

# Habitat Subcommittee Report



11/9/09 YRBWEP Workgroup Meeting



# Committee Membership

- Jeff Thomas, USFWS
- Scott Nicolai, Yakama Nation
- Joel Hubble, USBOR
- Perry Harvester, WDFW
- Joel Freudenthal, Yakima County
- David Child, Yakima Basin Joint Board
- Jason McCormick, Washington Water Trust
- Alex Conley, YBFWRB

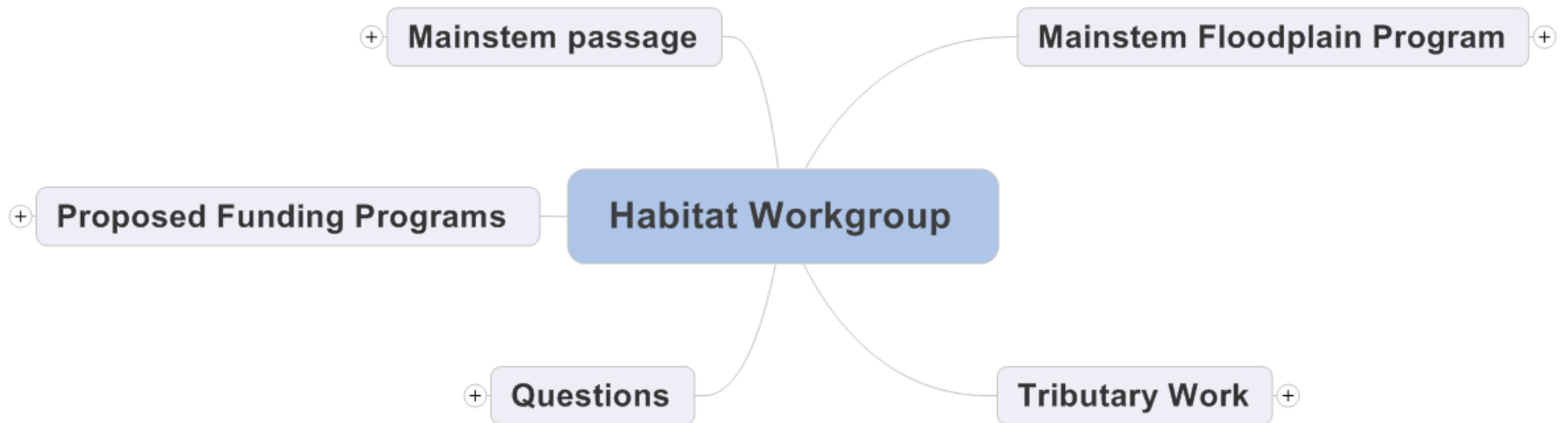
*With support from Ben Floyd, HDR and Wendy Christiansen, USBOR*

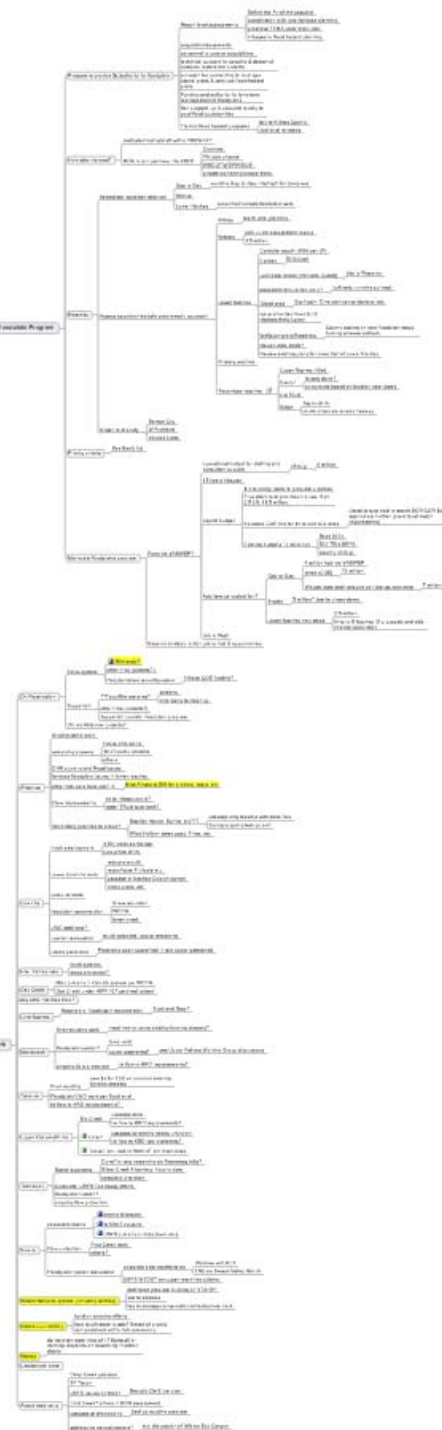
# Mandate to Committee

- Identify fish habitat work to be funded by the proposed integrated package
- Identify estimated funding needs
- Propose structure for habitat programs

# Working Assumptions

- Focus on currently unmet needs, assuming continuation of existing support
- Identify opportunities to accelerate rate of implementation
- Support work by diverse project sponsors
- Maintain flexibility in programs







# Draft Proposal

## THREE ELEMENTS:

- a) Mainstem Floodplain Program
- b) Tributaries Program
- c) Emergent Opportunities Fund

# Mainstem Floodplains









# Mainstem Floodplain Program

- Funding through YRBWEP program
- Implementation via YRBWEP and partners  
*(Counties, Conservation Districts, NGOs, Yakama Nation)*
- Link to flood hazard reduction and County, City & State infrastructure projects
- Build in-basin technical capacity



