

Application of water reuse technology for hatchery production of upper Columbia River summer Chinook and steelhead. Miller, J.*, Dilly, S., Murauskas, J., Adams, I., Hayes, S., Larsen, D., Beckman, B., Good, C., & Vinci, B.

Confronted with increasing competition for existing water resources and climatological indicators suggesting supplies may decrease considerably in the future, Chelan Public Utility District has initiated two hatchery water reuse pilots as a water conservation/risk hedging strategy to augment its Habitat Conservation Plan hatchery programs. The two pilots have successfully reared upper Columbia summer Chinook and Endangered Species Act listed Wenatchee River steelhead utilizing one-eighth the water of a standard single-pass raceway system. Unexpectedly, smolts produced from the reuse pilots also exhibited lower travel times and higher survival rates through the mainstem Columbia River than fish reared in raceway controls. Based on these results; as well as cost, installation and operational considerations, water reuse appears to be an effective tool for rearing anadromous salmonids and achieving significant reductions in water consumption.

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