Restoring Connections

Lessons from 20 Years of Riparian Restoration in the Methow River Watershed

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2026 Eastern Washington Riparian Symposium

26 February 2026

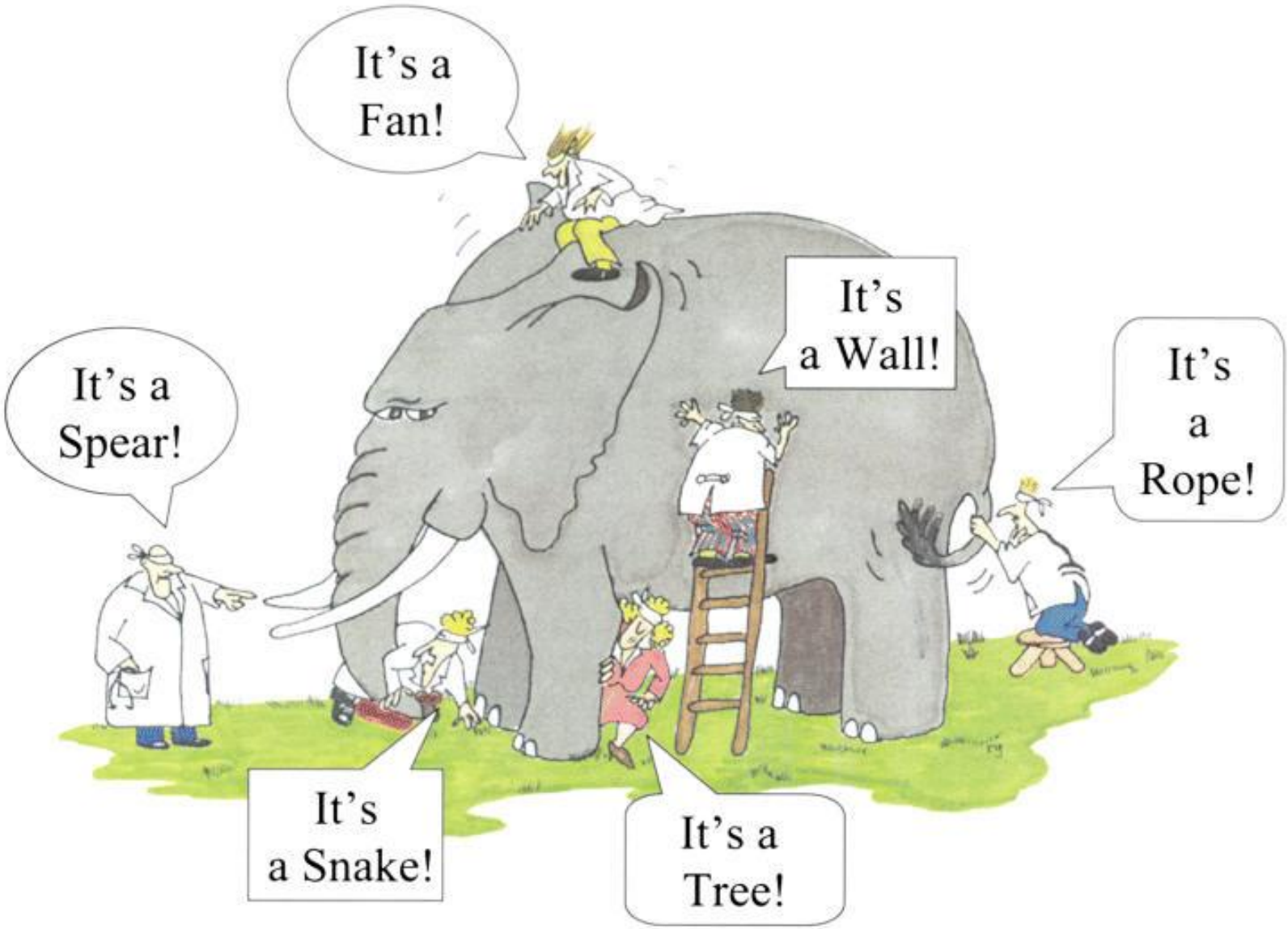
METHOW SALMON RECOVERY FOUNDATION

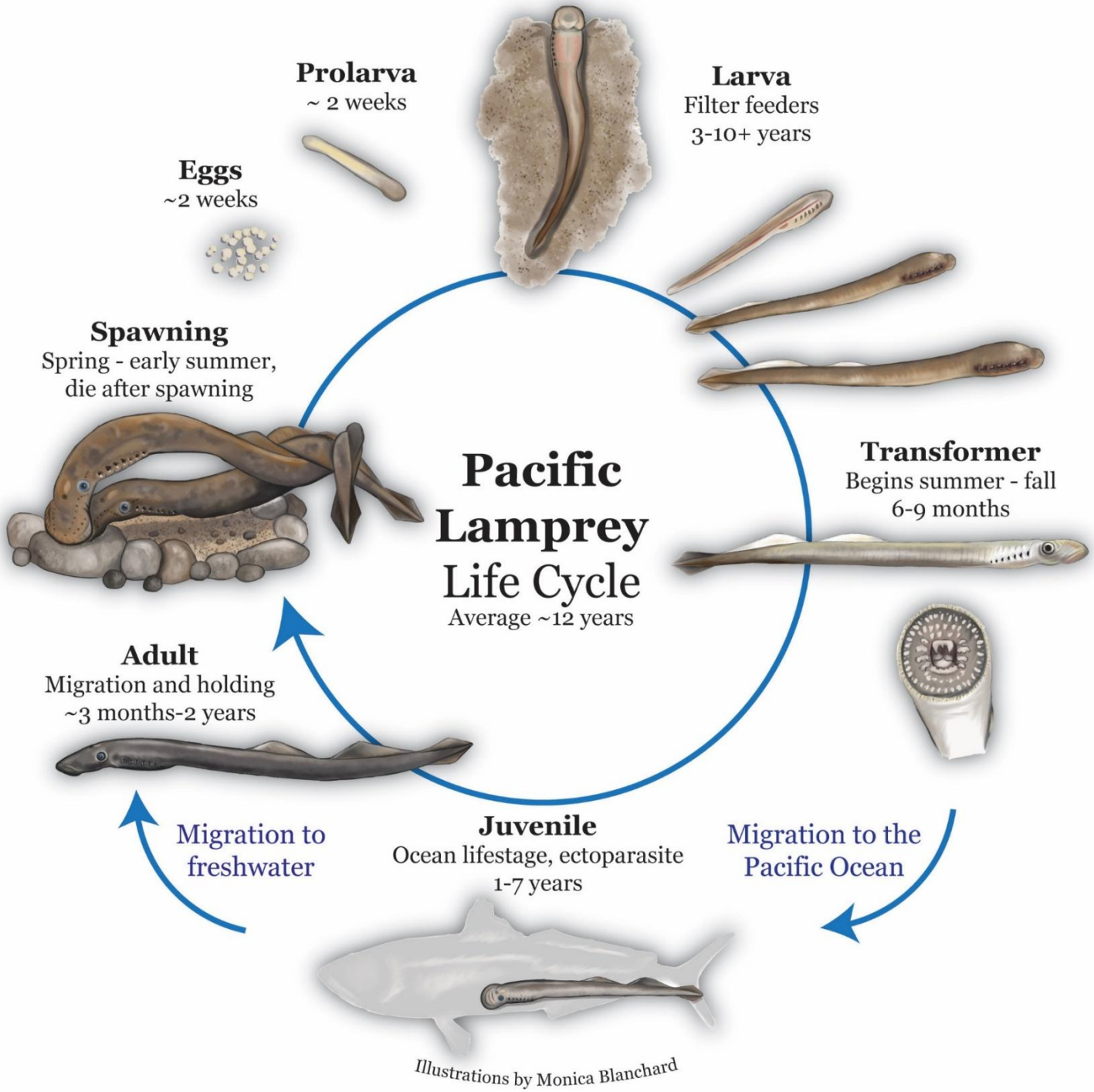

Yakama Nation Fisheries


2004


2006

SEE THE BIG PICTURE

