

CARVING OUT FISH FLOWS IN TIGHT WATER MARKETS

2011 YAKIMA BASIN SCIENCE AND MGT. CONFERENCE

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June 16, 2011



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Working to restore rivers and streams in Washington state

WHO IS WWWT?

- Small 501-c3 non-profit
- QLE – Columbia Basin Water Transaction Program
- Mission: WWWT works to improve and protect stream flows and water quality throughout Washington that benefit agriculture, fisheries and wildlife by using innovative, market-based transactions and cooperative partnerships to create balanced solutions.



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WHAT DOES WWT DO?

- Purchase Water Rights
- Lease Water Rights
 - Full Season/Late Season
 - Short-term/Long-term
- Develop water banks
- Independent resource for state agencies
- Intermediary in regulatory actions



Funding Sources

- Columbia Basin Water Transaction Program, NFWF, BPA
- Department of Ecology
- Private/Public Mitigation dollars
- Columbia River Water Management Program
- State SRFB
- Private grants



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WHAT IS A WATER MARKET?

- Market as defined in Webster's Dictionary: "4(d); the area of economic activity in which buyers and sellers come together and the forces of supply and demand affect prices"
- Single transaction
- Multiple organized transactions
 - Yakima Basin "Drought Transfers"
- Regulated Marketplace to address specific needs
 - Kittitas exempt well rule
 - Willamette Partnership
- Conservation market
- Organized Marketplace
 - Murry/Darling Basin - AU



FACTORS AFFECTING WATER MARKETS?

- Supply
- Willingness of seller
- Existence of buyer
- Externalities
 - State Exempt Well Rule
 - Large Resorts
 - Municipalities
 - Any peak in “new” water demand
- Marketplace



WATER PRICING DIFFERENTIALS/MARGINS (YAKIMA BASIN)

- Winter stock water - \$100/acre-foot diverted
- Summer stock water/conveyance water - \$300-700/acre-foot diverted
- Winter consumptive stock water - \$varies wildly
- Summer consumptive irrigation water - \$varies wildly based on new use/willingness of buyers
 - **Bruton Ditch - \$1,400/acre-foot consumptive
 - **coupled with a \$1M habitat/flow/infrastructure proj.
- Upper Yakima Mitigation Water
 - \$10, 20, 30,000/acre-foot



TANEUM CREEK – YAKIMA BASIN

- Restored 28.8 cfs (winter) and 1.84 cfs (summer) *permanently* to Taneum Creek through source substitution
 - Water users sourced to groundwater and irrigation district
 - Changed 130-yr practices
- Voluntary agreements with Taneum Canal Company and Bruton Ditch



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TANEUM CANAL COMPANY

Source substitution: winter water for fish & livestock

- Up to 28.8 cfs of stock water – from November to February
- Allows for full passage of salmonids and steelhead
- Canal company shareholders continue receiving stock water from individual wells
- Restored a water-deprived and often dry section of Taneum Creek
- Created opportunities for further work with TCC
 - Diversion dam reconstruction – Fall 2010/
Winter 2011
 - Summer flow opportunities – 2011 /12



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BRUTON DITCH

Passage barrier removal: adding instream flow and providing passage

- Major passage barrier removed Fall 2009
 - ~ 12 feet high concrete dam
- 1.84 cfs – April—October instream flow
- Irrigators source switched to a separate source: continue irrigation
- 2010 marks first spring Chinook smolts using habitat above former dam
- Steelhead began using upstream habitat immediately

