Barriers and Actions to Improve Regional Recovery Efforts

Findings from the Adaptive Management Process (2025)

UCSRB: Meghan Camp, PhD
Lichen: Nick Legg, LG and Dominique Shore

Thanks to many who have provided input throughout this process!

UPPER COLUMBIA SALMON RECOVERY BOARD

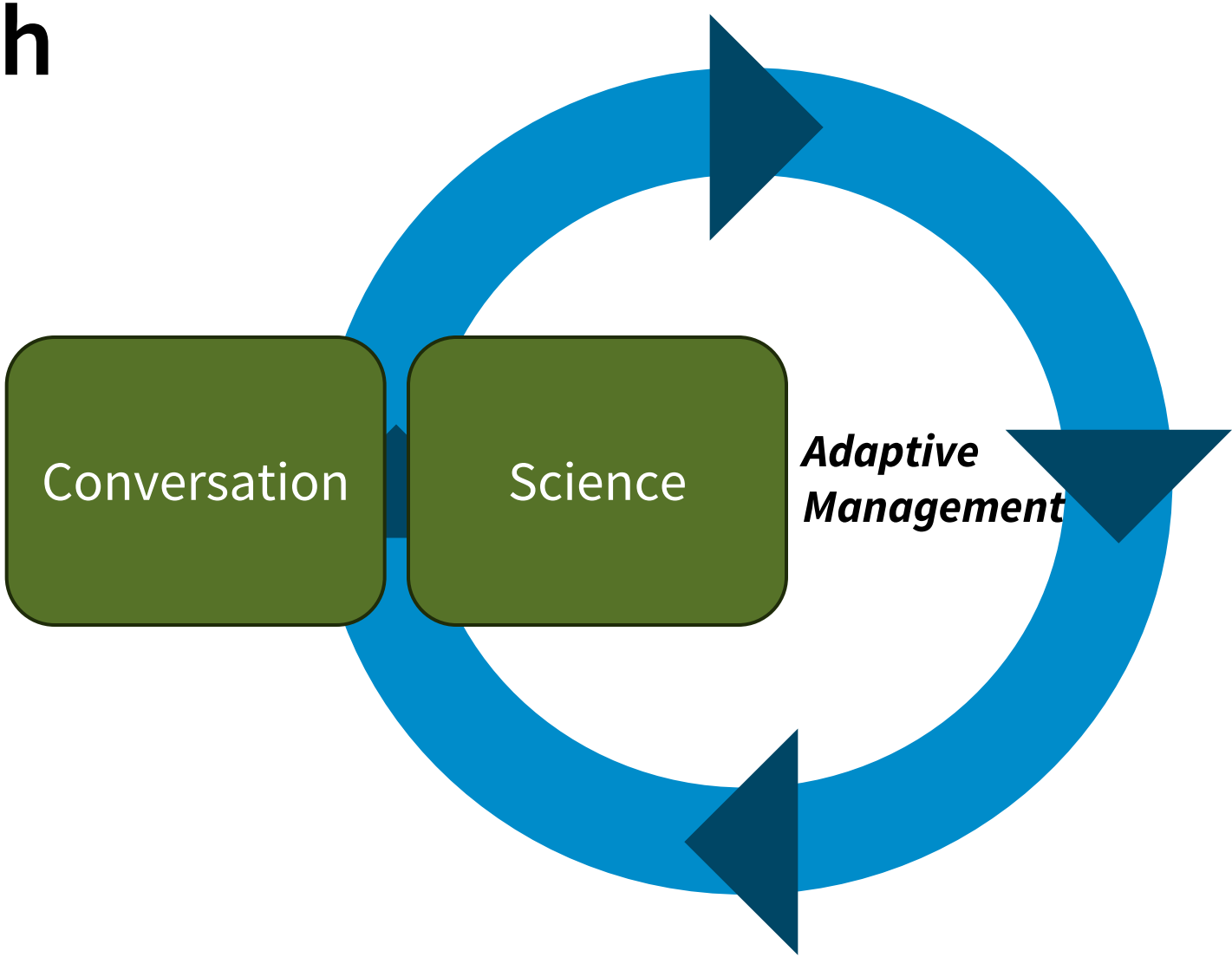
LICHEN LAND & WATER

The Adaptive Management Process: Housekeeping

- Decadal process, specified in recovery plan (2007)
- This iteration:
  - **Phase I – 2025 – Issue and solution identification (Habitat-Focus)**
  - Phase II – 2026 – Decision making
- Report forthcoming

