



WATER BANKS IN WASHINGTON

Dungeness & Yakima Basins

Susan Adams
AWRA Conference 2012



WASHINGTON
WATER TRUST

Working to restore our state's rivers and streams.

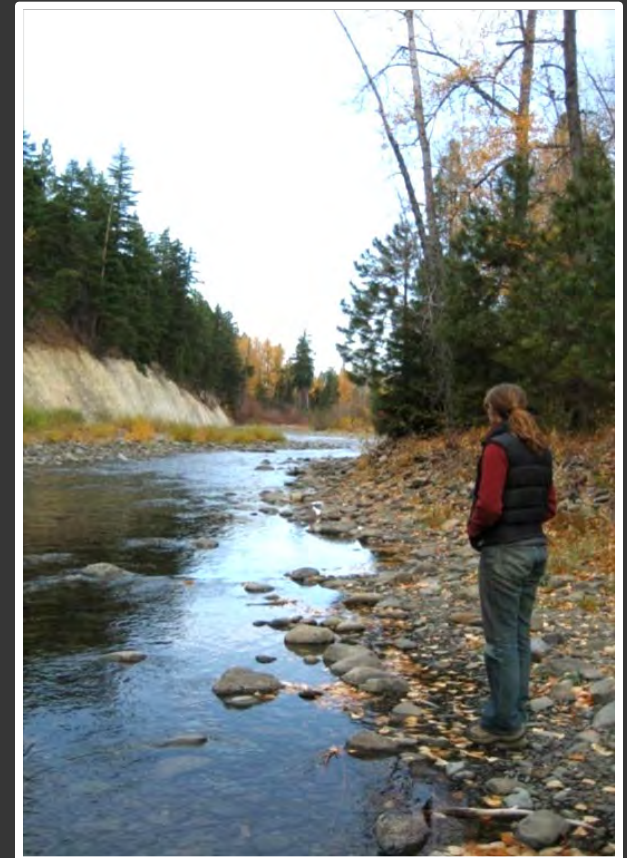
Washington Water Trust

Enhancing stream flows since 1998

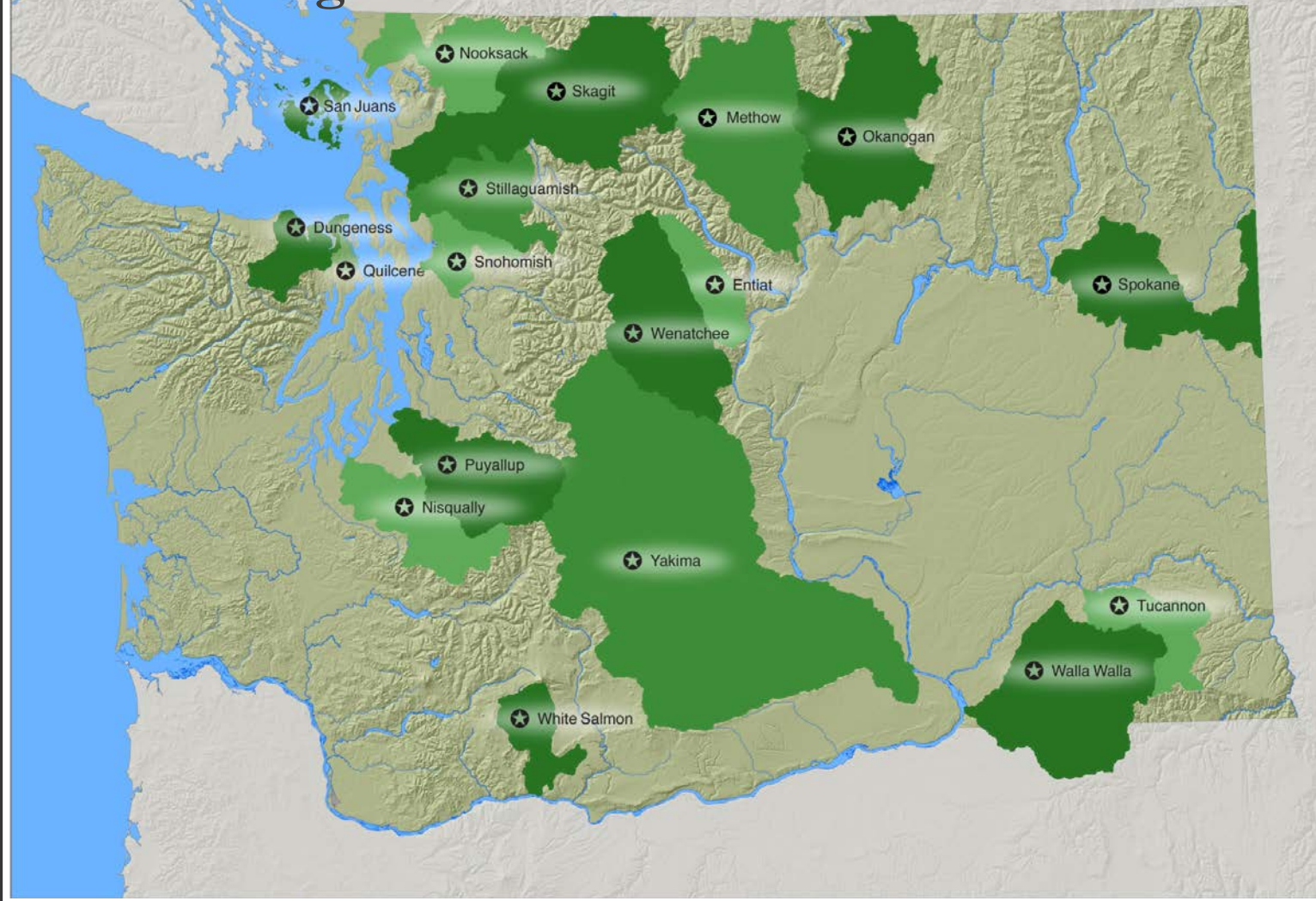


Washington Water Trust

- 501(c)3 independent nonprofit
- Enhancing stream flows statewide
- Water acquisition—voluntary, cooperative, market based, confidential, nonregulatory
- Water banking, mitigation
- Work collaboratively with a wide range of partners
- Columbia Basin—regional effort
- Working since 1998 with 35 years collective experience



Washington Water Trust Focus Basins



Why would WWT want to be involved in water right mitigation banking?

- Net instream benefit
- Access to potential sellers for restoration
- Full amount not used all the time
- Ability to retire groundwater to benefit surface flows
- Piggy back administrative costs for restoration and mitigation transactions
- Unique partnerships with Counties



Photo: Tom Ring

Kittitas Bank Example

- Purchase consumptive use instream flow (.75)
 - Lower price (instream flow)/unit water
- Assist in development of a mitigation bank (.25)
 - Higher price/unit water
- Results:
 - Opportunity to purchase instream flow water at conservation value, offset by mitigation bank higher value/unit water
 - Provides measurable improvement to instream flow, higher mitigation ratio



Reallocating Water | Competing Demands





Mitigated Permitting vs. Transferring Water Rights

