PROGRESS REPORT

Reporting Period: December 13, 2007 to September 22, 2009

Peshastin Irrigation District Pipeline SRFB Contract # 07-1865R

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Introduction

The Peshastin Irrigation District Pipeline project was proposed by the Chelan County Natural Resource Department (CCNRD) as part of a regional commitment by Chelan County to initiate long-term habitat protection and restoration efforts within the Wenatchee River subbasin for salmonid species listed under the federal Endangered Species Act (ESA). The long term goal stated in the Wenatchee Subbasin Plan (NPCC 2004) is to have the Wenatchee River's existing and future habitats contribute to the recovery of listed species and to eventually provide harvestable and sustainable populations of fish and other aquatic resources.

The CCNRD has been working with local, state, and federal agencies, private landowners, and the Wenatchee Watershed Planning Unit (WWPU) to identify and implement habitat restoration projects through the Wenatchee subbasin to benefit Upper Columbia steelhead, spring Chinook and bull trout. The overall purpose of the Peshastin Irrigation District Pipeline project is to pipe the existing Peshastin Irrigation Ditch to conserve water and allow more cfs to remain in Peshastin Creek. The project is designed to improve habitat for ESA-listed salmonid species in the Wenatchee River, by addressing limiting biological and habitat factors that were identified by numerous salmon recovery documents, including the Wenatchee Subbasin Plan (NPCC 2004), watershed analyses, Wenatchee Limiting Factors Analysis Report (Andonaegui 2001), the Upper Columbia River Biological Strategy (UCRTT 2007), Draft Salmon Recovery Plan (UCSRB 2006a) and the Draft Salmon Recovery Implementation Schedule (UCSRB 2006b). In addition, the project was described as an alternative in the Peshastin Subbasin Needs and Alternatives report (Anchor Environmental 2007).

Project Goal and Objectives

The overall goal of the Peshastin Irrigation District Pipeline project is to provide instream flow to Peshastin Creek to benefit Upper Columbia steelhead, spring Chinook and bull trout. The objective includes piping 10,498 feet of the existing Peshastin Irrigation District irrigation ditch to provide irrigation efficiencies so less water will be diverted from Peshastin Creek. These efforts should provide 1-2 cfs of instream water.

Project Description

The primary benefit of the project will be to increase instream flow during summer (July – September) which will benefit in-migration for Chinook salmon and bull trout. Other life stages (such as rearing) and species (steelhead) present in Peshastin Creek from July-September will also benefit from increased flow.

Peshastin Creek is a tributary to the Wenatchee River, originating at Blewett Pass and flowing in a northeasterly direction 15.4 miles before entering the Wenatchee River at RM 17.9, downstream of the town of Peshastin (Andonaegui 2001). The Peshastin Creek watershed has a long history of Euro-human impacts. Water use has had a significant effect on aquatic habitat and stream function, contributing to low flows or dewatering and elevated instream temperatures in some reaches, affecting sediment and LWD transport through the system and fish passage.

The Wenatchee Limiting Factors Analysis report (Andonaegui 2001) describes the water diversions in Peshastin Creek as:

The Peshastin Irrigation District operates a water diversion dam and diversion on Peshastin Creek at RM's 2.4 and 4.8, respectively. During late summer, in years when total water diversion exceeds instream low flows, the area directly downstream of the diversion is dewatered for 100 feet. The extent and duration of dewatering varies depending on climatic conditions. At RM 1.0 where the Chelan County Conservation District measured flows from September 1992 through October 1993, a low flow of 0.3 cfs was reported on September 27, 1993.

The Peshastin Creek watershed is a Category 2, with three significant subwatersheds, including the Upper Peshastin, Lower Peshastin and Ingalls Creek (UCRTT 2007). It is a Major Spawning Area for steelhead, a Minor Spawning Area for spring Chinook, and a Core Area for bull trout (UCRTT 2007). Low instream flows in the lower Peshastin Creek impede upstream migration, reduce rearing habitat, and likely contribute to elevated water temperature (UCRTT 2007).

The population size category for Wenatchee Upper Columbia steelhead is "intermediate" and the spring Chinook population size category is considered "very large" (UCRTT 2007). The status for each is "high risk" based on Viable Salmonid Population guidelines from the ICTRT (UCRTT 2007). The Draft Salmon Recovery Plan (UCSRB 2006a) states the following regarding Wenatchee spring Chinook and steelhead populations, respectively:

When considering the factors that determine diversity and spatial structure, the Wenatchee spring Chinook population is currently considered to be at a high risk of extinction because of the loss of naturally produced Chinook spawning in tributaries downstream from Tumwater Canyon. In addition, the Wenatchee spring Chinook population is currently not viable with respect to abundance and productivity and has a greater than 25% chance of extinction in 100 years. In sum, the Wenatchee spring Chinook population is not currently viable and has a high risk of extinction.

When considering the factors that determine diversity and spatial structure, the Wenatchee steelhead population is currently considered to be at a high risk of extinction. Based only on abundance and productivity, the Wenatchee steelhead population is not viable and has a greater than 25% chance of extinction in 100 years. In sum, the Wenatchee steelhead population is not currently viable and has a moderate to high risk of extinction.