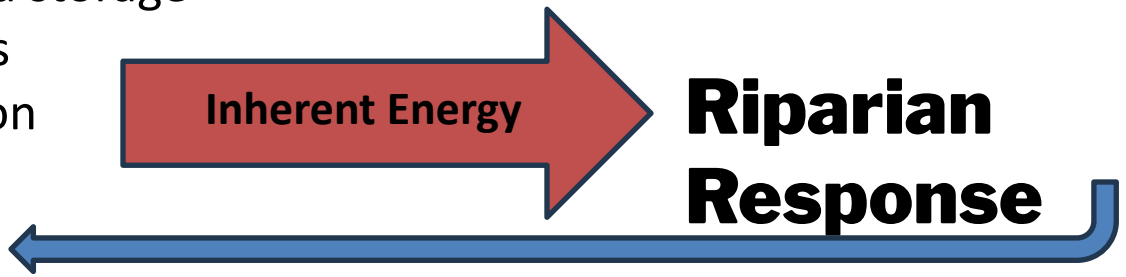



Prolarva
~ 2 weeks
Eggs
~2 weeks
Larva
Filter feeders
3-10+ years
Spawning
Spring - early summer,
die after spawning
Pacific
Lamprey
Life Cycle
Average ~12 years
Transformer
Begins summer - fall
6-9 months
Adult
Migration and holding
~3 months-2 years
Migration to
freshwater
Juvenile
Ocean lifestage, ectoparasite
1-7 years
Migration to the
Pacific Ocean
Illustrations by Monica Blanchard