- A water bank or exchange can “pre-position” the mitigation for future buyers and announce its availability through marketing
- A water right transfer, for comparison, would require the prospective buyer and seller to find one another, reach an agreement, and then process a change of water right
- Mitigated permitting (or mitigated permit-exempt uses) can be accomplished faster



Mitigation to accomplish what?

Serve “local” water supply needs

- To prevent impairment to existing out-of-stream rights?
- To resolve a conflict with an adopted instream flow?
- To offset a negative impact to water quality or fish habitat?
- Is it a work-around to a “closure” to new diversions or withdrawals?
- Is it temporary or permanent?



How can a market successfully reallocate water rights?

- Market/local factors:
 - Is there certainty of demand?
 - Is there certainty of supply?
 - Is there adequate institutional support for the transaction framework?
- Is reducing litigation cost or mitigation plan development and approval costs worth the cost of running a mitigation bank or water exchange?
- Are enough transactions expected to support exchange operations?
- History of collaborative efforts?



What tools can a water exchange use?

- Legal Authority:
 - Water right changes and transfers?
 - Mitigated permitting?
 - Groundwater permit exemption?
 - New water right permits?
 - Trust water right agreements?
 - Contracts?
- Physical infrastructure:
 - Conveyance facilities?
 - Storage facilities?
 - Run-of-the-river?