# Mainstem Floodplains Funding

Tier I: Specific projects already in design phase

*Work to begin immediately; \$25 million total*

Tier II: New projects in priority reaches

*\$2 million/yr for 5 yrs; \$4 million/yr in yrs 5-15*

*Scope/design immediately; construction after Tier I*

Tier III: Additional opportunities

*\$1 million/ yr for 30 years (or only yrs 15-30)*

*Program management at \$250,000 per year*

# PHASE I: Gap To Gap





Union Gap

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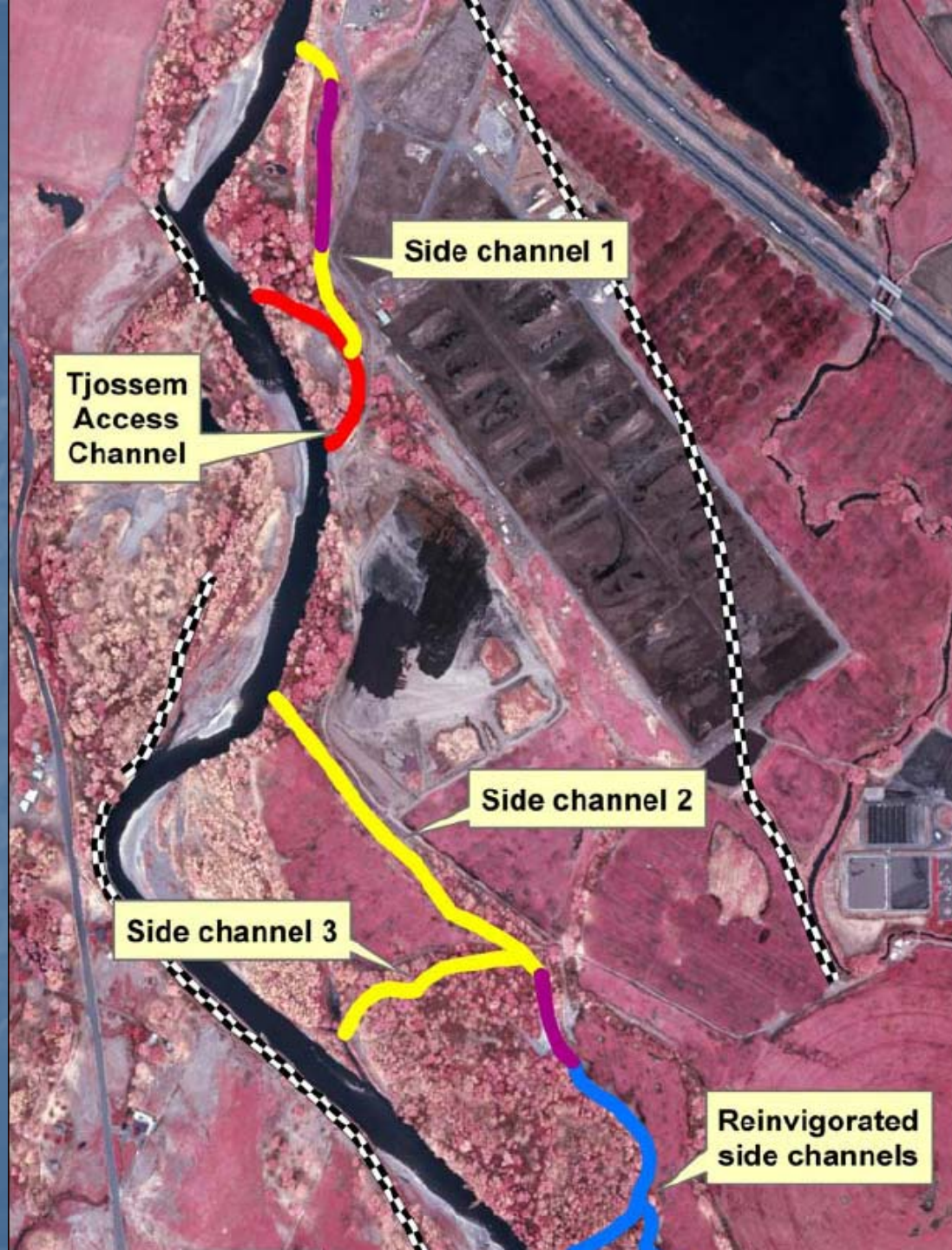
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Streaming 100%