Goals and Approach

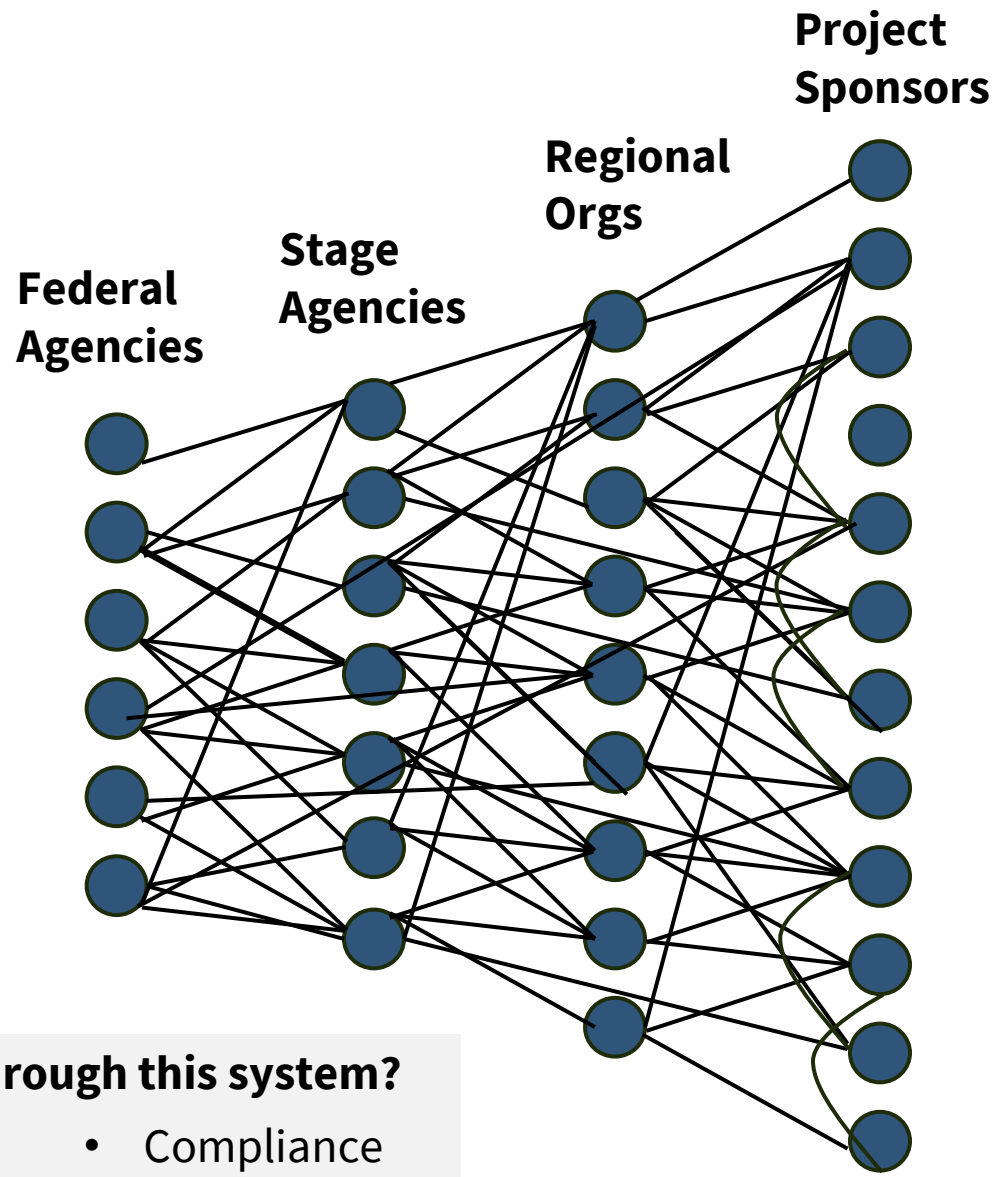
- Elicit lessons learned through conversation and multiple perspectives
- Keep it action-oriented
- Support with science



Conversational Process

- Interviews (n=7)
- Workshop (48 attendees)
- Advisory Committee (12 orgs represented)
- Literature Review


How can we improve the pace, scale, and effectiveness of habitat restoration at a regional level?