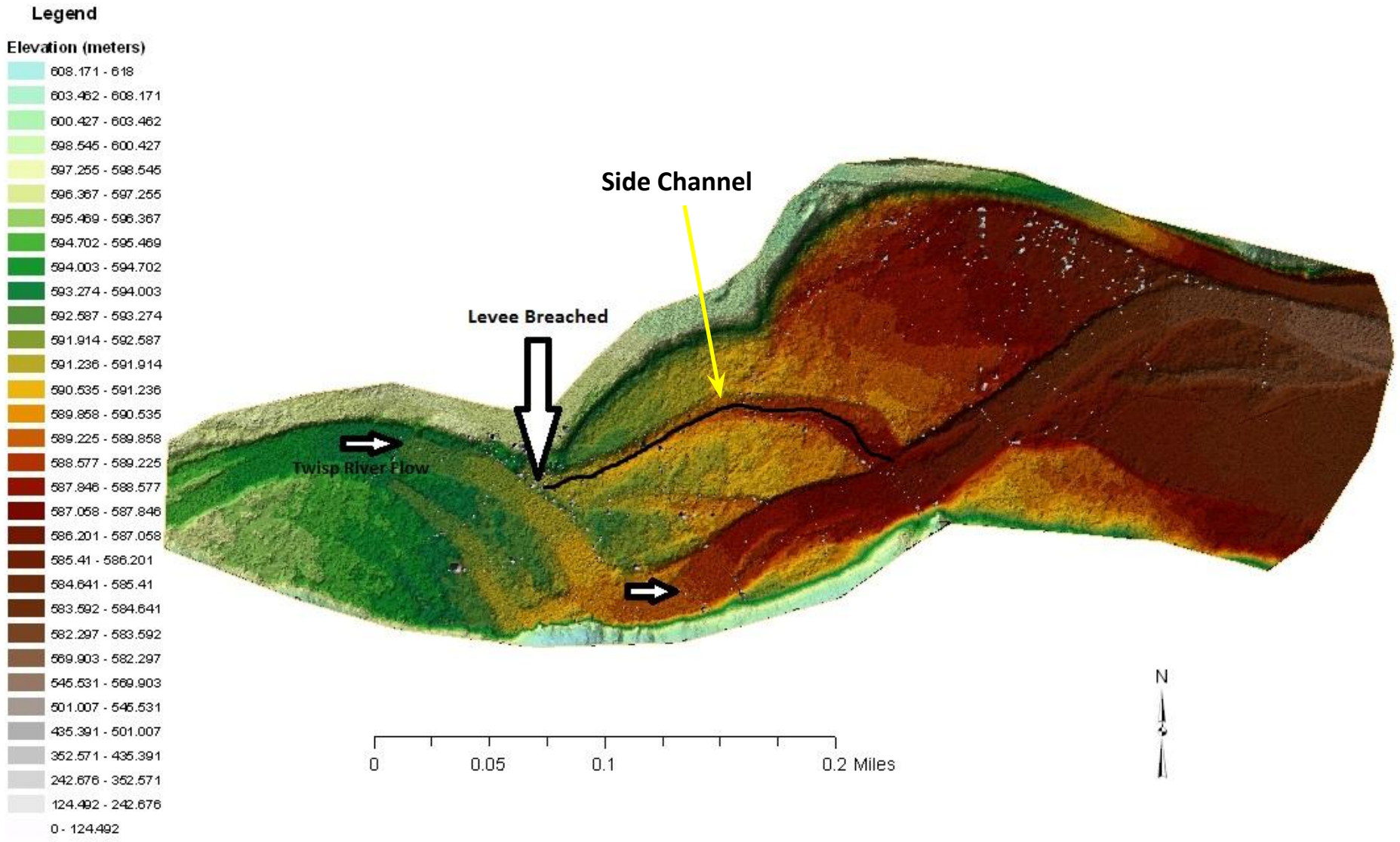
Process-Based Restoration

"Process-based Restoration aims to reestablish normative rates and magnitudes of physical, chemical, and biological processes that