Water Banks & Exchanges



White Salmon River
Tom Ring Photo



Water Banks & Exchanges

- Yakima Basin Water Exchange
 - Emergency drought response
 - Upper Kittitas Water Exchange
 - Post-1905 domestic/municipal (“cabin owners”)
- Dungeness Water Exchange



Yakima Basin

- Annual runoff from 2.5 – 5 MAF; 1 MAF stored in 5 reservoirs
- “One bucket” management; unified entitlements to runoff and storage
- All surface water claims are adjudicated.
 - TWSA is a cumulative limit on all May 10, 1905 and earlier entitlements
 - If TWSA is short of satisfying entitlements, junior users are shut off and May 10, 1905 rights are proportionately reduced based on entitlements.
 - Time immemorial water right in U&A fishing areas:
 - Target flows for incubation and rearing – Quackenbush, 1980
 - Target flows (300-600 cfs) at Parker and Prosser – YRBWEP 1994

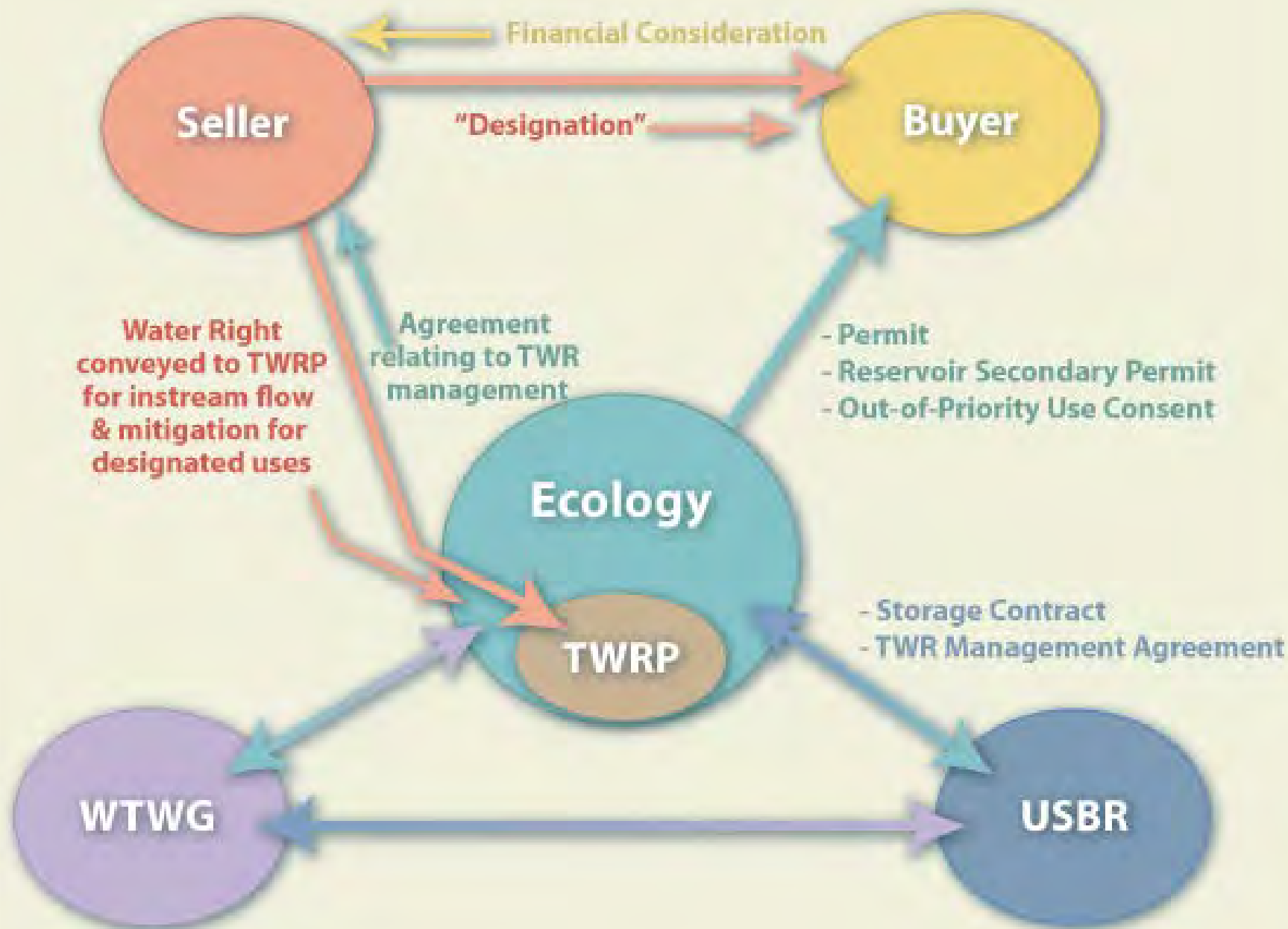
Yakima Water Exchange



- It has evolved to meet changing water management needs.
- Mitigation for post-1905 domestic and municipal use curtailment (2004)
- Drought response mitigation (2005)
- Mitigation for new users (since 2009 in upper Kittitas)

