

**Bonneville Power Administration Power Administration
Fish and Wildlife Program FY99 Proposal Form**

Replace Chumstick Creek Culvert

Bonneville project number, if an ongoing project 9044

Business name of agency, institution or organization requesting funding
Washington Department of Fish and Wildlife

Business acronym (if appropriate) WDFW

Proposal contact person or principal investigator:

Name Bob Steele, Area Habitat Manager
 Mailing Address 3860 Chelan Highway North
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 Phone (509) 662-0503
 Fax (509) 662-0490
 Email address _____

Subcontractors.

Organization	Mailing Address	City, ST Zip	Contact Name
Chelan County Public Works	Courthouse, 350 Orondo Avenue	Wenatchee, WA 98801	David Koberstein, P.E., County Engineer

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

7.6 (Habitat Goals, Policies, and Objectives); 7.7. (Cooperative Habitat Protection); 7.9 (Pursue Subbasin Goals); 7.10K (Passage into Historic Habitat)

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

The NMFS Biological Opinion on steelhead is not available at this time.

Other planning document references.

This culvert was not known to be a passage barrier until recently, so it is not cited in earlier planning documents. However, it is mentioned as a high priority in three recent planning documents: (1) the Habitat Assessment, a part of the Mid-Columbia Public Utility Districts application package for a Habitat Conservation Plan (Bugert et al. 1997; page 32), (2) as part of the Wenatchee Watershed Planning Project for Chelan County Conservation District (Davis 1996; page 13), and (3) the flood plain protection program sponsored by USFWS (Titus 1997; page 14).

Subbasin.

Chumstick Creek, tributary to Wenatchee River, Washington.

Short description.

Replace Chumstick Creek culvert to allow salmonid passage.

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.

Passage improvements, historical habitat

Section 3. Relationships to other Bonneville projects

Project #	Project title/description	Nature of relationship
N/A		

Section 4. Objectives, tasks and schedules

Obj 1,2,3	Objective	Task a,b,c	Task
1	Remove and replace culvert	a	Finish functional design.
		b	Purchase and stage materials.
		c	Remove existing structure and fill. Install structural plate arch.
		d	Resurface roadway.

Objective #	Start Date mm/yyyy	End Date mm/yyyy	Cost %

1	07/1999	08/99	100
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Schedule constraints.

We foresee no constraints that may cause schedule changes.

Completion date.

All work will be done in July 1999.

Section 5. Budget

FY99 budget by line item

Item	Note	FY99
Personnel		
Fringe benefits		
Supplies, materials, non-expendable property	Structural plate arch	\$19,250
Operations & maintenance		
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		
PIT tags		
Travel		
Indirect costs		
Subcontracts	Work by Chelan County Public Works	\$152,130
Other		
TOTAL		\$171,380

Outyear costs.

All work will be conducted in FY 99.

Section 6. Abstract

The entire Chumstick Watershed is blocked to anadromous fish passage by a 10 foot diameter culvert on North Road, at the creek=s confluence with the Wenatchee River. This prevents use of 78 square miles of habitat to chinook salmon and steelhead, listed as Aendangered≅ under the Endangered Species Act.

Washington Department of Fish and Wildlife and Chelan County Public Works will replace the culvert with a bottomless arch structure to allow adult and juvenile passage under all flow conditions.

Section 7. Project description

a. Technical and/or scientific background.

The Wenatchee Watershed support runs of chinook and sockeye salmon, and steelhead, which is listed as "endangered" under the federal Endangered Species Act (ESA). In their status report on steelhead, NMFS (Busby et al. 1996) list passage barriers as one factor contributing to the decline of steelhead in the mid-Columbia Region. Based on a Hankin-Reeves (USFS 1996) survey of the Wenatchee River and its tributaries, the USFWS recommended that replacement of culverts on Chumstick Creek with bottomless arches is a high priority for fishery restoration and flood protection (Titus 1997). Survey results indicate that temperature, pool:riffle ratios, fine sediment deposition, and other conditions in Chumstick Creek are adequate for successful spawning and rearing (Titus 1997).

b. Proposal objectives.

This project has only one objective: allow salmonid passage into a tributary to the Wenatchee River (Chumstick Creek). The North Road crosses this creek at its confluence with the Wenatchee. The culvert under that road prevents upstream passage of all salmon, trout, and whitefish, thereby preventing use of the entire Chumstick Creek and its tributaries (Eagle, Freund, Merry, and Little Chumstick creeks), which have been documented to historically support anadromous salmonids (Mullan et al. 1992). The watershed now supports viable populations of resident rainbow trout (Titus 1997).