sustain river and floodplain ecosystems." Beechie et al. 2010

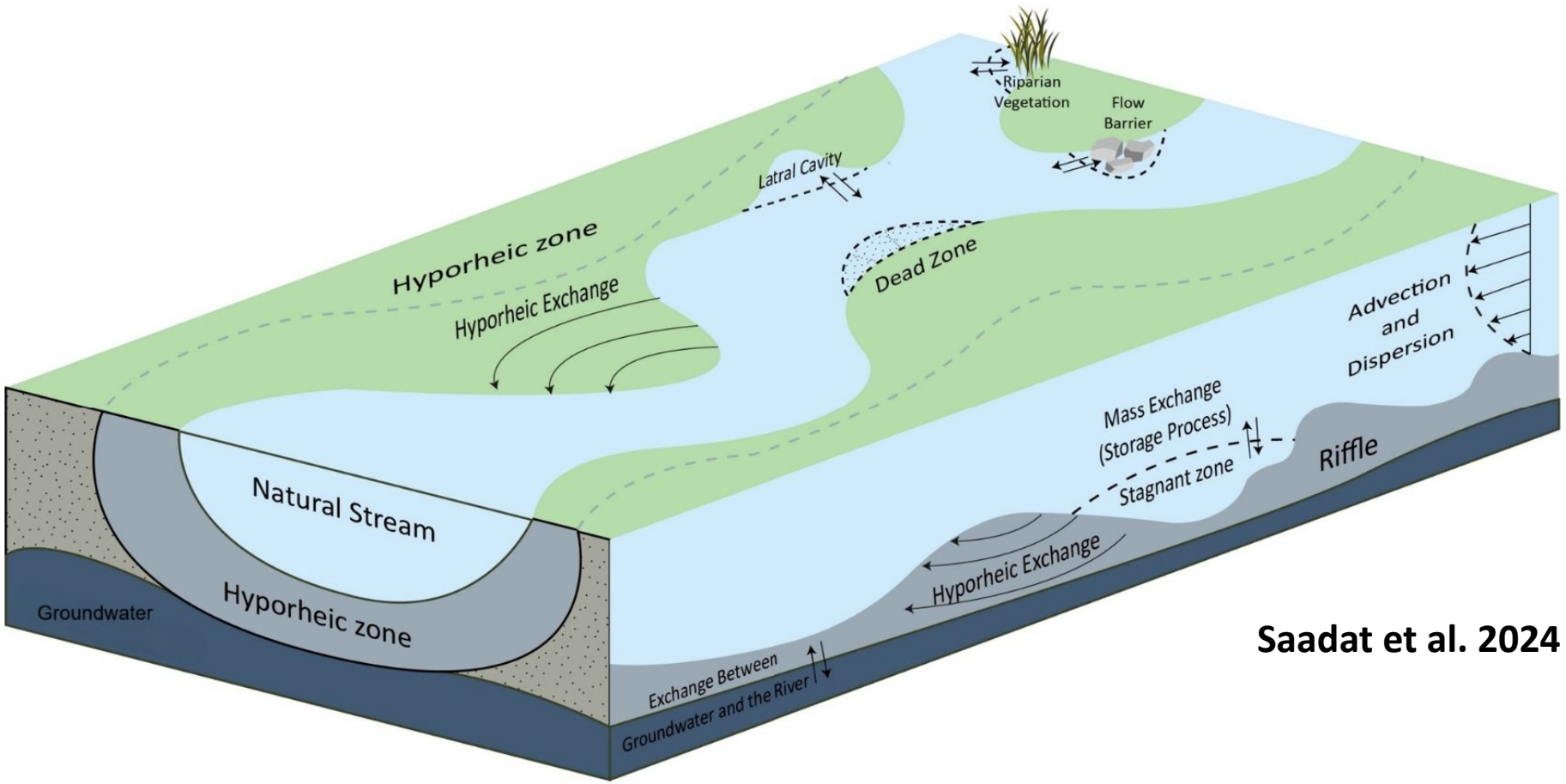
- Water routing and storage
- Sediment regimes
- Erosion/Deposition
- Nutrient Cycling
- Food Webs