The Yakima Mitigation “Product”

- **The basin wide requirement:** Total Water Supply Available (TWSA) neutrality - a pre-May 10, 1905 water right held in the trust water right program
- **Local requirements:**
 - No flow reduction adverse to fish
 - No impairment to existing water rights



Yakima Water Exchange Functions

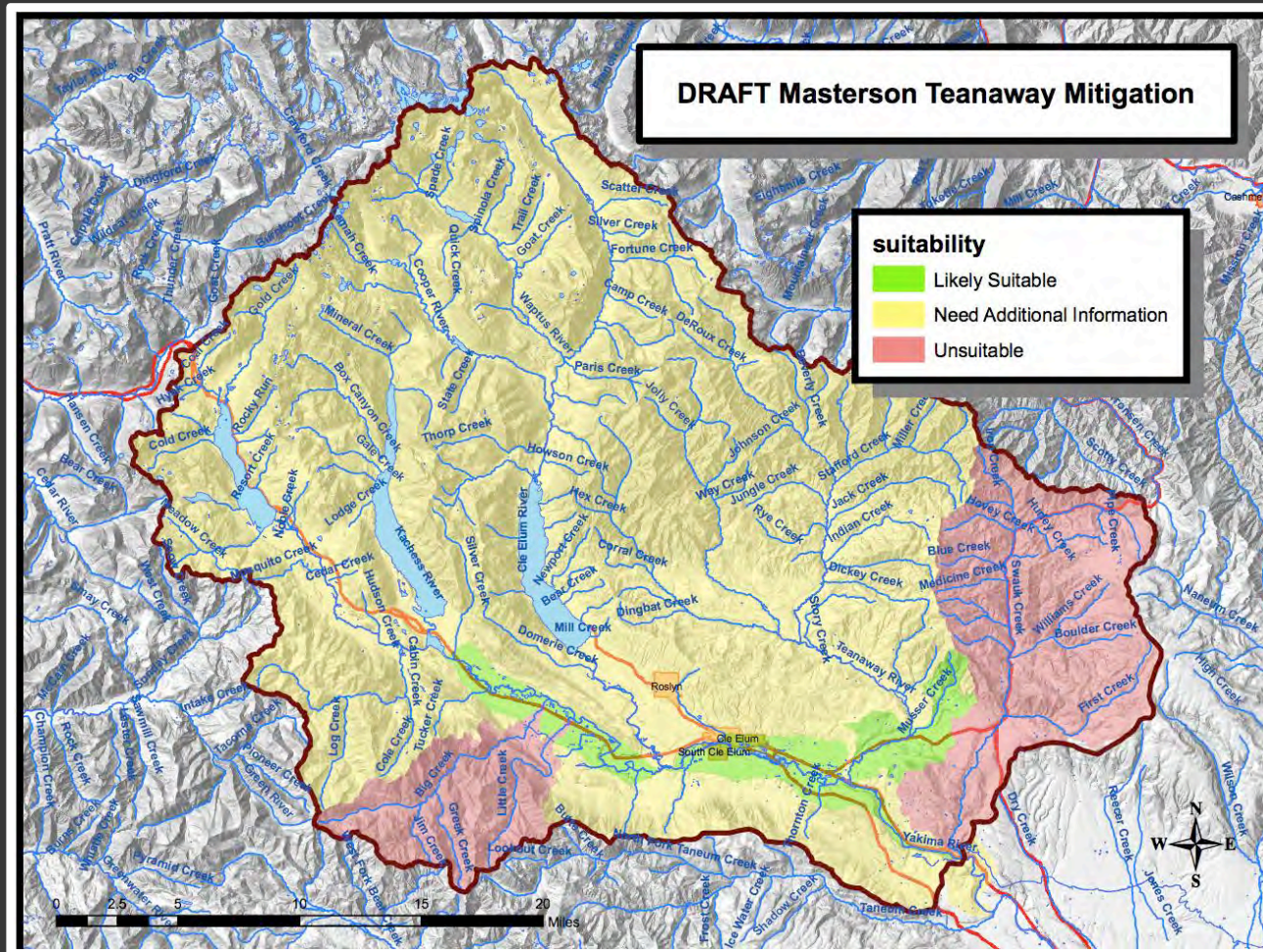
- Drought response program:
 - Periodic water shortages result in curtailment of post-1905 water rights and pro-rationing of 1905 water rights
 - Water for proratable users who purchase water rights
 - Water for post-1905 out-of-priority domestic/municipal use
- Groundwater management for new uses:
 - In 1999, Ecology, USBR, and YN settled a 6-year lawsuit and agreed to a USGS study, coupled with conservative water resources management (i.e., mitigated permits) in the interim.
 - USGS Final Report and Model released in Sept 2011
 - Upper Kittitas Water Budget Neutral projects since 2009 adoption of WAC 173-539A
 - Mitigated permits and permit-exempt uses (water budget neutral)