We need to think about the methods of restoration, and our delivery system

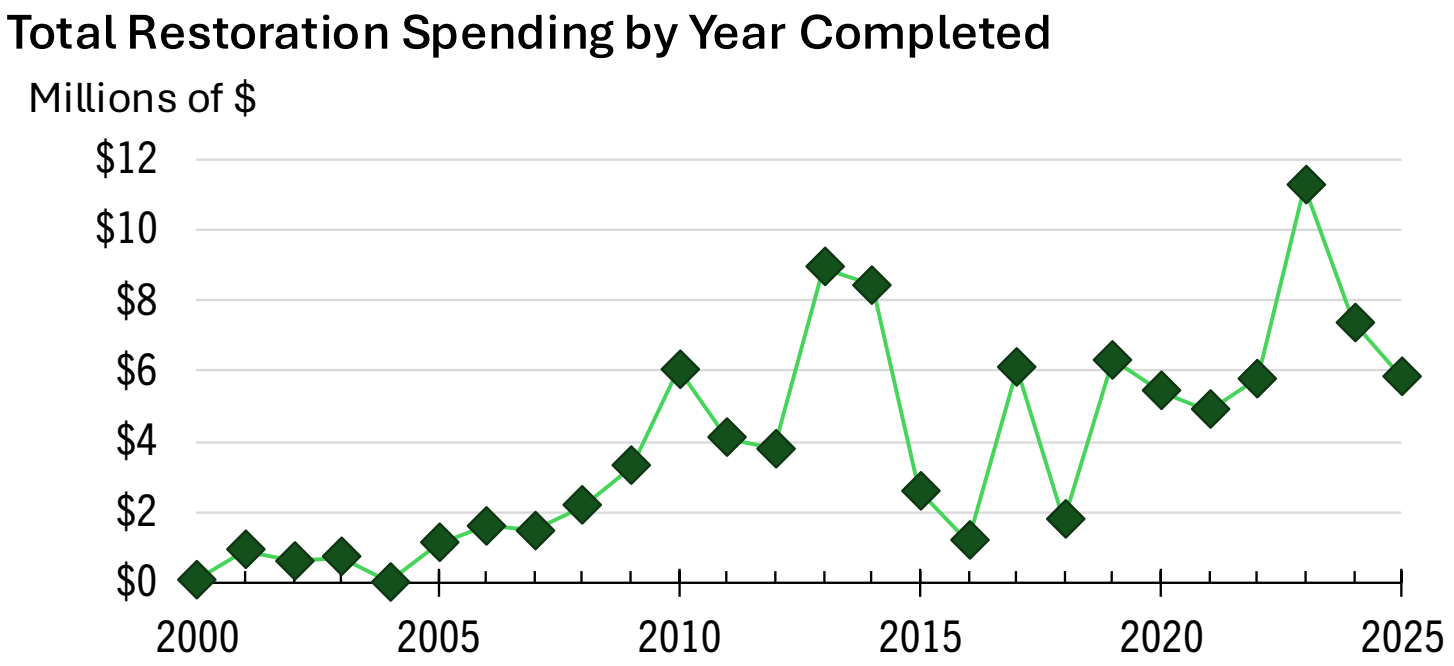
Landowners

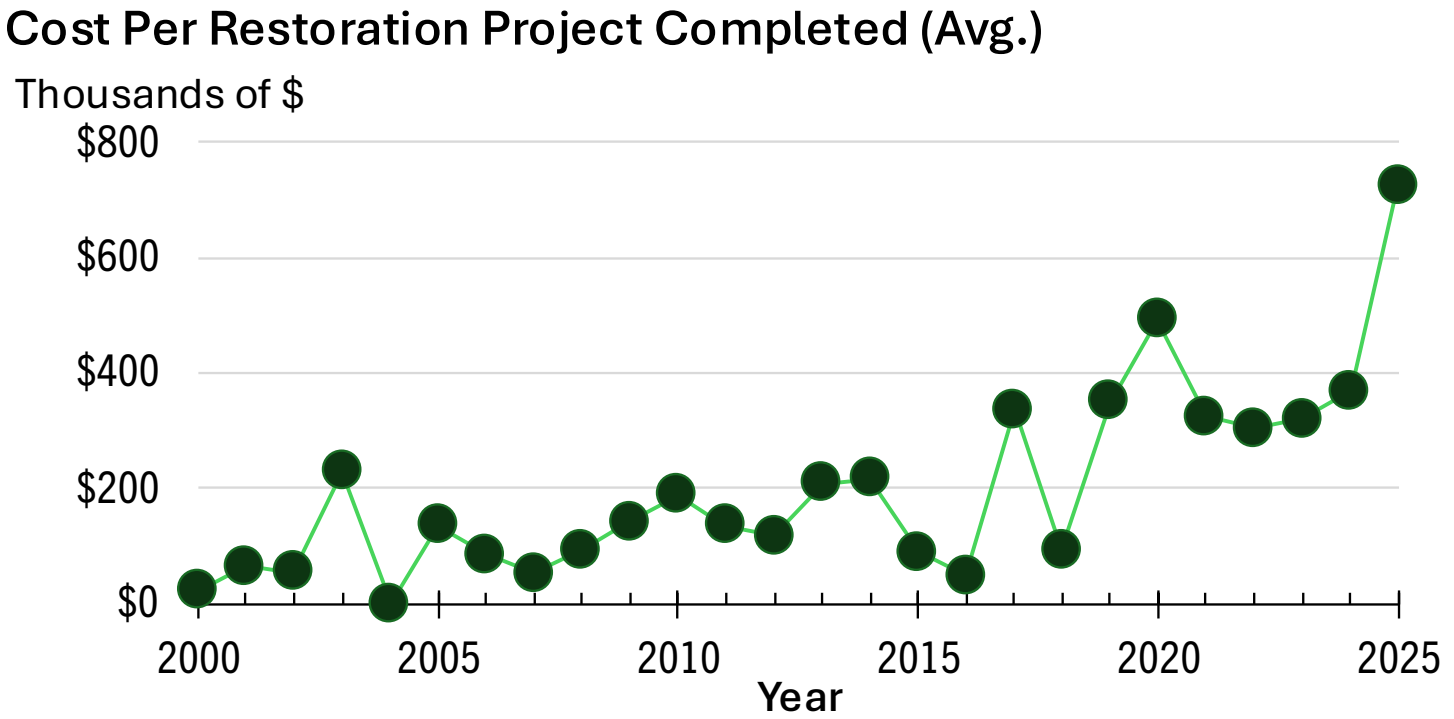
Habitat Restoration

What flows through this system?

- Funding
- Information
- Metrics
- Credits
- Policy
- Compliance
- Risk/Liability
- Incentives
- Effort….

Restoration Spending and Project Costs Have Grown





Salmon Recovery Portal Data

Institutional Barriers to Habitat Restoration

1. Regulatory Complexity
2. Funding Process Complexity
3. Insufficient and Ineffective Outreach and Coordination
4. Fragmented Collaboration and Competition
5. Infrastructure Constraints
6. Disjointed Monitoring and Progress Tracking
7. Mismatch of Restoration with Life History Needs

Action Menu (n = 26)

		Action Categories									
Barrier	Actions	Coordination Structures and Strategies	Resource Pooling	Upper Columbia Prioritization Updates	Strategic Planning	Funding Processes and Incentives	Policies and Programs	Tracking and Accounting	Research, Analysis, and Monitoring	Education	Advocacy
1-Regulatory Complexity	Expand programmatic permitting pathways						●				
	Develop shared permitting templates and regional specialists		●								
	Pool project liability						●				●
2-Funding Process Complexity	Improve grant contract flexibility					●	●				●
	Funding sources for project development/landowner engagement					●	●				●
	Standardize grant applications among funding entities		●			●					