Eye alt 15010.0



# PHASE I: Schaake Project



Side channel 1

Tjossem  
Access  
Channel

Side channel 2

Side channel 3

Reinvigorated  
side channels



# PHASE I: Lower Naches



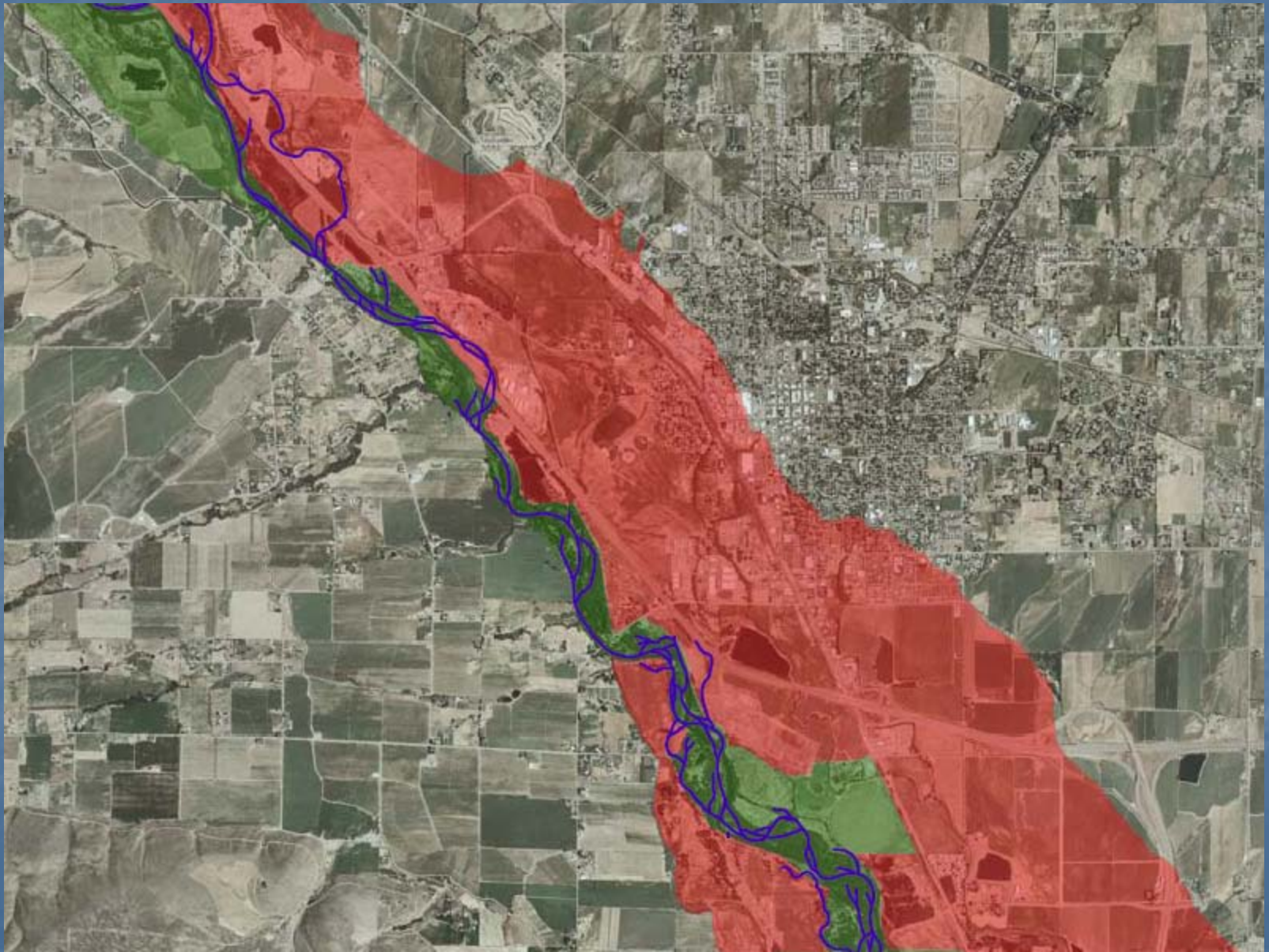




# PHASE II: Priority Reaches

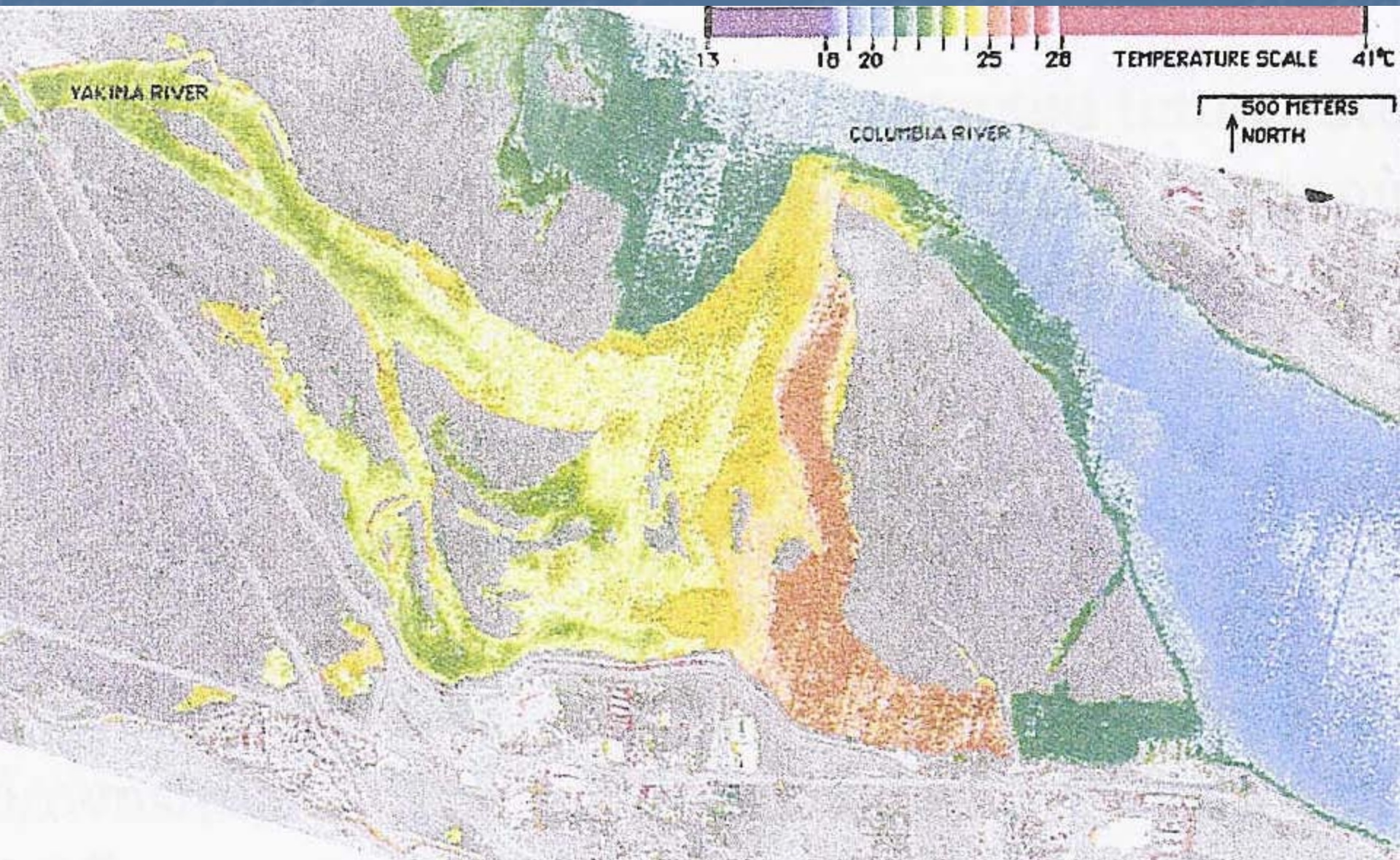
- a) Ellensburg/Kittitas, Wapato, Naches as highest priorities;
- b) Easton & Cle Elum high priorities as opportunities arise
- c) Selah, Benton City, West Richland and Yakima Delta also potentially significant