The Peshastin Irrigation District Pipeline project is listed in the Salmon Recovery Implementation Schedule (UCSRB 2006b) and has a Biological Benefit of Tier 1 and Social Benefit of Tier 4. The Peshastin Irrigation District Pipeline addresses two short-term restoration actions listed in the Salmon Recovery Plan (UCSRB 2006a), including:

- Use practical and feasible means to increase stream flows (within the natural hydrologic regime and existing water rights) in Peshastin Creek.
- Reduce water temperatures by increasing stream flows and restoring riparian vegetation along the stream.

The Upper Columbia Salmon Recovery Plan (UCSRB 2006a) and the Wenatchee Watershed Plan list the limiting factors for Peshastin Creek to be: water quantity, habitat diversity and

habitat quantity, and obstructions. Actions that increase stream flow are recommended in both plans. Peshastin Creek is also listed on the 303(d) list for temperature. The draft TMDL submittal to EPA includes recommendations to increase stream flow to address temperature. Instream flows have also been recommended in the Wenatchee Watershed Plan (with rule-making underway) to avoid further degradation of water quantity.

The activities that contribute to the limiting factor are irrigation diversions excarbated by low natural streamflow in late summer. This project will reduce diversions by the Peshastin Irrigation District and increase streamflow during the in-migration period of Chinook salmon and bull trout.

Methods

CCNRD staff were responsible for overall project management and coordination with stakeholders. U.S. Bureau of Reclamation hired and paid for Anchor Environmental to develop the designs and specifications. CCNRD staff will be responsible for project management, construction contractor advertising and selection, and construction oversight.

Summary of Activities

- Regional Coordination: The Wenatchee Watershed Planning Unit (WWPU) has been involved with the Peshastin Irrigation District Pipeline project since it was identified in the Wenatchee Limiting Factors report (Andonaegui 2001). In addition the WWPU assisted in prioritization of the Draft Salmon Recovery Plan Implementation Schedule (UCSRB 2006b), which recommended that the Peshastin Irrigation District should incorporate efficiencies in the first 3-6 years. The WWPU has been kept abreast of progress on Peshastin Irrigation District Pipeline project during the monthly meetings and will continue to be informed.
- <u>Designs</u>: Kittitas County Conservation District conducted the topographic survey. Anchor Environmental has developed draft designs and specifications. These designs and specifications were reviewed and approved by the Peshastin Irrigation District Board at their meeting on August 11, 2009. A copy of the designs and specifications were provided to the Recreation and Conservation Office in August 2009.
- <u>Permits</u>:
 - <u>Archaeology</u>: An archaeology survey crew has conducted a field survey and written a draft report. The final archaeology report should be submitted to the RCO in October 2009. Then the RCO will finalize the government to government archaeology consultation with the Department of Archaeology and Historic Preservation (DAHP) as well as the Yakama Nation and the Colville Confederated Tribes. We anticipate that this process will be completed in October 2009.
 - <u>Construction Stormwater</u>: CCNRD has completed a Washington State Department of Ecology Construction Stormwater permit application and expect to receive the permit in October 2009.
 - <u>Endangered Species Act</u>: Since the Peshastin Irrigation District Pipeline project will not be working within the Ordinary High Watermark, nor will it be disturbing any wetland areas, ESA permits are not required for the project.
 - <u>SEPA</u>: A SEPA exemption was obtained for the project from Chelan County.

- <u>Construction Bid</u>: The construction bid was advertised on August 31, 2009. A pre-bid walk-through occurred on September 18, 2009. Bids were opened on September 21, 2009.
- <u>Project Construction</u>: Construction is planned for Fall 2009. The Peshastin Irrigation District Pipeline project will be constructed by Mountain West Construction, a construction contractor with the lowest bid. CCNRD staff will be on-site to provide project inspection.

Landowner Agreement

A signed Landowner Willingness Form was provided with the grant application. The Peshastin Irrigation District Board approved the draft designs and specification at their meeting on August 11, 2009.

Lessons Learned

A lesson learned on past projects that benefited the Peshastin Irrigation District Pipeline project includes early and complete coordination with the stakeholders. The CCNRD has had frequent meetings with the Peshastin Irrigation District to ensure their acceptance and approval of the project.

Summary of Expenditures

The U.S. Bureau of Reclamation has provided funding for CCNRD staff time and for Anchor Environmental to develop designs for the new irrigation pipeline. For this reason, minimal Salmon Recovery Funding Board funds have been spent on the Peshastin Irrigation District Pipeline project to date.

Figure 1 Peshastin Irrigation District Pipeline Project CASHMERE feet 12". 8" diameter PVC Wescoff Dr 2 Ł 1 al 0 1,000 Scale in Feet ANCHOR



Figure 1. Vicinity Map.



Figure 2. Photo of the irrigation ditch flowing through buried pipeline.

Figure 3. Photo of water flowing through the concrete-lined portion of the irrigation ditch.





Figure 4. Open, unlined portion of irrigation ditch.

References

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