	Update scoring criteria to encourage a broader mix of projects					●					
	Simplify the Upper Columbia Prioritization Framework			●		●					
3-Insufficient and Ineffective Outreach and Engagement	Plain language communication tools		●							●	
	Funding sources for project development/landowner engagement					●	●				●
	Expanded landowner incentives						●				
	Integrate habitat with comprehensive flood hazard planning	●	●		●						
4-Fragmented Collaboration and Competition	Evaluate root causes and solutions	●		●	●						
	On-call facilitation services	●	●								
	Incentivize inter-sponsor coordination	●				●					
5-Infrastructure Constraints	Strategic action plans for infrastructure	●			●						
	MOUs and strategic coordination with infrastructure owners	●	●		●						
	Incentives for coordination on large projects					●					
6-Disjointed Monitoring and Progress Tracking	Improved and clarified project metric reporting							●			
	Transparent tracking of restoration progress and need							●			
	Accessible accounting of floodplain/riparian status and trends							●	●		
	Centralized monitoring data repository and coordination	●	●								
	Standardized monitoring and adaptive management plans		●					●	●		
7-Mismatch of Restoration with Life History Needs	Incentives to restore more life history pathways/habitats			●		●					
	Improve adaptability of Upper Columbia Prioritization framework			●				●			
	Salmon life history workshops								●	●	