Elbow Coulee Site with LiDAR and Survey Data Combined



FOLLOW THE HYPORHEIC



Saadat et al. 2024

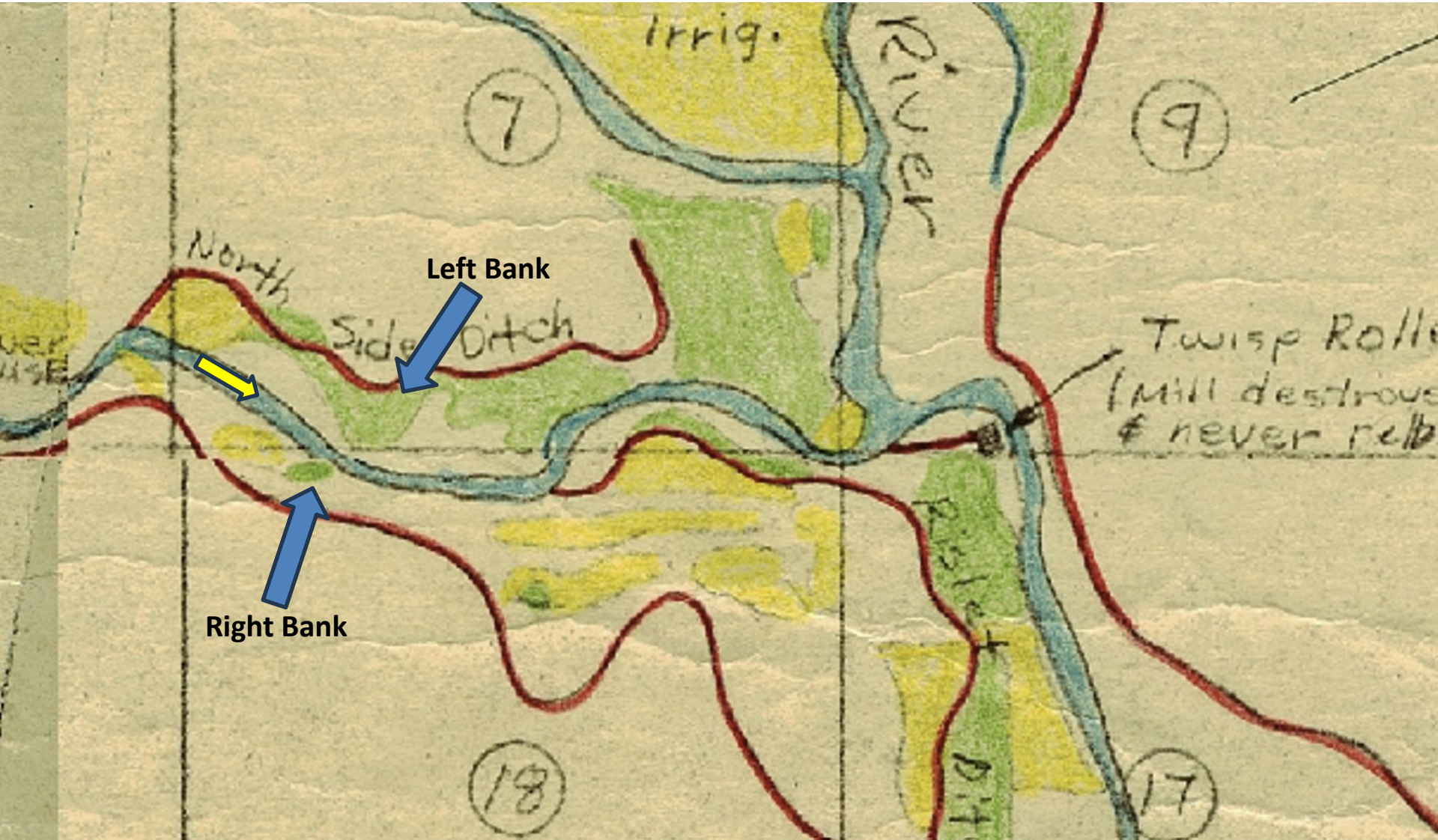
Water exchange and mixing
Upwelling - Downwelling

Hyporheic – What's It Good For?

