

Icicle Peshastin Irrigation District Pump Exchange Project

ICICLE COMPREHENSIVE WATER RESOURCES STRATEGY

Ecology Publication Number: 13-12-007

PROJECT DESCRIPTION

Peshastin Irrigation District (PID) diverts up to 50-cfs flow from Peshastin Creek. However, natural late summer flows in Peshastin Creek cannot sustain this need and often falls below 25-cfs. During these times, PID relies on additional water rights in Icicle Creek and jointly operates the diversion and conveyance facilities with the Icicle Irrigation District (IID). The IID Canal conveys water to the PID Canal through a siphon located near Peshastin Creek.

The purpose of this project is to install a 50 cfs pump station on the Wenatchee River near Dryden (RM 16.5 just downstream of the IID siphon) that will divert water from the Wenatchee River and deliver it to both the PID Canal and the IID Canal, allowing for reduced diversions in both Peshastin Creek and Icicle Creek during later summer and early fall. This 50 cfs pump station would deliver 20 cfs to the PID Canal and 30 cfs to the IID Canal.

This project was identified through a series of studies to find the best alternative focused on improving instream flows in Peshastin Creek. Restoring normative flows is the highest priority for salmon restoration in Peshastin Creek and is specifically recommended by the UC Regional Technical Team.

Lead Entity to Implement: Icicle-Peshastin Irrigation District Estimated Project Cost: \$14 Million (\$7 Million Construction / \$7 Million lump sum O&M). (Source: Table 9-5, 2012 Appraisal Study).

PROJECT BENEFIT

- Peshastin Creek: 20 cfs to lower 2.4 miles
 - Icicle Creek: 30 cfs to lower 5.7 miles
 - Mainstem Wenatchee River:
 - 30 cfs for 8.1 miles
 - 50 cfs for 1 mile.
- (Instream Flow estimated for 8 week)

GUIDING PRINCIPLE

- Instream Flow (GP #1)

POTENTIAL ISSUES/ DATA GAPS

- Securing long-term O&M funding
- IID Canal is limited to pumping 30-cfs from a pump station without modifications to the Canal through Division 1 to deliver there.
- Coordinate with Irrigation District Efficiencies Project.

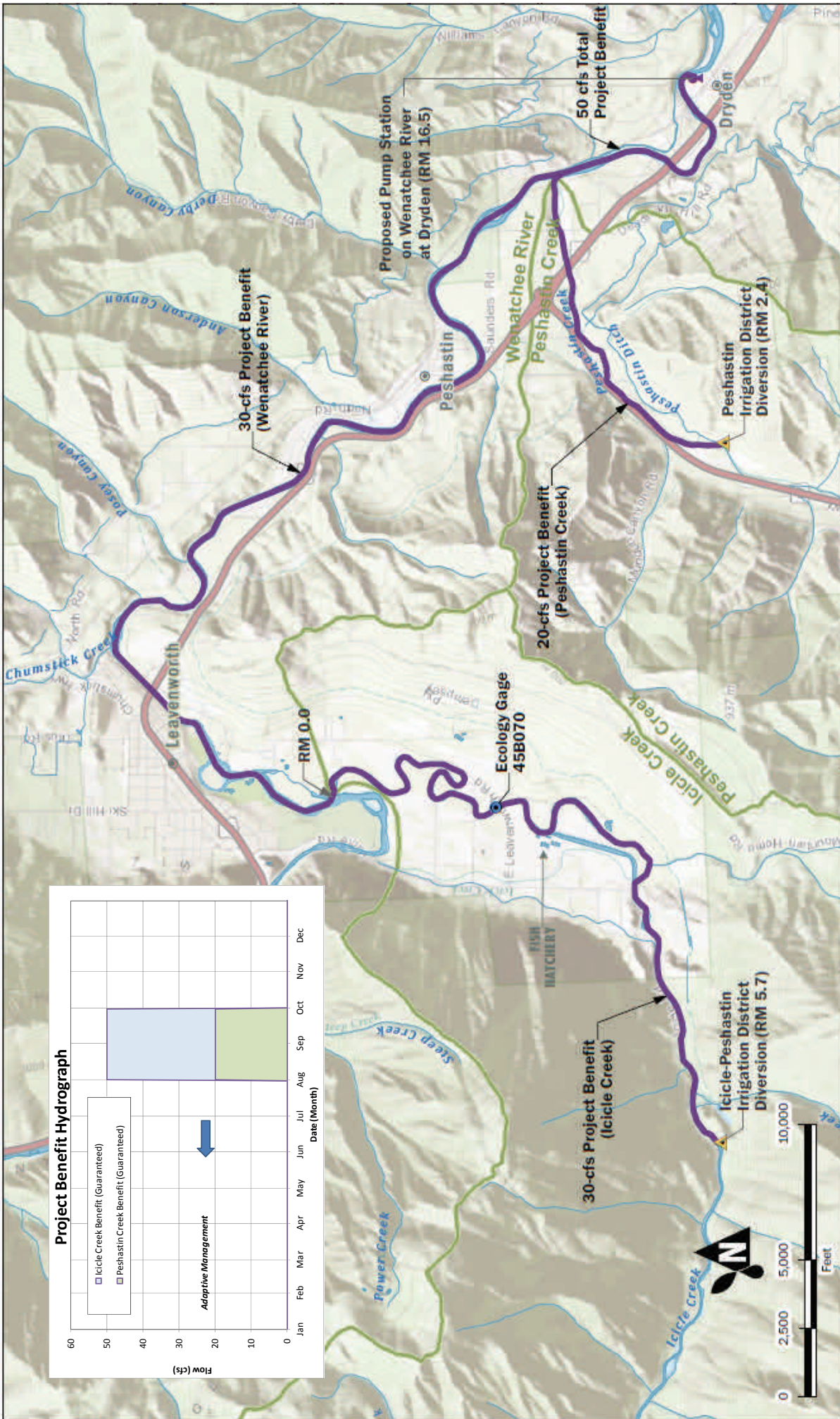
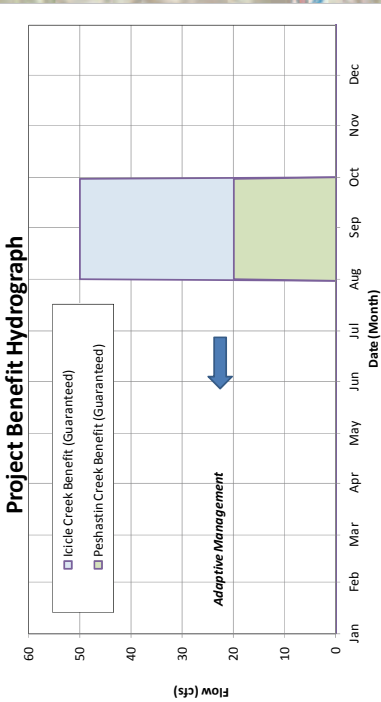
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EXISTING and ONGOING STUDIES