Before



After

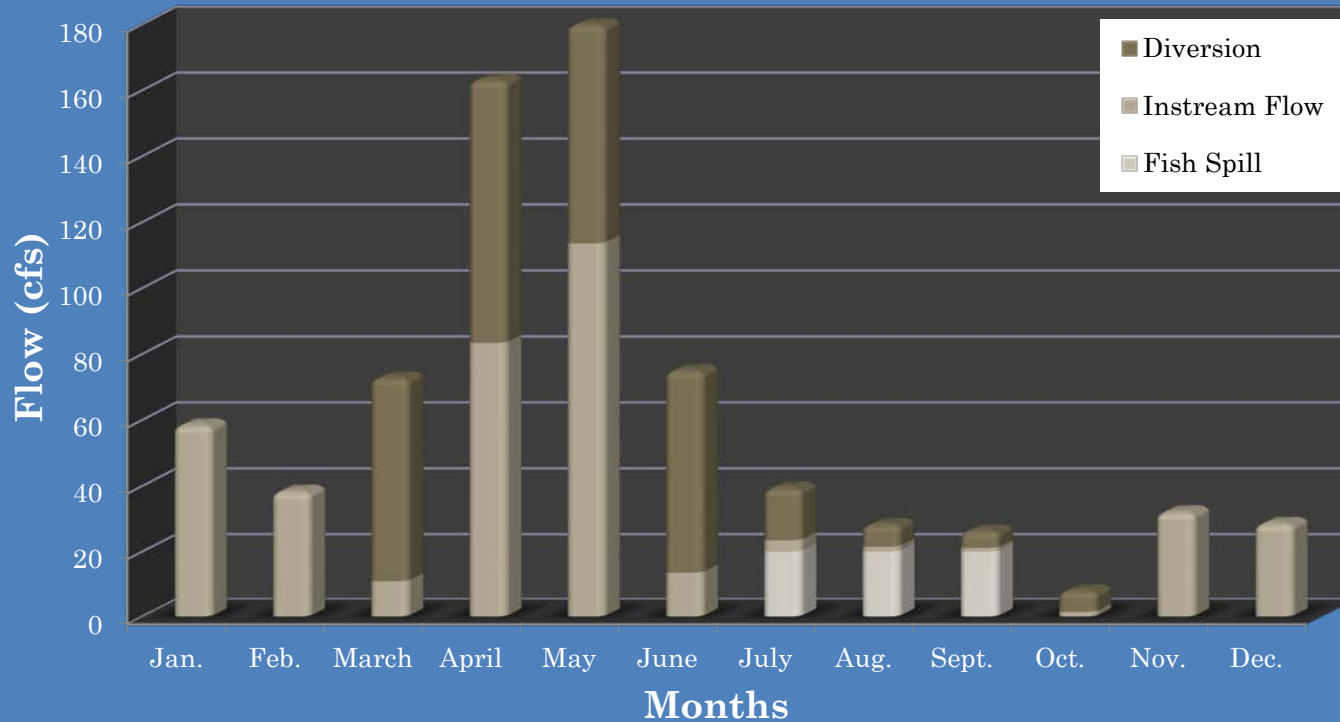


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TANEUM CREEK – YAKIMA BASIN

Instream Flow from WWT and USBOR

Taneum Creek at Brain Ranch
Five Year (2005-2009) Average Instream Flow by Month



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August 27, 2010 – 16.03 cfs



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FIRST CREEK/SWAUK CREEKS

- 4.5 cfs winter stock water purchase
- 3 landowners
- Permanent agreement
- Flow/temperature moderation
- Benefits steelhead and coho
- Low cost, high benefit





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Image U.S. Geological Survey

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Imagery Date: 6/30/2006

47°10'38.84" N 120°41'21.79" W elev 3191 ft



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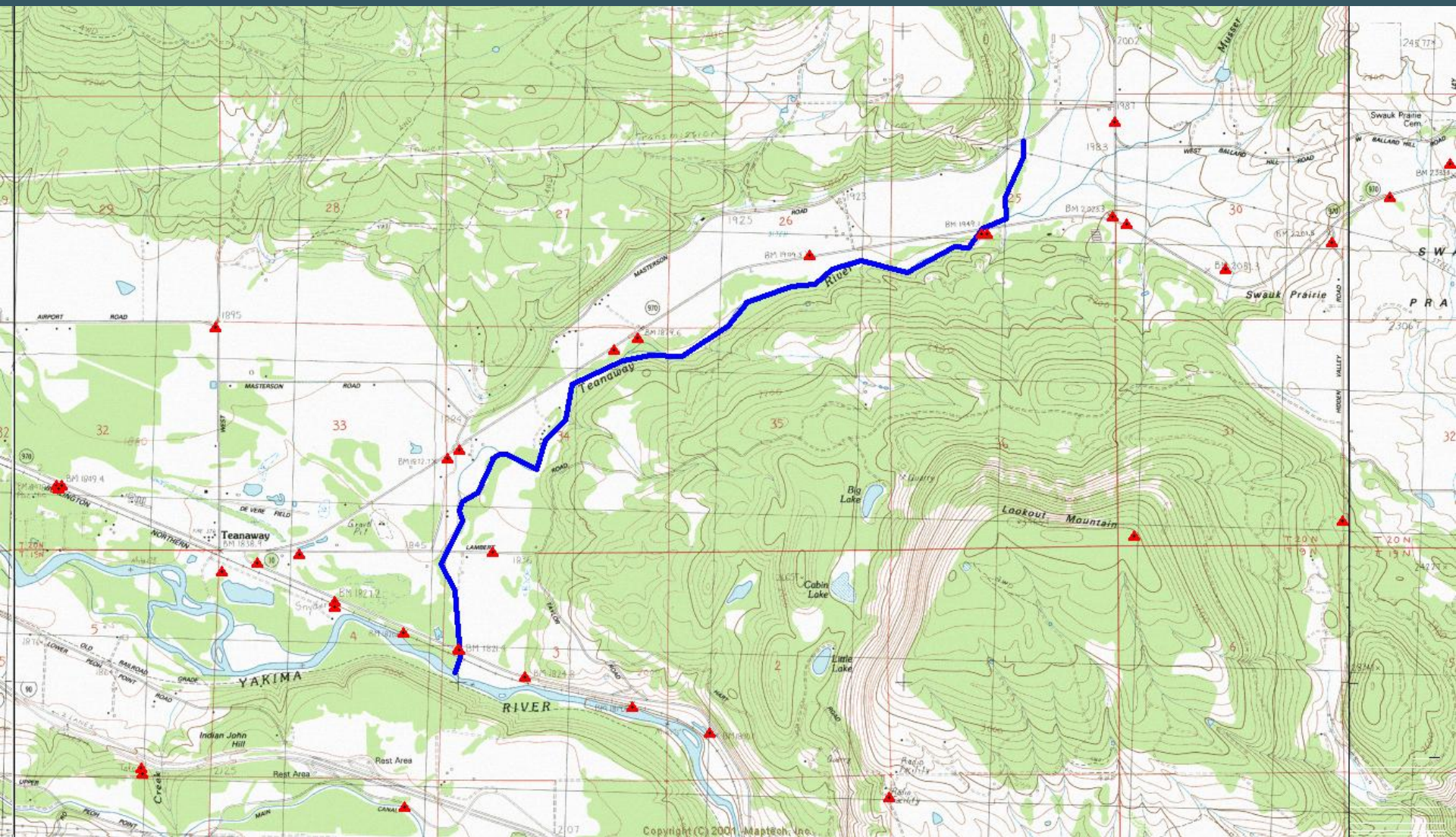
TEANAWAY RIVER