- Primary link between stream and riparian zone
- Retention and processing of nutrients
- Strong influence on water quality - Temperature
- Habitat for a diverse suite of organisms

Twisp Ponds Project

1924 Map



1995

Pre-Project Conditions – Cleared Lands, Old Irrigation Ditches

Low Hydrologic Connectivity

2004

Right Bank Ponds, Twisp River Side Channel Complexity, and Initial Plantings

2009

Left Bank Initial Plantings and Planning, Right Bank Continuing Plantings

2013

Left Bank Wetlands and Plantings, Right Bank Nursery & Plantings

2017

Left Bank Side Channel, Continued Plantings and Mainstem Large Wood

2020

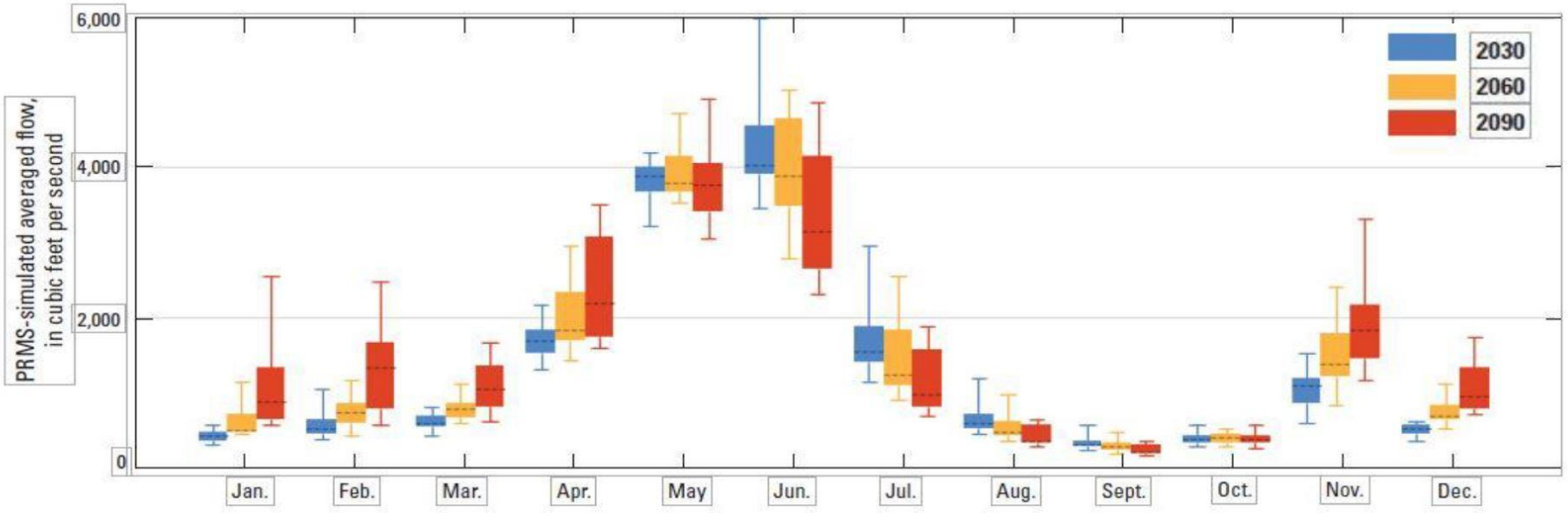
Left Bank Plantings, Right and Left Banks Planting Maintenance