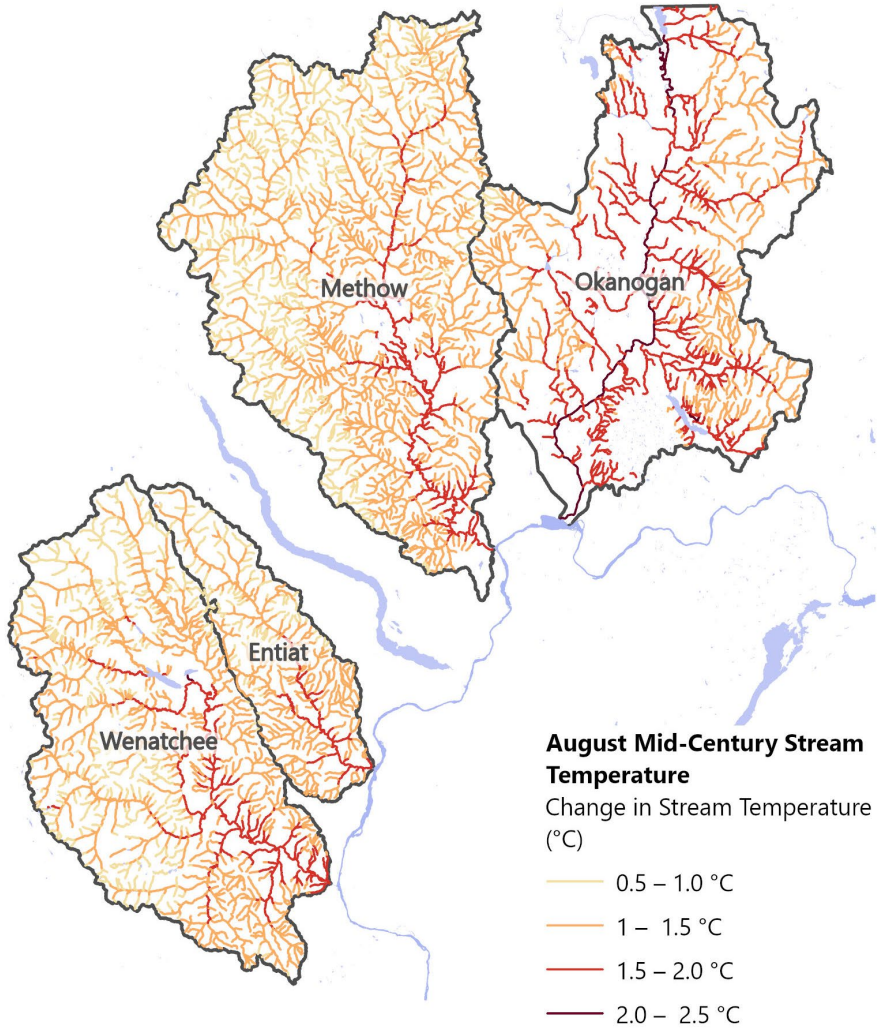
Key Action Areas to Address Institutional Barriers

- Updates to the Upper Columbia prioritization
  - →To increase transparency, adaptability, and biological priorities
- Improve accounting of restoration progress and needs

