA. No O & M is planned for BPA funding under this project.

g. References.

Section 8. Relationships to other projects

Coho supplementation is planned for the Methow River under project number 96-040.

Section 9. Key personnel

The WDOE will be the lead in implementing this project. BPA will contract with WDOE for project implementation.

Section 10. Information/technology transfer

Techniques used in developing water conservation measures in this project will be shared with interested parties.