# Phase II/III Reach Assessments





# And the mouth of the Yakima...





# Tributaries Program



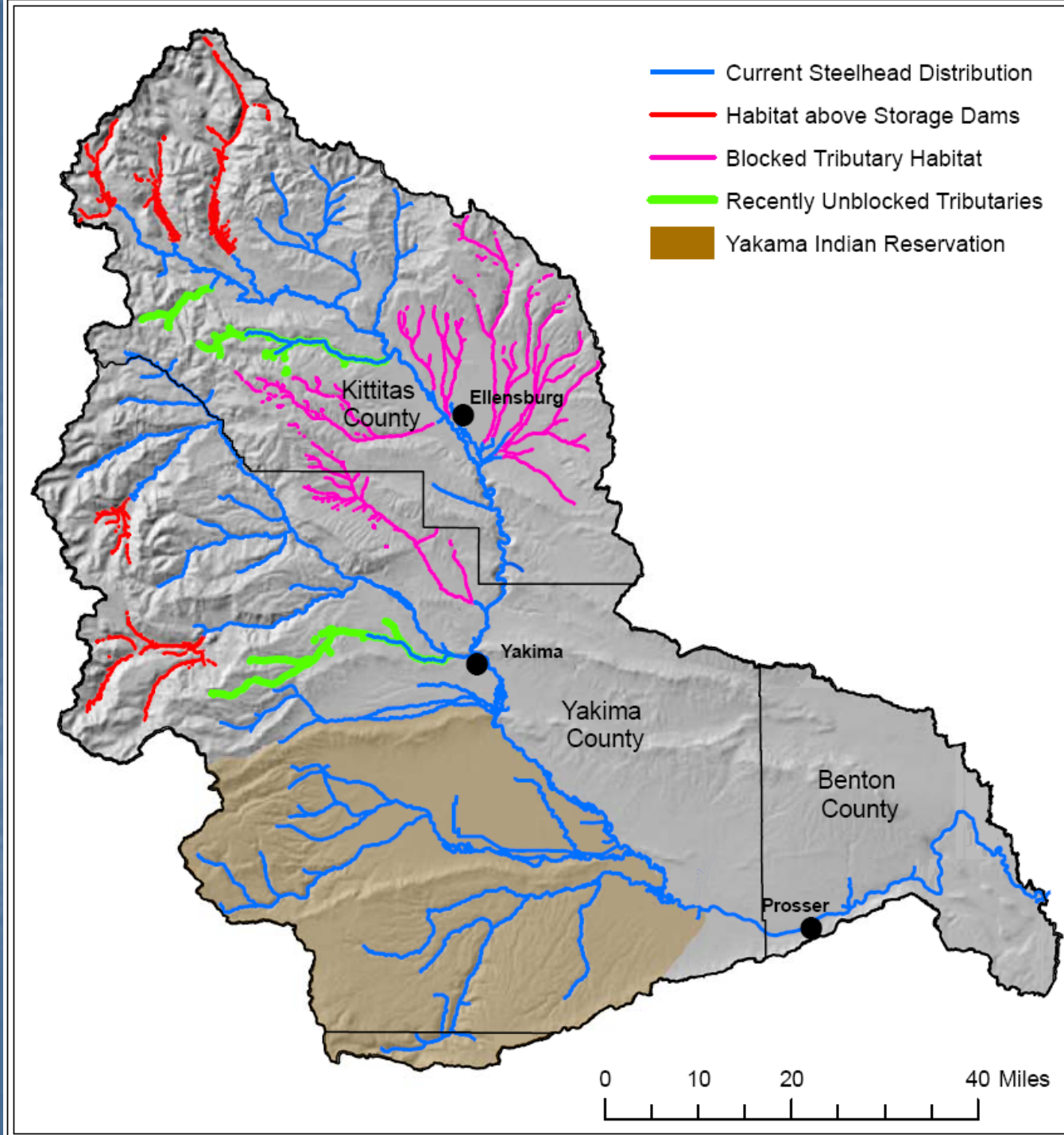








# Tributary Passage & Screening



# Passage & Screening

- Complete work in Cowiche, Taneum
- Ongoing work in Manastash, Reecer, etc
- Secondary tribs and partial barriers in some locations
- Wilson/Naneum as a separate program
- Wenas low priority based on challenges