Kittitas Water Exchange

- Divided into upper and lower exchanges
- Upper Kittitas coincides with WAC 173-539A boundary
- Mitigation = a pre-1905 water right held by Ecology in the trust water right program of equivalent or greater consumptive use
- The primary purposes of the banks within the Kittitas Water Exchange has been to reallocate pre-1905 water rights from irrigation use (a seasonal use) to domestic and municipal use (year-round uses)
- <http://www.ecy.wa.gov/programs/wr/cro/wtrxchng.html>

A Mitigation Suitability Map





Operating Banks

Water For Sale To 3rd Parties

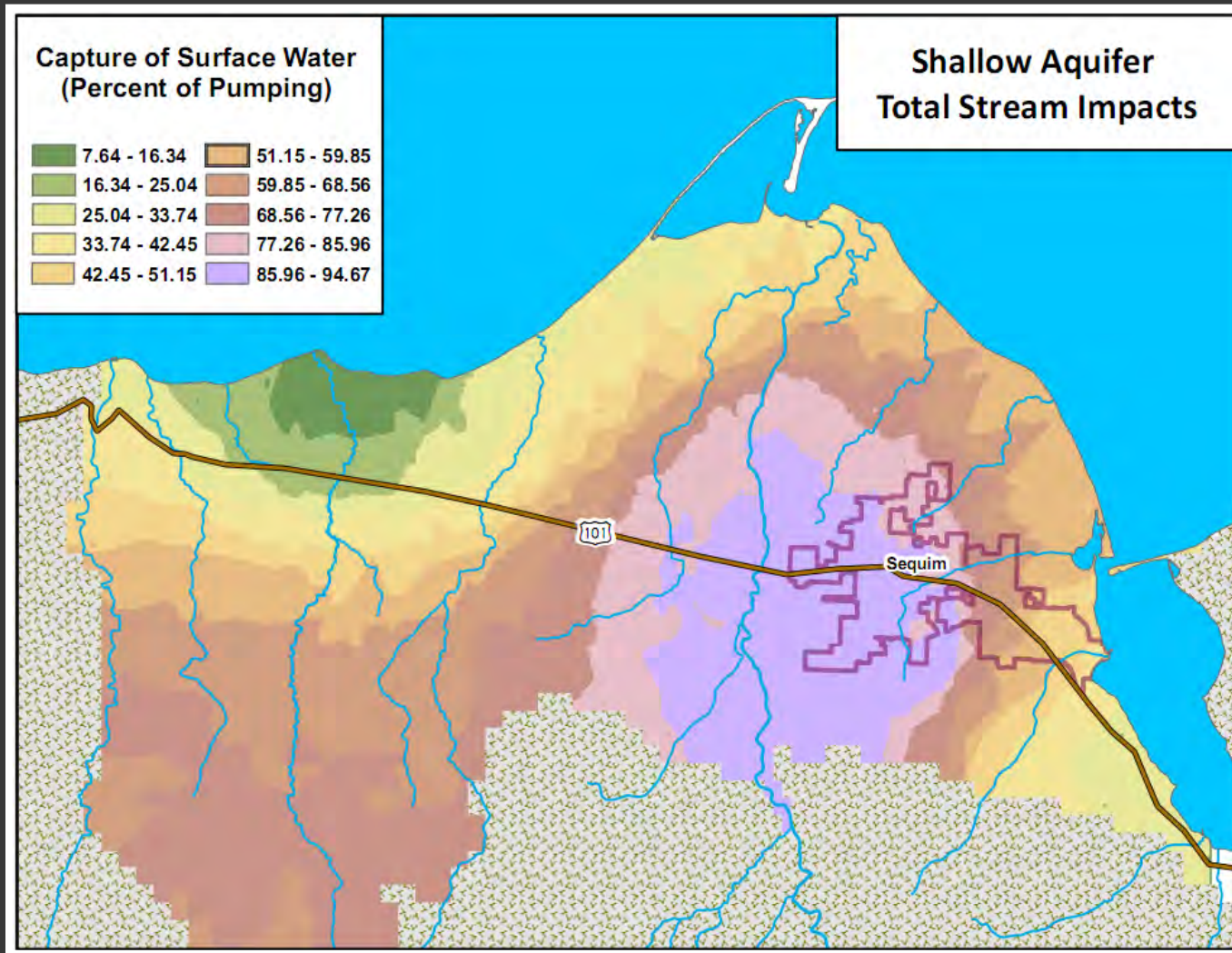
- Ecology – Yakima post-1905 “Cabin Owners”
- Suncadia’s Lamb and Anderson (Upper Kittitas)
- Reecer Creek Golf Course (Lower Kittitas)
- SwiftWater (Teanaway)
- Masterson (Teanaway)
- JP Roan (Swauk Creek)
- Mitch Williams – Amerinvest (Manastash Cr)
- Roth-Clennon (Upper and Lower Kittitas)