- Instream flow in 2001
 - Primary reach: 0 cfs
- Instream flow for 2009 irrigation season
 - Primary reach: up to 9.79 cfs - July 9 to September 15
- Instream flow for 2010 irrigation season
 - Primary reach: up to 10.3 cfs – August 1 to September 15
- WWT's First Permanent Purchase - 2010/11
 - Up to 7.6 cfs – May 1 to September 15



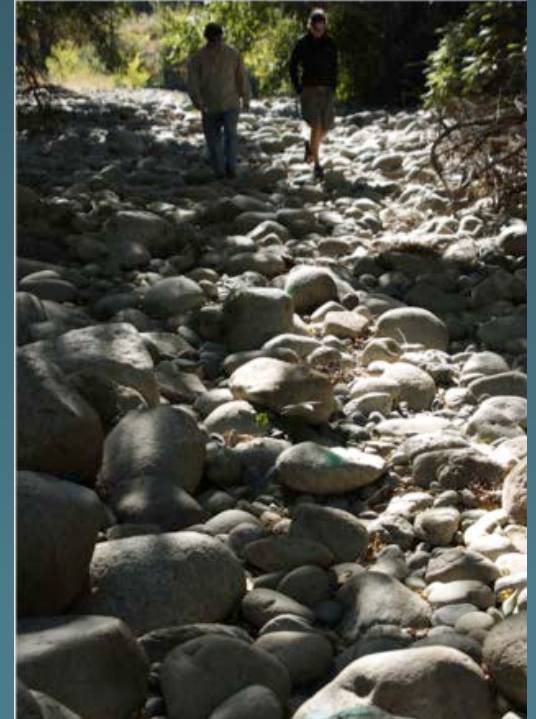
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INSTREAM FLOW NEEDS/LIMITING FACTORS

- 2009 Yakima Steelhead Recovery Plan, August 2009
- Most tributaries have instream flow listed as limiting factors
- Prioritize work in streams where:
 - Recovery potential is highest
 - Instream flow combined with habitat actions provide cumulative benefit
 - And/or a single project can do a lot of good