# Costs & Goals

- Cost estimates from Conservation Districts and others
- Clear, finite priorities; can set specific goals

Program Element	Recommended Funding Level (\$/millions)	Geographic Areas and Improvements	Timing
Passage & Screening Projects	\$9	Upper Yakima	Years 1 – 15
	\$4.1	Middle Yakima	Years 1 – 15
Subtotal	\$13.1		

# Tributary Habitat Program



# Enhancing Riparian Vegetation





# Providing instream structure





# Reconnecting streams & floodplains



# Improving Instream Flows

- Irrigation efficiencies and water acquisitions with tributary diverters
- Only for creeks not tied to KRD infrastructure elements











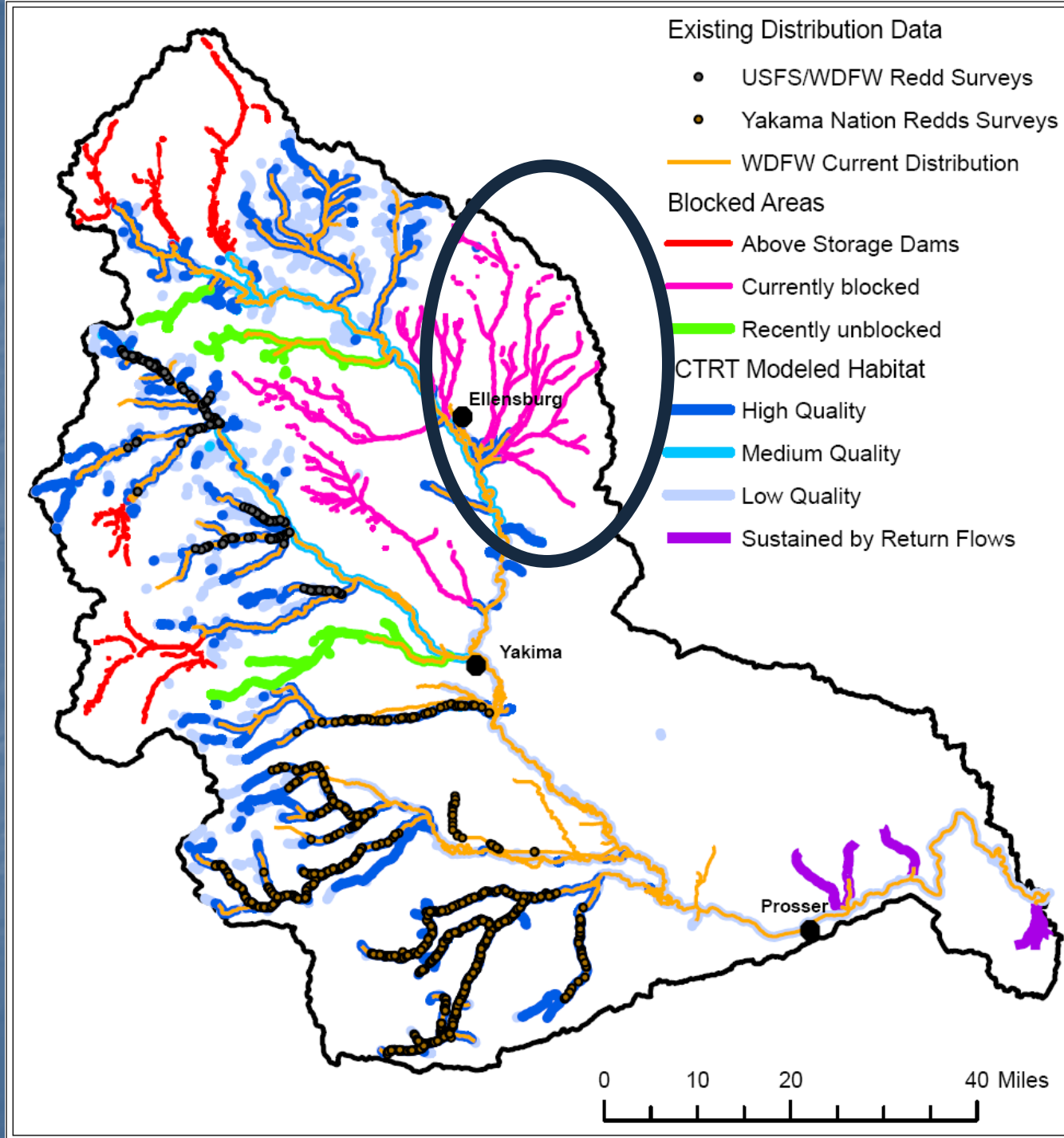
# Tributary Habitat Improvements

- Some priorities known, but will require ongoing process to identify and prioritize opportunities