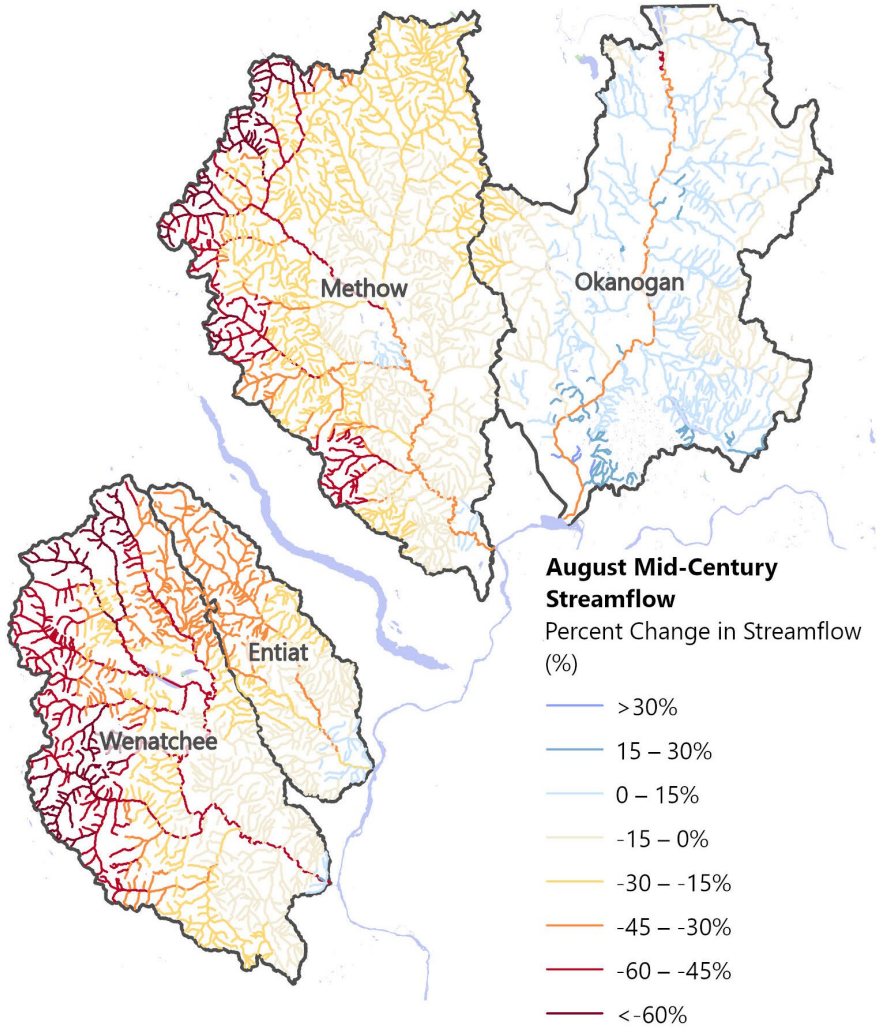
- Funding process improvements
  - →Streamline grant application processes
  - →Revise scoring criteria to improve incentives
- Strategic planning/coordination to develop integrated, multi-benefit projects
- Streamline/refine governance structures (e.g., WATs)

