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RECLAMATION

Yakima River Scoping Study to Assess Temperature and Dissolved Oxygen Levels to Inform Water Management Options

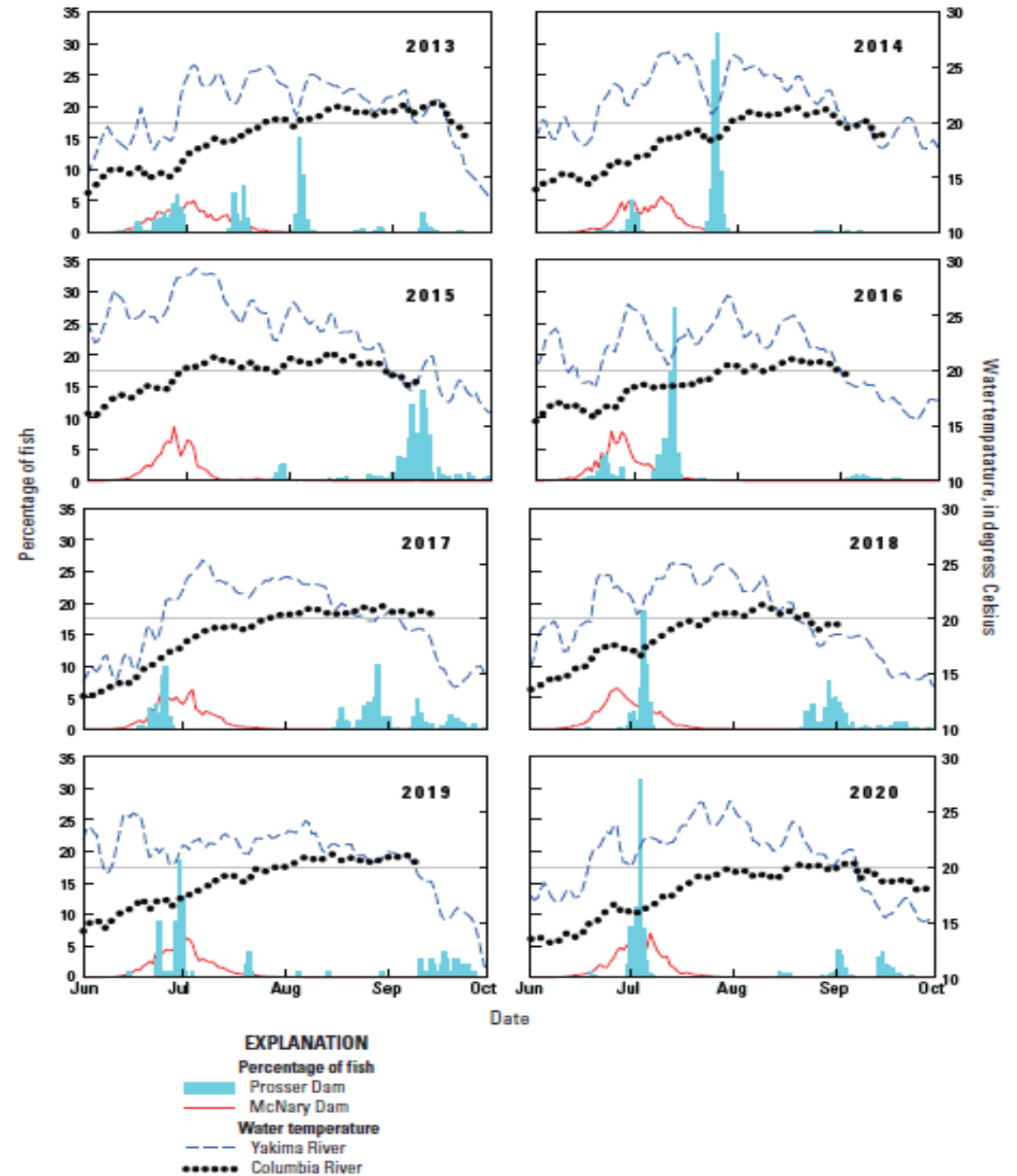
Presenting: Richard Visser (YRBWEP, USBR) & Kristin Mikkelsen (TSC, USBR)