SCIENCE/MONITORING BEHIND OUR WORK

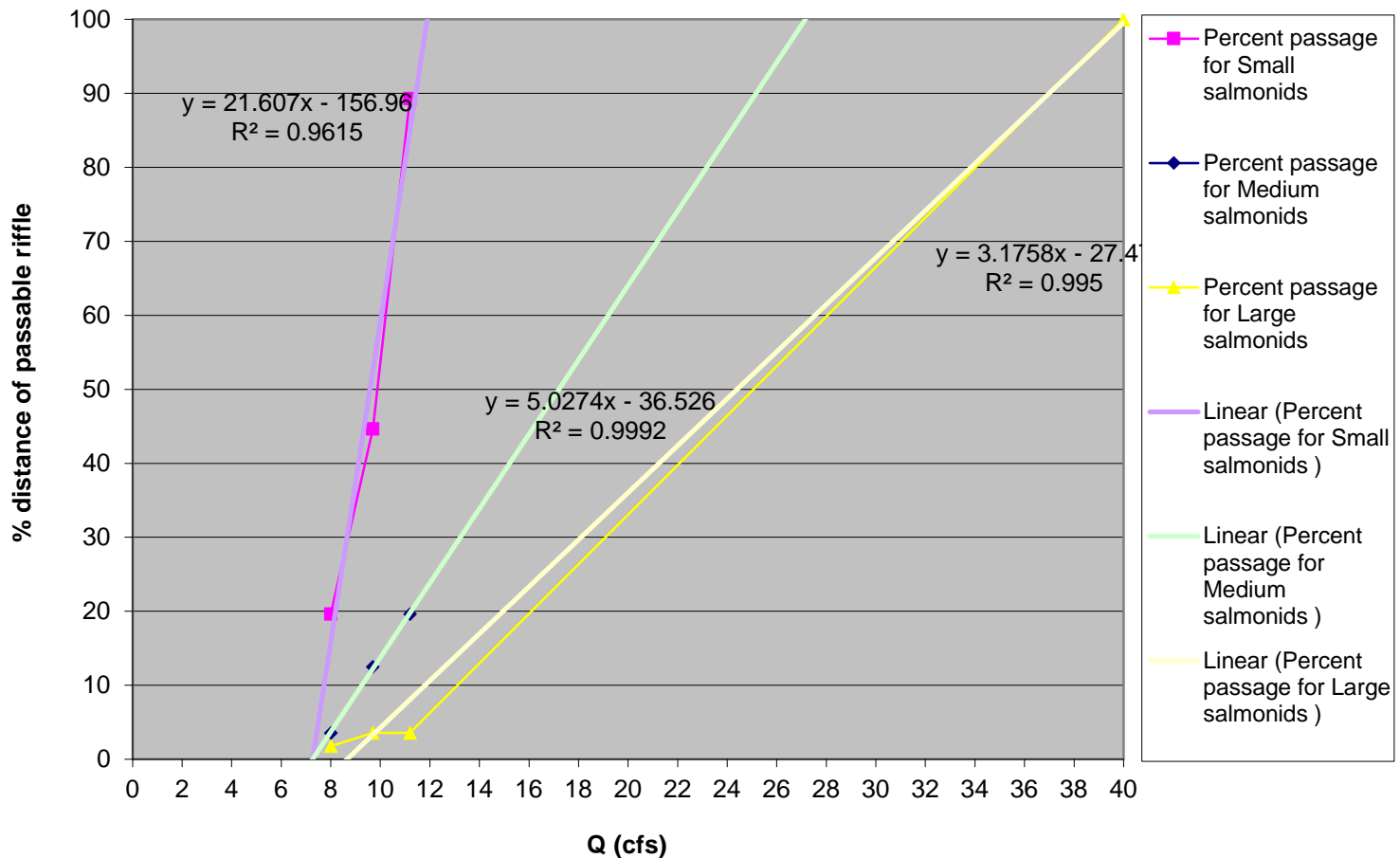
- IFC – Dr. Hal Beecher
- WDFW Water Team
- Teanaway Critical Riffle Study
- Teanaway PHABSIM
- Population Estimates/Bio Response
 - Mark and recapture
- Instream Compliance Monitoring
 - WWT
 - WDFW Water Team
 - Volunteers



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TEANAWAY CRITICAL RIFFLE

Teanaway River Passage % @ 75m DS of Lambert Road Bridge



QUESTIONS & DISCUSSION

Washington Water Trust presents~

Teanaway RIVER FESTIVAL

2-4 pm Activities
5-6 pm Social hour
& Raffle Drawing
6-7:30 Dinner & Program
7:30-9 Music and Dancing

Saturday, July 16, 2 pm-9 pm
Swauk-Teanaway Grange

Let's Celebrate!

- Live music/dancing
- Activities for kids
- Flycasting demonstration with The Evening Hatch
- Kayak raffle
- Teanaway geology tour, Tom Ring
- Teanaway project tours
- Scavenger hunt for kids
- Exhibits
- Free admission, dinner \$10 per person

Come enjoy an afternoon near the river celebrating the cooperative efforts of local landowners, Washington Water Trust and partners who help keep the Teanaway River flowing.

Join us for the *best river festival of the year* with great food, locally brewed beer, live music, dancing and fun for the whole family.

Location:

Swauk-Teanaway Grange
1361 W. Ballard Hill Road
Cle Elum, WA

For more information:

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