- Icicle Creek Target Flow Report of the Leavenworth National Fish Hatchery, 2004, Montgomery Water Group; Addressing Icicle Creek from RM 3.9 to RM 4.5.
- Lower Icicle IFIM, 2005, US Bureau of Reclamation; Basis for Wenatchee Instream Flow Rule (WAC 173-545) addressing Icicle Creek from RM 0.0 to RM 2.7.
- Wenatchee Watershed Plan and Multi-Purpose Water Storage Assessment, 2006, CCNRD, funded by Ecology (CCNRD Project Sponsor); Identified water needs across the watershed and prioritized sub-watersheds with critical water needs. Included a high level analysis of water storage opportunities including several opportunities in Peshastin and Icicle Creeks.
- Peshastin Creek Needs and Alternatives Analysis, 2007, Anchor Environmental, funded by Ecology (CCNRD Project Sponsor); Outlined the water needs for Peshastin Creek and identified several strategies to meet those needs.
- Draft Campbell Creek Reservoir Study, 2010, Anchor QEA LLC, funded by Ecology (CCNRD Project Sponsor); Preliminary evaluation of an off channel reservoir in Peshastin Creek also identified several alternatives, including the Wenatchee River pump station.
- PID Pump Exchange Appraisal Study, 2012, Anchor QEA, funded by Ecology (CCNRD Project Sponsor); Alternatives analysis evaluated five pump station and pipeline alternatives. Alternative 1 selected to move forward with conceptual designs completed.
- Instream Flow Incremental Methodology (IFIM) Study, (Ongoing), US Fish and Wildlife Service; Addressing Icicle Creek from RM 2.7 to RM 3.8.

Revision Date: September 4, 2013

Project Benefit Hydrograph



Icicle Peshastin Irrigation District Pump Exchange, 50-cfs Alternative

Icicle Creek Comprehensive Water Management Strategy
WRIA 45, Washington



AUG-2013
PROJECT NO. 120045

EAH / JRB
REV: ---

FIGURE NO. **1**

City of Leavenworth (RM 5.5)

Water Supply Availability:
Guaranteed - water rights are permanently placed in the State Trust Program under RCW 90.42.08
Firm - water rights that are described as "non-permanent conveyances" under RCW 90.42.040
Interruptible - water rights that are subject to interruption during drought years

- Stream
- Water Body
- Subbasin
- Instream Flow Benefit (Guaranteed)
- Adaptive management
- Diversion
- Pump
- Town/City
- County
- Stream Gage