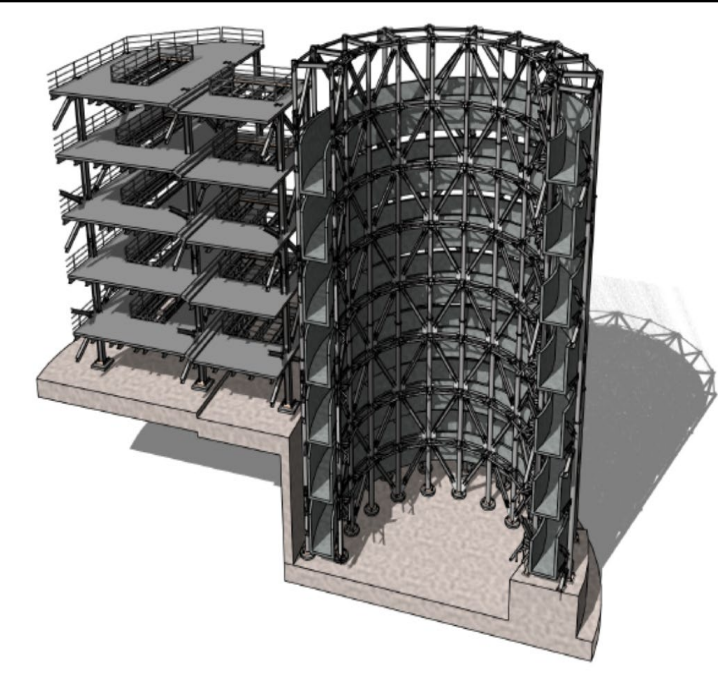
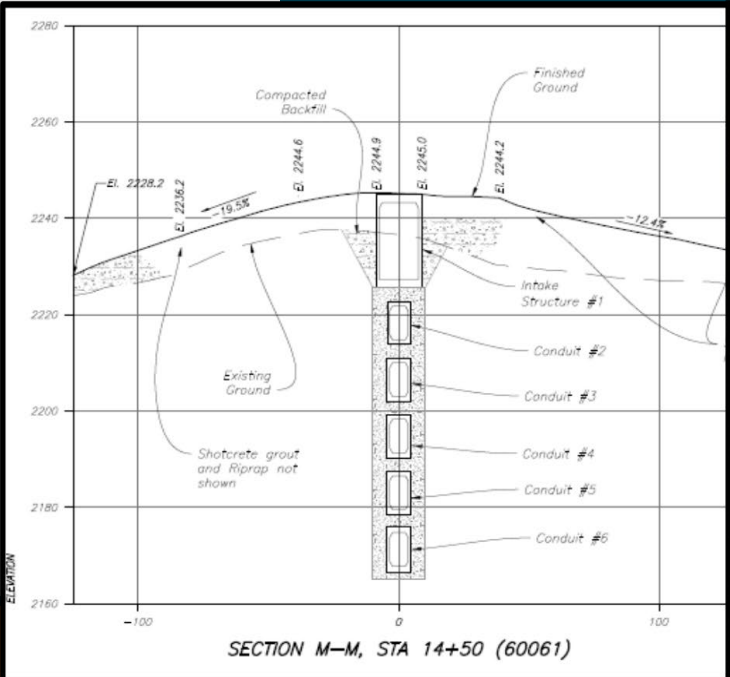
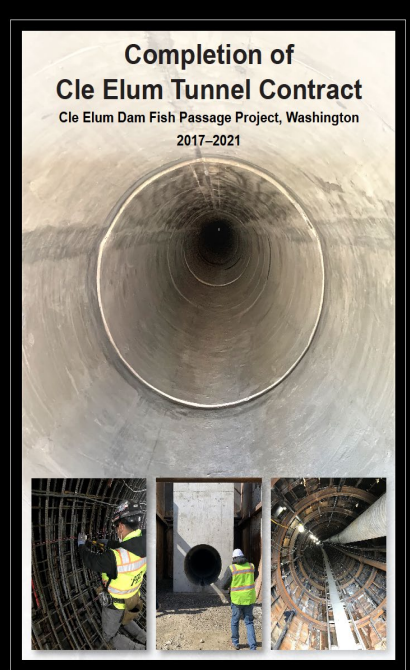
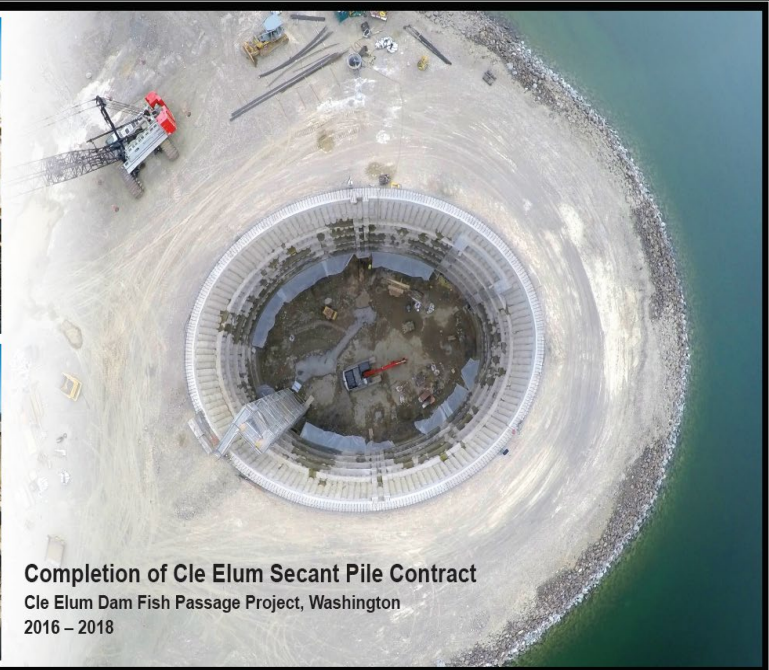
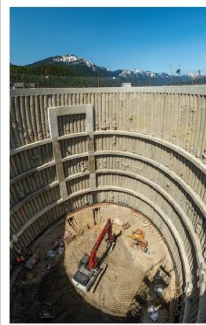
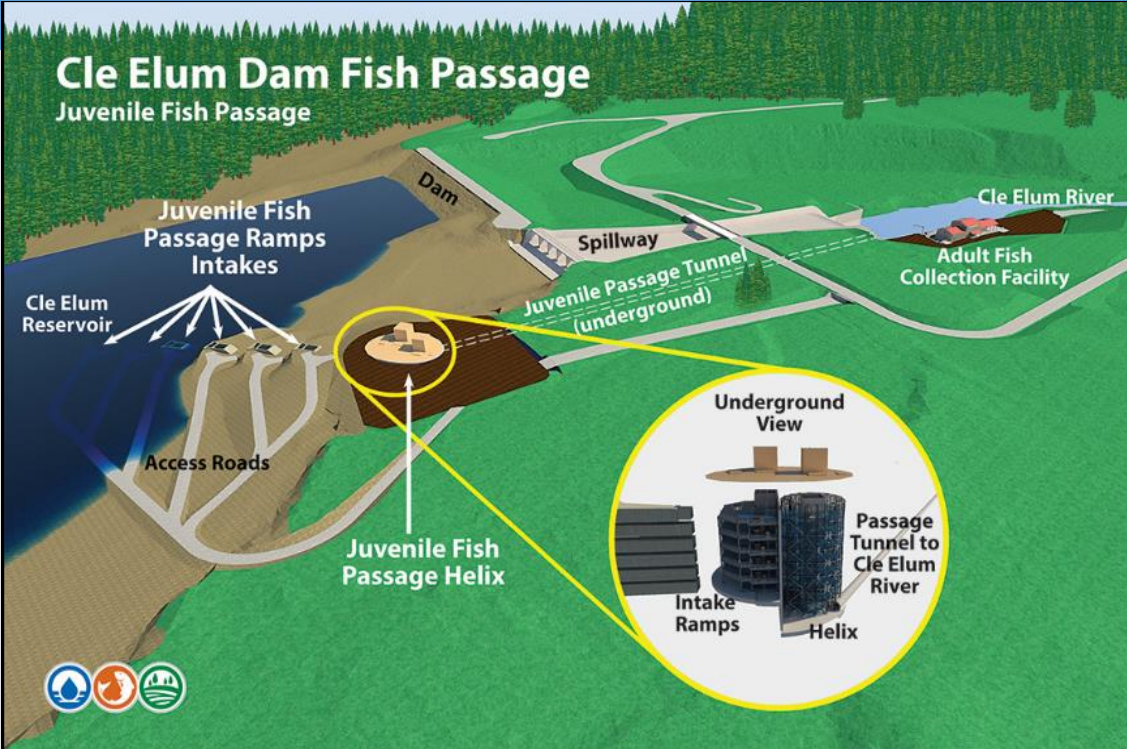
Other team members: Lindsay Bearup (TSC, USBR); James Carroll (Ecology); Timothy Clarkin (TSC, USBR); Jennifer Johnson (CPN, USBR); Christopher Lynch (YFO; USBR); Patrick Monk (YFO; USBR) Jim Carroll (Department of Ecology) and many other Local Partners