Dungeness Basin

- Alluvial stream with several channels and adjacent small streams
- Three groundwater aquifers within the alluvial fan
- Adjudicated rights confirmed in 1924 to 520 cfs
- Agreement with DWUA limiting diversion
- 2005 Watershed Plan under RCW 90.82
- 2012 water management rule:
 - Instream flow in Dungeness River and 7 smaller streams
 - Reservation of water for domestic use, mitigation requirement

Dungeness Groundwater Model



Dungeness Water Exchange

Context (drivers for an exchange):

- Surface and groundwater rights are fully allocated
- Surface water flows insufficient for instream flow needs *and* economic growth
- New Water Rule
 - Formally closes surface water allocations
 - Sets instream flows
 - Requires new GW allocations to offset impact on SW flows



Limits On Negative Flow Impacts Due To Mitigation Imperfections:

- The Maximum Depletion Amounts (MDA) limit the cumulative impact due to mitigated new uses to 1% of the low flow in each stream.
- The critical period is the 30-day period with the lowest flow to support a critical life stage for fish, typically during late summer of fall.
- The MDAs give Ecology and the exchange some temporary flexibility to deploy and manage mitigation projects that do not provide perfect spatial offsets to the impacts from new uses.

WWT Work In The Dungeness

Activity	Complete
Water Exchange Feasibility Report draft to Ecology	Aug-Oct 2008
Water Exchange Strategy and Design draft report to Ecology	Dec 5, 2008
Presentations and participation at DREC, DRMT, WUA, LLWG etc meetings	Sept 2008-present
Leasing program with DWUA commenced	Feb 2009
Phase 2 Formalizing mitigation strategy, revisiting 2001 WUA memo, MOA w/County and WUA, cost benefit analysis, multi-criteria analysis	Jan 2010
USBOR WaterSMART grant, partnership with Agnew Irrigation District for Water Exchange Development, ongoing water exchange support	July 2011



What Is The Dungeness Water Exchange?

- It is a form of **water bank**.
- A water bank is an **institutional mechanism** used to facilitate the legal transfer and market exchange of various types of surface, groundwater, and storage entitlements.
- It would use funds provided by **conservation purchasers and mitigation credit purchasers** to acquire water rights and fund projects to improve stream flows