Climate Change

…we're pretty good at describing impacts



NORWEST, Isaak et al. 2017



Wenger et al. 2010

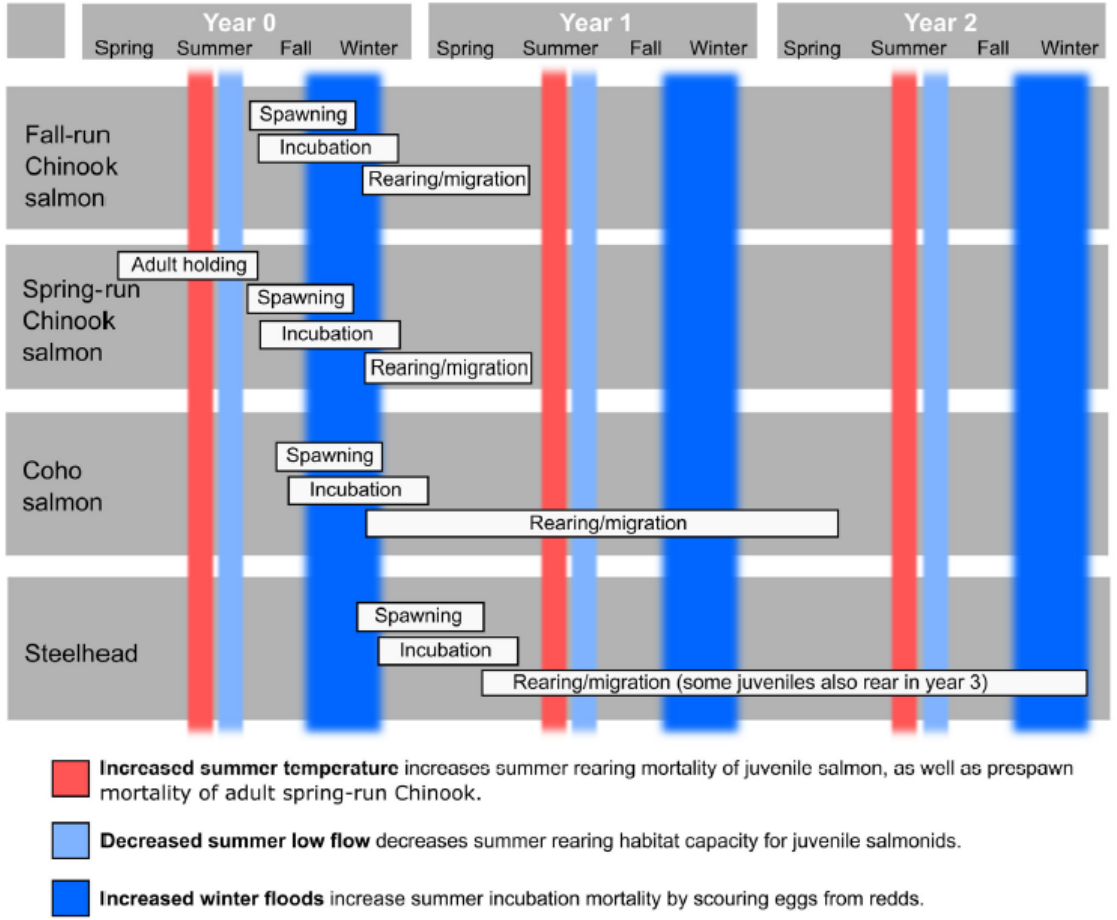
Climate Change

…but we need a strategy

A climate-focused restoration strategy would define the **“what”** and **“where”** of restoration actions

And those actions would in terms of their:

- **Salmon resilience benefits**
- **Amelioration benefits**

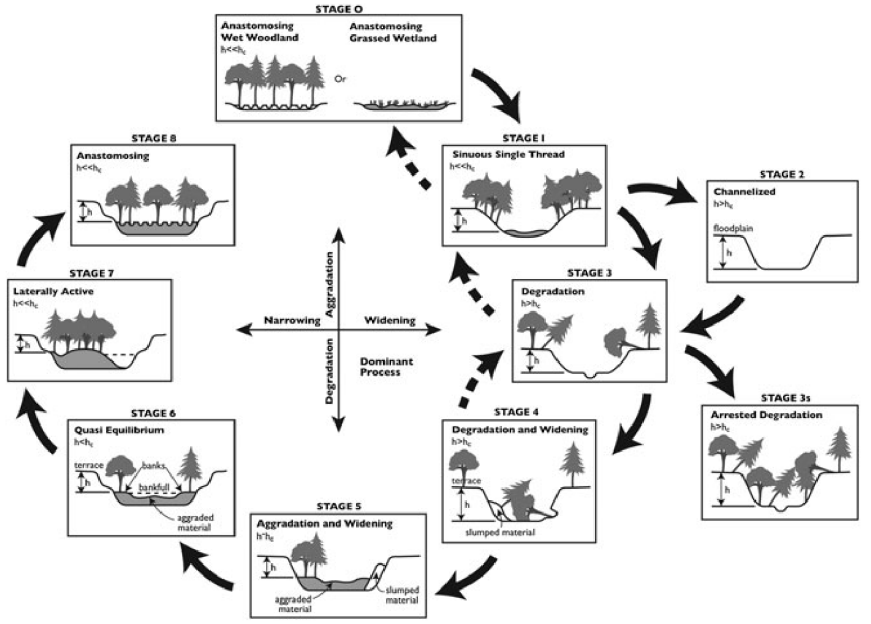


Beechie et al. 2023
Beechie et al. 2013

Floodplain Restoration

…we have learned a lot, but we have opportunities

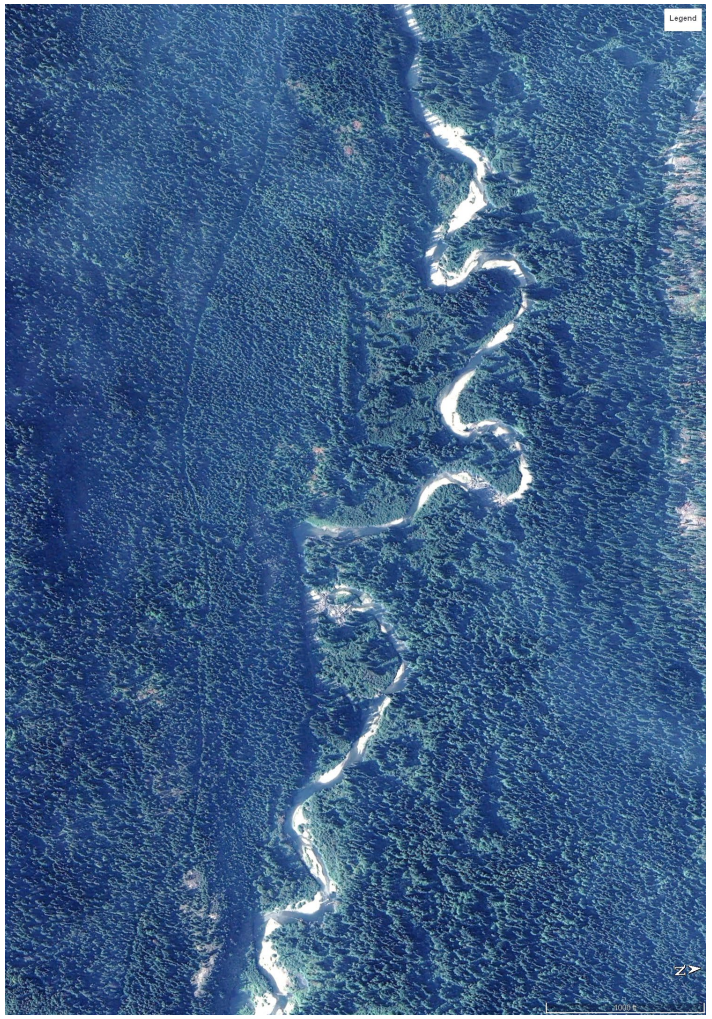
- To implement “Stage 0” in the region (expanding our toolkit)
- Address life cycle costs
- To integrate food webs (e.g., Bellmore et al 2017)
- To streamline floodplain permitting processes (a major impediment)



Cluer and Thorne 2014

We have divergent challenges by watershed position

Upper Watersheds



5,070 stream miles
(67% USFS)

→Stream Orders 1-3

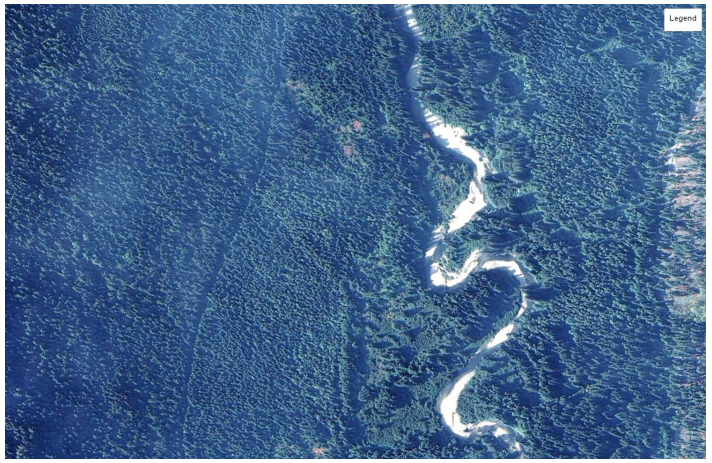
Lower Watersheds

590 stream miles
(34% USFS)

→Stream Orders 4-6

We have divergent challenges by watershed position

Upper Watersheds



NEEDS:

- Cost-effective techniques over life-cycle
- Streamlined coordination
- Clarity on downstream benefits

Lower Watersheds

NEEDS:

- Multiple benefits, multiple funding sources
- Landowner incentives
- Strategic infrastructure coordination
- Clarity on fish uses and needs

Summary of Opportunities

→Unlock progress through streamlining (address institutional barriers)

→Increase scale and effectiveness of habitat restoration, through a climate-focused, catered, community-focused approach

Next Steps:
Phase I summary report issued this winter
Phase II of process will proceed in 2026 (decisions)