Temperature Patterns and Migration Behavior

Generally, Sockeye will enter the Yakima River when it is 20 C or lower.





Goals of Study

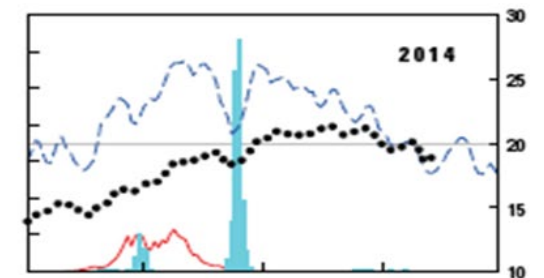
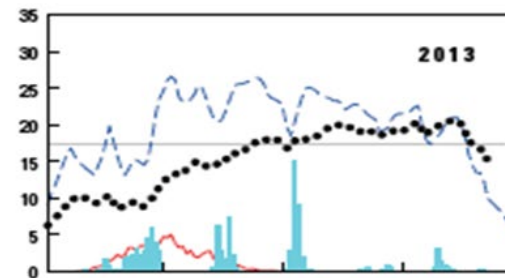
Evaluate and Model River Temperature and Water Management Relationships

Answer the questions

- Can we release cooler storage water to work with existing river conditions or upcoming weather conditions to maintain or change river temperature?
- How much water is needed?
- How long can we maintain beneficial river temperature for migration under different Scenarios

Notes:

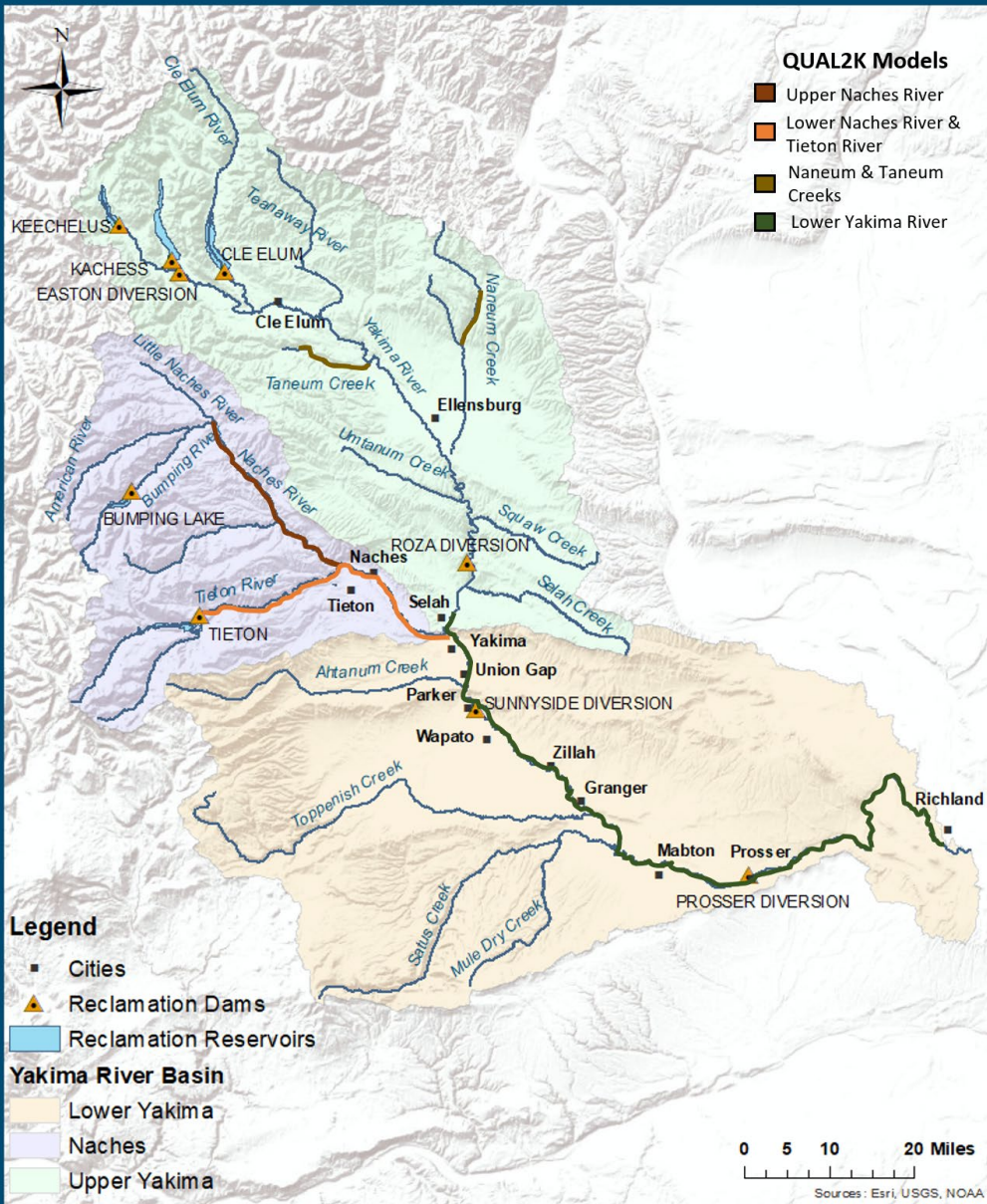
- We expect water management to provide short term benefits = a few days.
- We will need to find water to implement water management actions
- Funding Sources





QUAL2K Models

Study Scope:



1. Develop Upper Yakima WQ model
2. Add DO to Naches Branch WQ model
 - Field data collection
3. Merge all three WQ models
4. Develop weather & water management scenarios
 - Riverware operations model – flow inputs & management scenarios
 - Statistical analysis of 7-10 day weather patterns
5. Develop predictive model & run all combinations of scenarios
6. Develop web-based water management tool/dashboard
7. Model & dashboard workshop



Questions?

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