Scope of Trading

Water Exchange



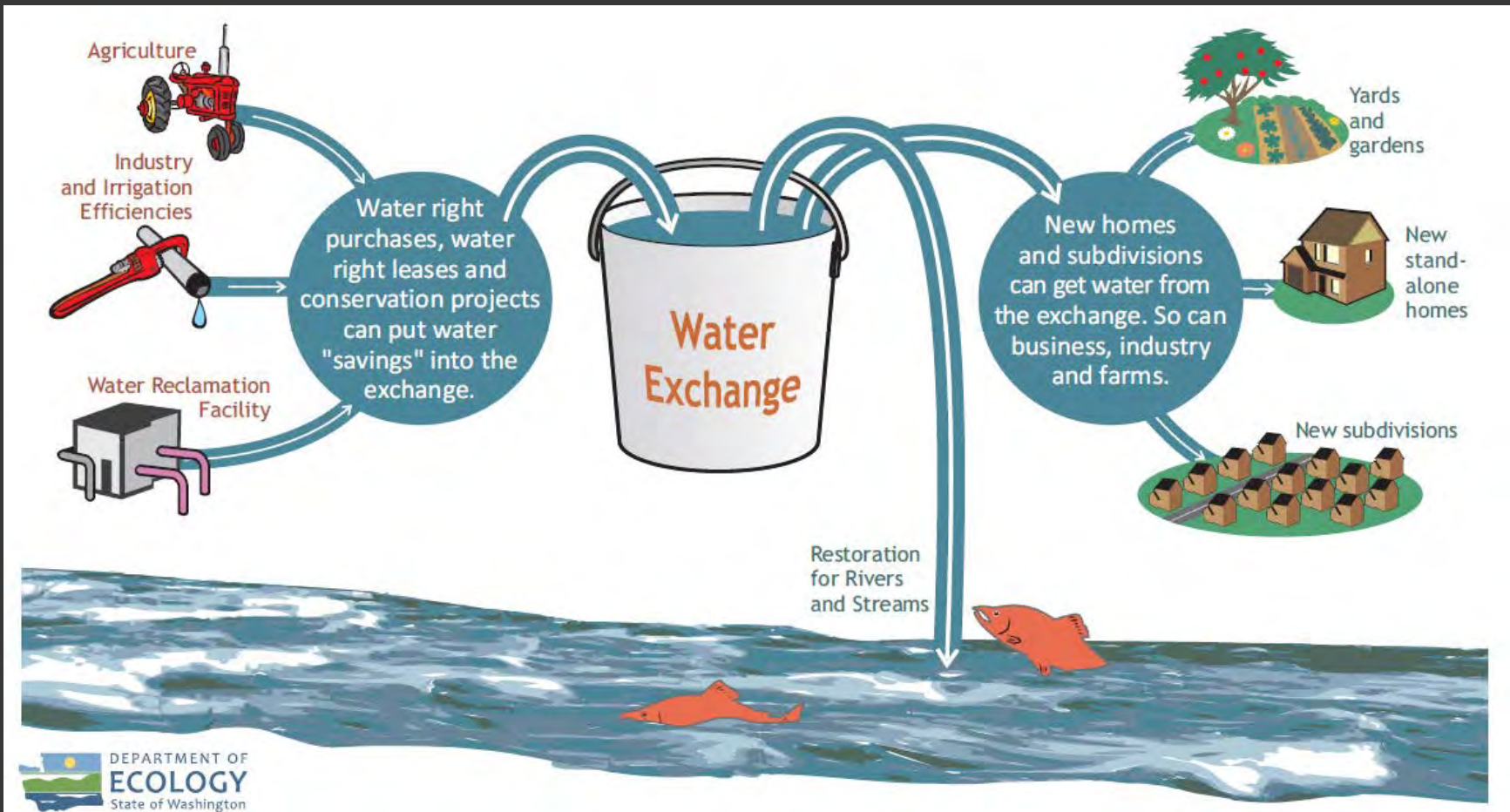
Potential Buyers

- Restoration
- City
- PUD
- Small GW uses
- Exempt wells

Potential Sellers

- Right holders
 - Irrigators
 - GW users
- Offsets
 - Reclaimed water
 - Recharge
 - Storage

Dungeness Water Exchange

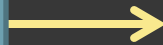


How does a water bank work?

Water Bank as Broker

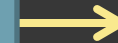
Supply

Seller: water right holders



Typical Functions

- Certifies validity of water rights
- Sets rules/criteria for bank
- Sets prices
- Matches buyers and sellers
- Determines priorities for banking transactions



Demand

Buyers:

- Mitigation for new water use
- Flow restoration



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Comparison Of Banks Designed To Meet Rural Residential Demand For Water

	Walla Walla	Yakima/Kittitas	Dungeness
Ac-ft in TWRP	15	900	
Transactions	3	186	
# Homes	3	1,579	Est. 30-100/yr
# Banks	1	10	1
Cost/home	\$2,000	\$500* - \$15,000	\$1,000-3500

Exchange Guiding Principles

- Address mitigation and restoration needs in the basin
- Respect irrigation district and ditch company rules and regulations
- Acquire water rights only from willing sellers
- Avoiding impairment and third party impacts of other water right users
- Leasing and transferring only water that was previously diverted and used (“wet” water)
- **Exchange Institutional Design:** Washington Water Trust provides initial exchange services