2022

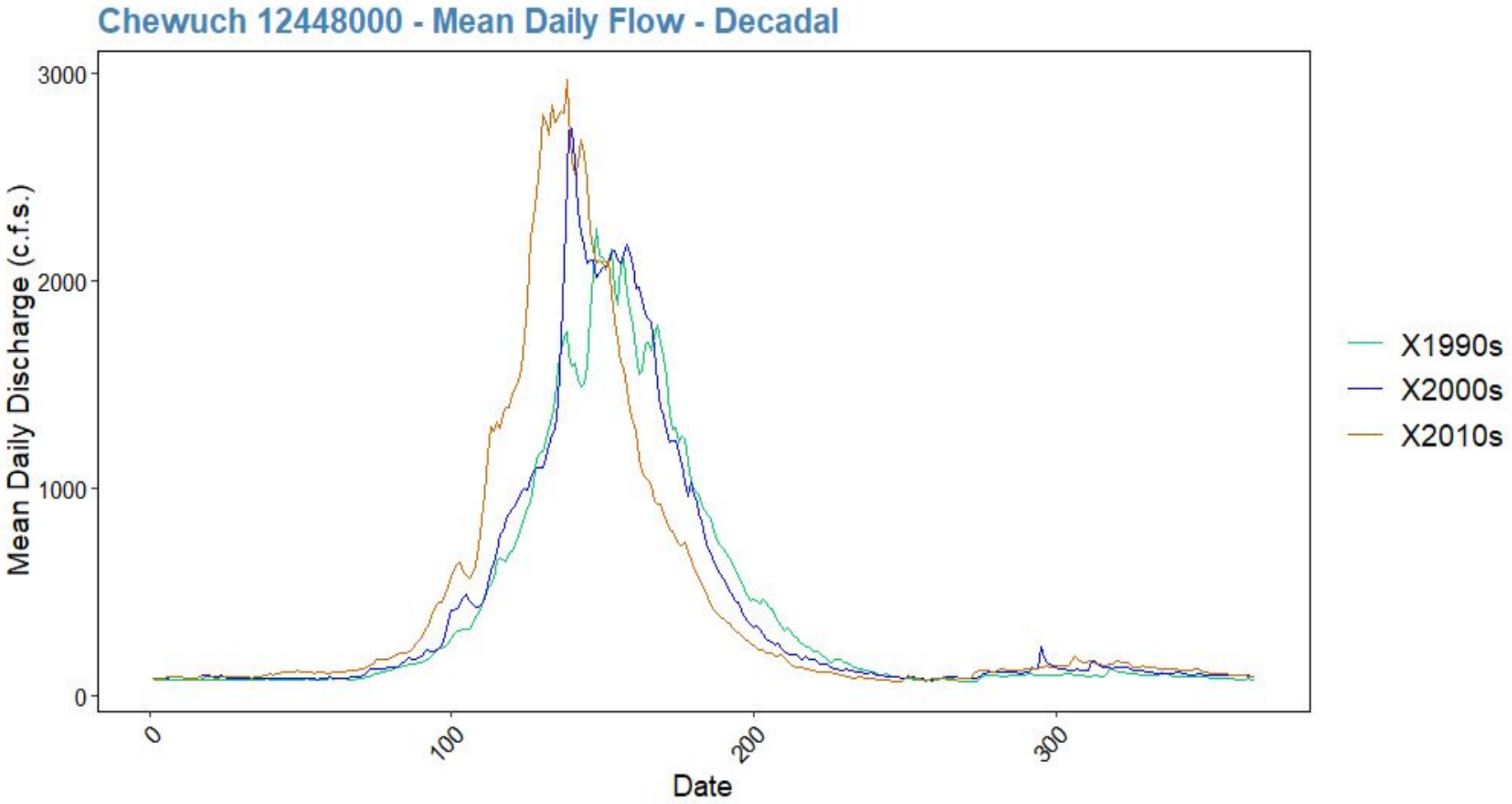
Right and Left Banks Planting Maintenance


COLVAN

CLIMATE CHANGE



Voss and Mastin 2012


Chewuch 12448000 - Mean Daily Flow - Decadal
Mean Daily Discharge (c.f.s.)
3000
2000
1000
0
0
100
200
300
Date
X1990s
X2000s
X2010s

