

BUREAU OF — RECLAMATION

### Icicle-Peshastin Irrigation Districts Instream Flow Improvement and Diversion Removal Project Value Planning Study







## Overview

- Value Planning (VP) Study Site Visit and Workshop, Dec 9-13, 2019
- Participants Reclamation, IPID, Chelan County, Ecology, WDFW, Anchor QEA, Aspect Consulting
- Presentation Agenda
  - Project Background
  - VP Study Alternative Evaluation
  - Hydropower Evaluation





# **Project Background**

- Reduce diversions from and increase flows in Icicle Creek and Peshastin Creek
- Identify alternate supply of water for IPID from pump stations on the Wenatchee River
- Several pump exchange alternatives have been evaluated since 2007
- A pump exchange project would meet multiple prongs of IWG Guiding Principles:
  - Augment streamflow in Icicle Creek
  - Benefit fish passage and habitat
  - Benefit Treaty and Non-Treaty Harvest



## **Timeline of Related Studies**

Year	Study	Author
2007	Peshastin Sub-basin Needs and Alternatives Study	Anchor QEA
2010	Campbell Creek Reservoir Feasibility Study	Anchor QEA
2013	IID Pump Exchange – Initial Project Assessment	Anchor QEA
2014	IID Instream Flow Improvement Options Analysis Study	Forsgren Assoc.
2015	IPID Pump Exchange – Summary of Additional Analysis	Anchor QEA
2018	IPID Conservation Plan – Full Piping Improvement Option	Anchor QEA
2018	IPID Comprehensive Water Conservation Plan	Anchor QEA

### **Peshastin Creek Flows**





#### Peshastin Creek During 2015 Drought Conditions









## **IPID Summary Table**

	Source of Diversion (CFS)			Delivery (CFS)					
	lcicle (max.)	Peshastin (max.)	Wenatchee	Irrigation	Spill/Loss	Remain In-Stream Icicle	Remain In-Stream Peshastin	O&M Labor (FTE)	Power Consumption (HP)
Water Right/Current	117	48.8	0	121	30	Ν/Δ	Ν/Δ	Baseline	0
Alternative 1*	78-101	-0.0	48-71	121	26-28	16-39	48.8	+1 FTE	4.210-3.550
Alternative 2	0	0	124	121	0	117	48.8	-5 FTE	8,950
Alternative 3	94	0	30	121	0	23	48.8	-5 FTE	2,790

\*Range represents different flows based on configurations with pump stations located at Dryden vs. Stine Hill

### Water Balance – Flow Tracking for Existing and Proposed Alternatives





### Hydropower



### **Hydropower Continued**

High Flow Capped at 71 CFS or 2000 KW





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