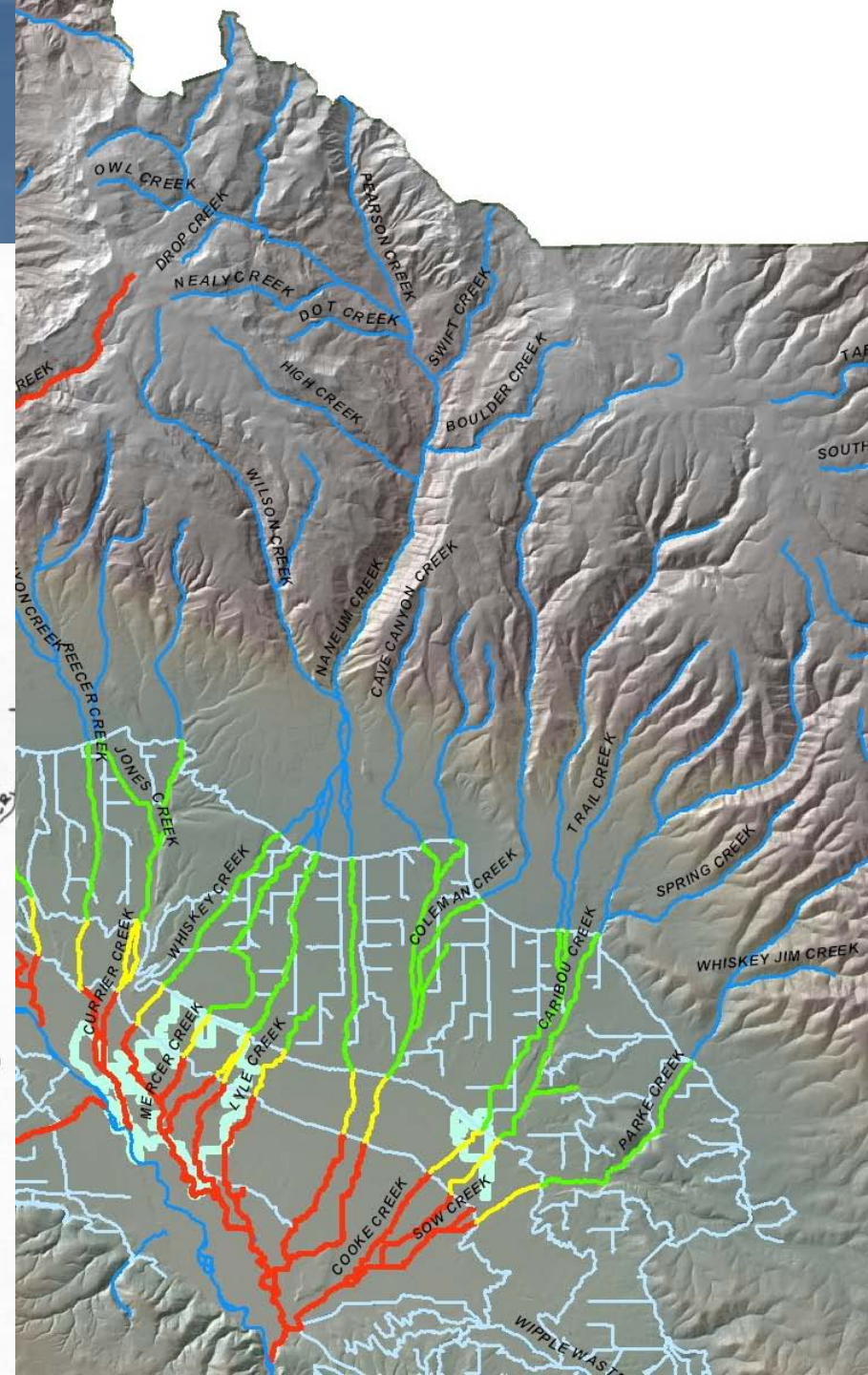
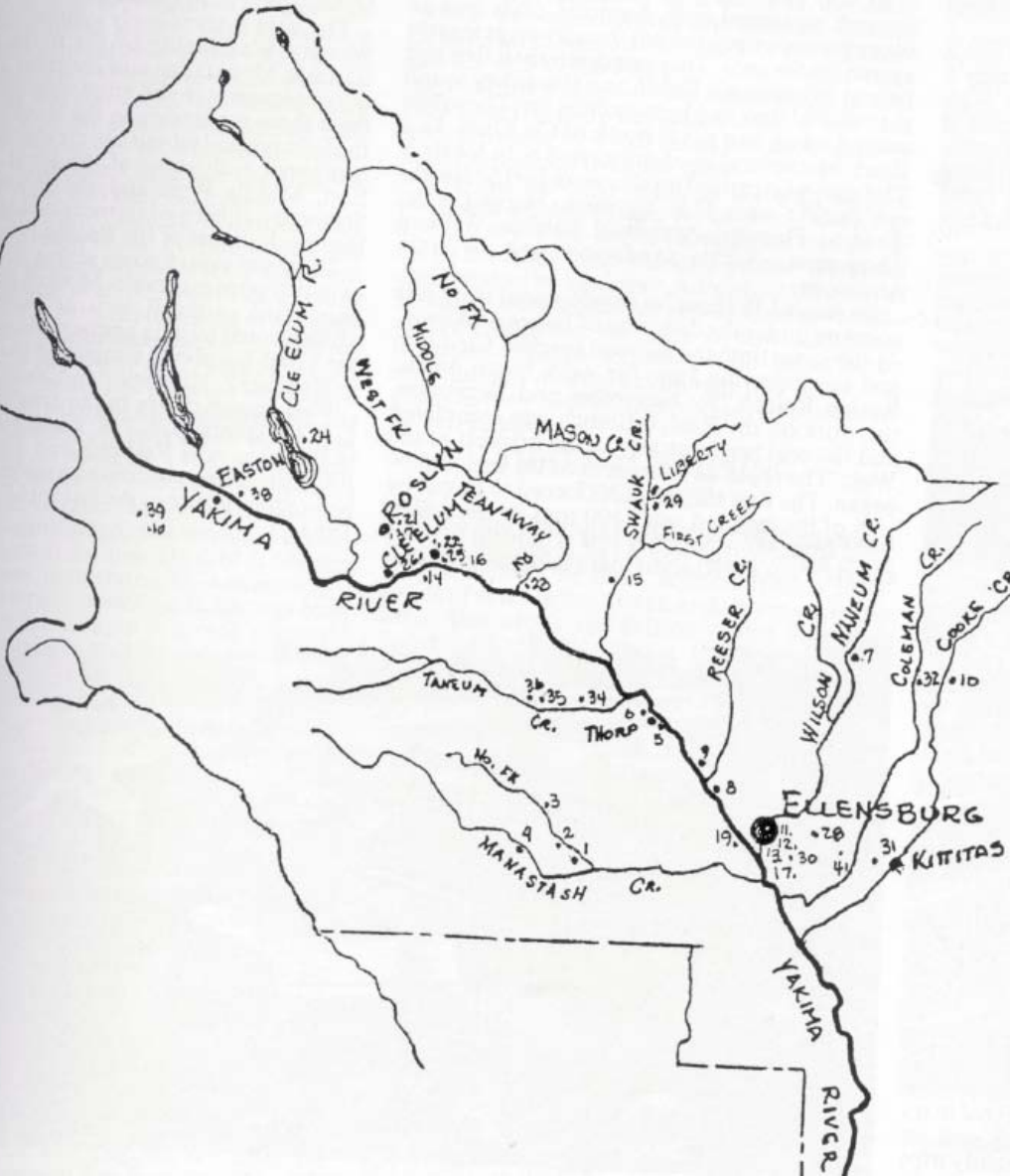
Habitat Restoration & Enhancement (below reservoirs)	\$9.5	Upper Yakima – Habitat restoration: (e.g., fencing plantings, large woody debris, side-channel/ floodplain, nutrient enhancement, instream flow enhancement.	Years 1 – 15
	\$5.8	Middle Yakima – Habitat restoration (e.g., Fencing plantings, large woody debris, side-channel/ floodplain, nutrient enhancement, instream flow enhancement.	Years 1 – 15
Subtotal	\$14.45		