The 10 foot diameter culvert will be removed and replaced with a 16 foot wide bottomless steel arch, which will allow upstream/downstream passage at all flow conditions. Moreover, this structure will normalize bedload movement and will reduce the potential for personal property damage during flood events. This culvert replacement project will be done in conjunction with an ongoing culvert renovation/replacement project sponsored by the Chumstick Watershed Association.

c. Rationale and significance to Regional Programs.

This project complements three local programs: (1) the work of the Chumstick Watershed Association, which has an objective to restore salmon and steelhead runs to that stream, (2) the Wenatchee Watershed Planning Project, lead by Chelan County Conservation District, which is addressing natural resource management issues in a consensus manner (Davis 1996), and (3) the pending Habitat Conservation Plan for the Mid-Columbia Public Utility Districts, who propose to provide incentives to local landowners to protect and restore salmonid habitat as a means to compensate for fish killed at the mainstem dams. These projects are synergistic in nature, and renovation of this culvert will further their objectives. Letters of support for this project are attached.

d. Project history.

This project is new and short term, although the Wenatchee Watershed Planning Project, lead by the Conservation District, has been underway since 1992 (Davis 1996). This culvert was identified as a passage barrier by WDFW in 1992 (Steele, pers. comm.).

e. Methods.

The conceptual design for project has been completed by WDFW and approved by Chelan County Public Works. Upon notice of funding by BPA, WDFW will complete the functional design (task a) and the county will then purchase the materials and place them at the site (Task b). Chelan County will then close the North Road during the removal and replacement project (task c), which should then take less than one month to limit the amount of time the road is closed. Chelan County will then complete the road preparations (task d).

f. Facilities and equipment.

All major facilities and equipment to be used in the project will be provided by Chelan County Public Works Department, who will supervise the construction.

g. References.

- Bugert, R, and twelve co-authors. 1997. Aquatic species and habitat assessment of the Wenatchee, Entiat, Methow, and Okanogan rivers for the Mid-Columbia Habitat Conservation Plan. Available from Chelan County Public Utility District, Wenatchee, WA. 104 p.
- Busby, P. J., and six coauthors. 1996. Status review of west coast steelhead from Washington, Idaho, Oregon, and California. U.S. Department of Commerce, NOAA Tech. Memo. NMFS-NWFSC-27, 261 p.
- Davis, D. 1996. Draft Wenatchee Watershed Planning Project, Chelan County Washington. Available from Chelan County Conservation District, Wenatchee, WA. 105 p. plus appendices.
- Mullan, J. W., K. R. Williams, G. Rhodus, T. W. Hillman, and J. D. McIntyre. 1992. Production and habitat of salmonids in mid-Columbia River tributary streams. Monograph 1., U.S. Fish and Wildlife Service, Leavenworth, WA.
- Titus, K. 1997. Stream survey report, Chumstick Creek, Washington. U.S. Fish and Wildlife Service, Leavenworth, WA. 16 p.
- USFS (United States Forest Service) 1996. Stream inventory handbook, levels I and II, version 9.6, Region 6, Portland, OR.

Section 8. Relationships to other projects

This project will complement the work of the Chumstick Watershed Association, and U.S. Fish and Wildlife Service, who identified additional culverts on private lands adjacent to Chumstick Creek that may block or hinder anadromous passage. Further, this project will further the goals of the Chelan County Conservation District, who has been working on a project since 1992 to identify and correct water quality and fish habitat problems on the Wenatchee Watershed. During their ranking phase for developing priority action items for the watershed, the Chumstick Creek was ranked as a high priority stream (Davis 1996).

This project will be undertaken primarily by the WDFW area habitat biologist and Chelan County Public Works (who will donate the contract inspection work and roadway resurfacing), but will also receive direct support or in-kind contributions from the following entities:

- (1) WDFW through the Regional Fisheries Enhancement Program and donated engineering design;
- (2) USFWS through the Washington State Ecosystem Conservation Program;
- (3) the Icicle Chapter of Trout Unlimited.

Section 9. Key personnel

This project will be supervised by Bob Steele, area habitat manager for WDFW. He has 18 years experience in fish habitat issues in North Central Washington, with a B.S. in Fishery Science from University of Washington. Fish passage engineering will be done by Bruce Heiner, WDFW senior fish passage engineer for eastern Washington. He has ten years experience in fish passage with a B.S. in Fishery Biology from University of Idaho and an M.S. in civil engineering from Washington State University.

Section 10. Information/technology transfer

This project will be done to WDFW fish passage standards, and will be promoted within North-Central Washington on how federal, state, and local governments can work cooperatively to solve a salmonid habitat problem. The Chumstick Watershed Association will use this project to further enhance their goals of watershed restoration.