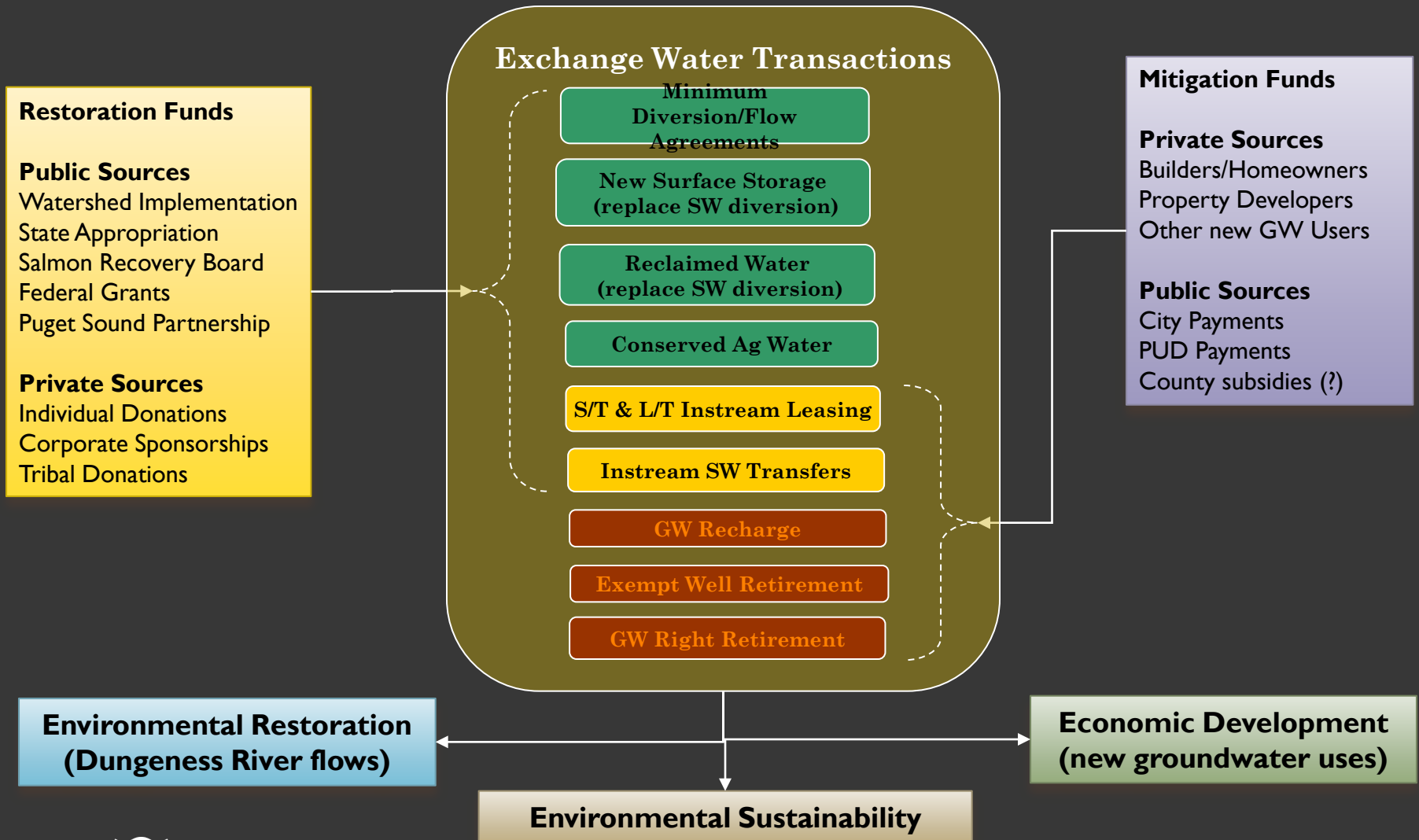
Dungeness Mitigation Challenges

- Small independent streams in the Dungeness present a challenge
- Finding water for water mitigation small streams is very difficult due to lack of beneficially used irrigation water rights as a source of supply
- Consideration of other water management strategies to enhance flow is key to successful mitigation or restoration programs i.e., recharge, source switch, small storage



Dungeness Water Exchange

Flow Restoration and Groundwater Mitigation



How do we work together to do it?

- Ecology - Clallam County MOA
- Procedures relative to rule implementation:
 - Water availability and allocation through water right permits and the ground water permit exemption
 - Water availability determinations for subdivision and building permit review and approval
 - Use of groundwater model to support decisions
 - Support for mitigation program
 - Information sharing
- Roles of County, Ecology, and WWT



Dungeness Advisory Board

Who will oversee the Dungeness Water Exchange?

Washington Water Trust, will be responsible for day-to-day management. A local advisory board that includes the Dungeness Water Users Association, Clallam County, Jamestown S' Kallam Tribe, Ecology and other basin stakeholders are proposed to guide policy and priorities for the Dungeness exchange.

Questions/Discussion

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Questions?