# Wilson-Naneum Program





# The Puzzle





# Why a separate program?

- Physical & institutional complexities
- Requires strategic plan to integrate habitat goals with flood control, irrigation infrastructure and development issues
- Collaborative process with City of Ellensburg, Kittitas County, Conservation District, landowners, etc

Wilson/Naneum – Passage/Screening	\$11.25	Confirm water management plan/Capital Improvement Plan (CIP), upgrade and consolidate diversions, provide fish passage and instream flow improvements.	Years 1 – 10
Wilson/Naneum – Habitat	\$1	Instream and riparian habitat improvements, floodplain restoration, and conservation easements.	Years 1 – 10
<b>Subtotal</b>	<b>\$12.25</b>		



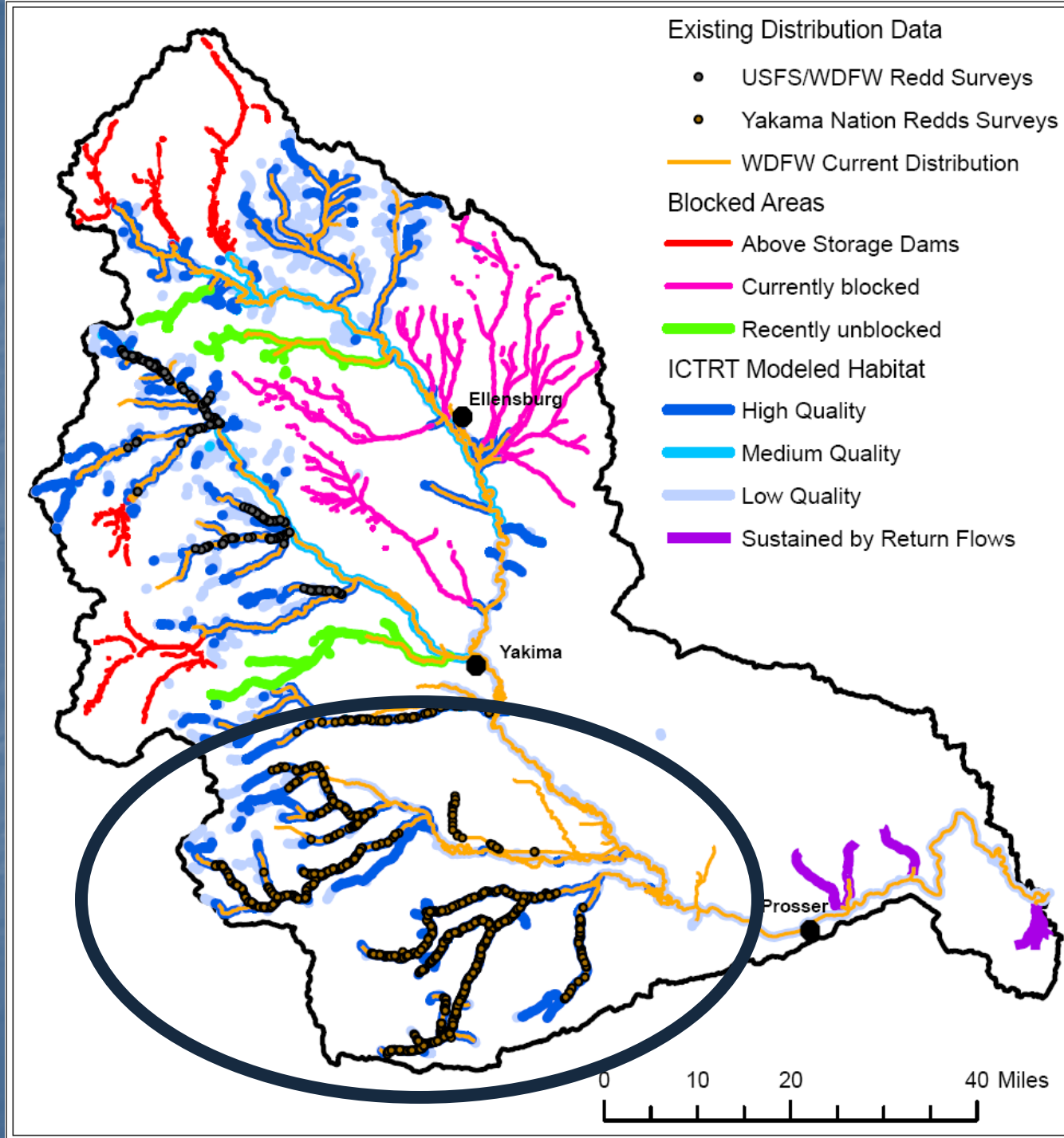
# Headwaters Program

- Primary focus on USFS lands and Bureau Reservoirs but open to diverse sponsors
- Addresses priorities for Bull Trout in areas currently inaccessible to anadromous fish
- Prepares habitat in anticipation of storage dam passage projects
- Also upper reaches of anadromous tribs

# Headwaters Elements

Headwaters Restoration (Above Reclamation Reservoirs)	\$3.75	Headwaters restoration and passage above reservoirs and on USFS lands: roads, culverts, channel improvements, LWD and other habitat improvements	Years 1 – 15
	\$2.5	South Fork Tieton River (primarily new bridge; reroute the South Fork to, or near, its historic channel at the mouth)	Years 1 – 15
	\$1.5 (\$0.05/yr)	Seasonal task force passage projects <sup>7</sup> to ensure unimpeded passage into spawning tributaries above the storage reservoirs.	Years 1 – 30
	\$0.5	Gold Creek hydrogeology report and restoration design	Years 1 – 15
<b>Subtotal</b>	<b>\$8.25 (\$0.5/yr)</b>		





# Yakama On-Reservation Program

- Build on current YRBWEP investment in Toppenish Corridor Plan
- Accelerate implementation of Yakama Reservation Watersheds and Riparian/Wetland Projects

YN Reservation Screening/Passage/Restoration	\$25	Implement Toppenish Creek Corridor program, and improve Satus Creek: screening, passage, riparian restoration	Years 1 – 10
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# Emerging Opportunities Fund