Discharge, cubic feet per second

Most recent instantaneous value: 1050 02-17-2026 04:15 PST

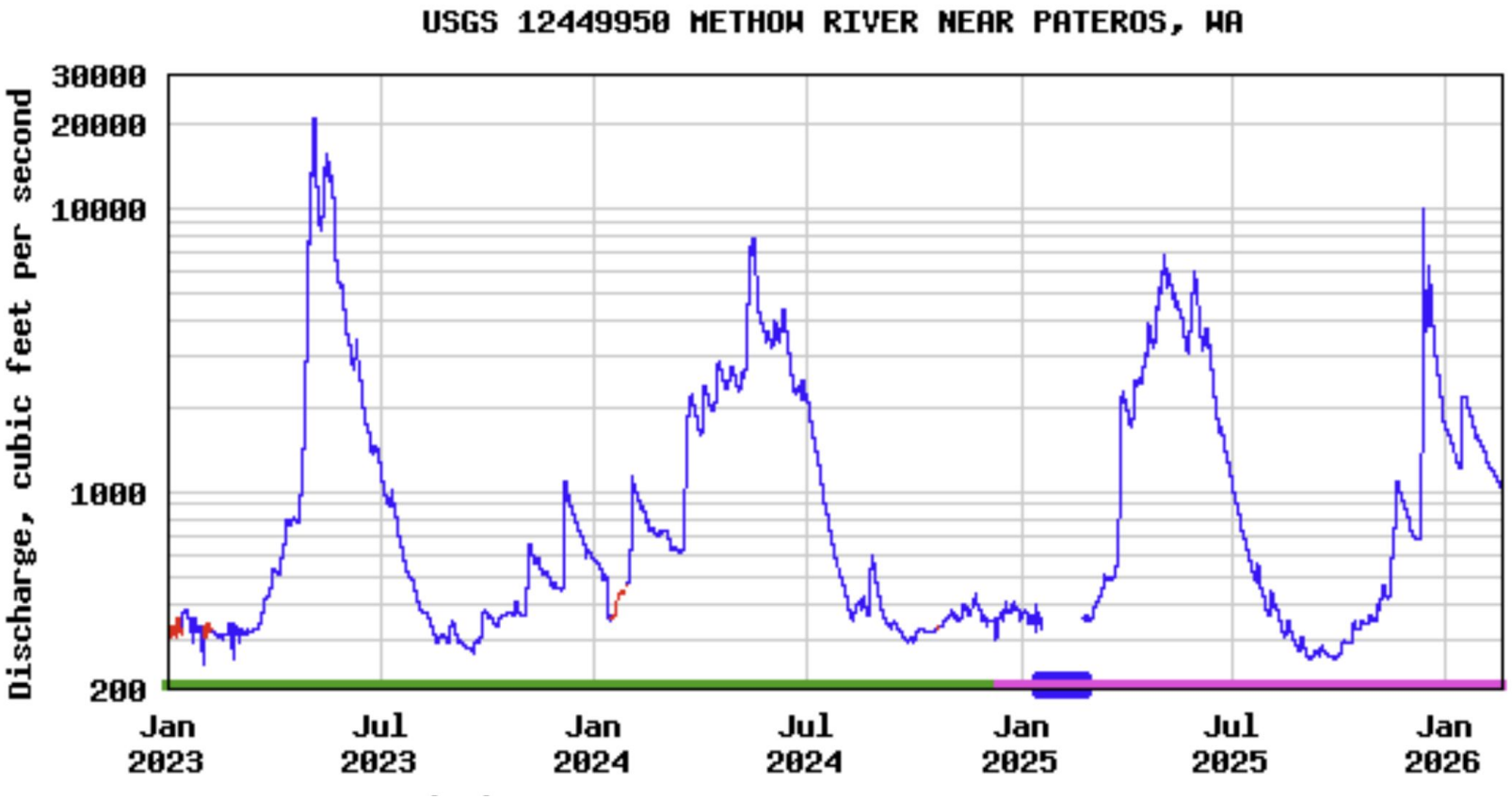


Figure adapted from Beechie et al. 2012


BE RESILIENT

FAILURE OR SUCCESS?

METHOW RIPARIAN PLANTINGS LESSONS LEARNED TOP 10!!!

1. Roots down - Green side up!
2. Develop a site-specific approach
3. Supplemental watering goes a long way in Eastern Washington
4. Grow along with your failures
5. Irrigation systems – size matters, so scale accordingly
6. Mulch for the win
7. Find the water table and know its tendencies
8. Thoughtful plant layouts for long-term maintenance efficiency
9. Get to know your competition
10. Test plantings - if possible