\$15 (\$5 upfront [Year 1], then \$0.5/yr)	Basin-wide – tributaries	Years 1 – 20	<p>Guidelines</p> <ul style="list-style-type: none"><li>• For projects that either fall outside other programs, or are particularly time sensitive</li><li>• Expect use for acquisitions (fee simple and easement), that need to be completed rapidly</li><li>• Connected to identified fish benefit/riparian, or water right acquisition</li><li>• Leverage mitigation benefit/project opportunity</li><li>• Seed money for studies would be administrated by an organization (not yet identified)</li></ul>
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Program Element	Recommended Funding Level (\$/millions)	Geographic Areas	Timing
<b>Mainstem Floodplain Restoration</b>			
Tier I – Existing projects with estimated budgets	\$25	Union Gap, Ellensburg Floodplain (Schaaake), Lower Naches	Phase I (Years 1 – 7)
Tier II – Existing planning efforts underway	\$50 (\$2/yr for 5 years; \$4/yr for 5 – 15 years)	Upper Ellensburg/Kittitas, Wapato, Naches/Nile, Selah/Taylor Ditch, Easton	Years 1 – 15
Tier III	\$30 (\$1/yr for 30 years)	Benton City/West Richland, Yakima Delta, & all other areas	Years 1 - 30
Program Management (management and oversight, preliminary design)	\$7.5 (or \$0.25/yr)	Basin-wide	Years 1 – 30
<b>Subtotal</b>	<b>\$112.5</b>		
<b>Tributaries Program</b>			
Passage/Screening Projects	\$13.85	Upper and Middle Yakima	Years 1 – 15
Habitat Restoration (Below Reservoirs)	\$16.3	Upper and Middle Yakima	Years 1 – 15
Wilson/Naneum	\$12.25	Wilson/Naneum	Years 1 – 10
Headwaters Restoration	\$8.25 (\$0.5/yr)	Headwaters above reservoirs and on USFS lands	Years 1 – 30
YN Reservation Screening/Passage/Restoration	\$25	Satus and Toppenish Creeks	Years 1 –10
Emergent Needs Fund: Acquisition/ Conservation Easement Opportunities	\$15 (\$5 upfront plus \$0.5/ yr)	Basin-wide – tributaries	Years 1 – 20
<b>Subtotal</b>	<b>\$90.65</b>		
<b>TOTAL</b>	<b>\$203.15 Million</b>		



# Next Steps

- Develop tighter project lists & show linkages to existing plans
- Develop mainstem reach/trib specific goals
- Develop more detailed proposals for how programs should be run
- Clarify prioritization frameworks
- Refine cost estimates based on above