

*Yakima County Water
Resource System (YCWRS)
A Countywide Utility to Serve Rural
Domestic Use*



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Yakima County Public Services
Water Resources Division



Oct. 26, 2016
WAWRA Conf.





Context - 2012 and 2014

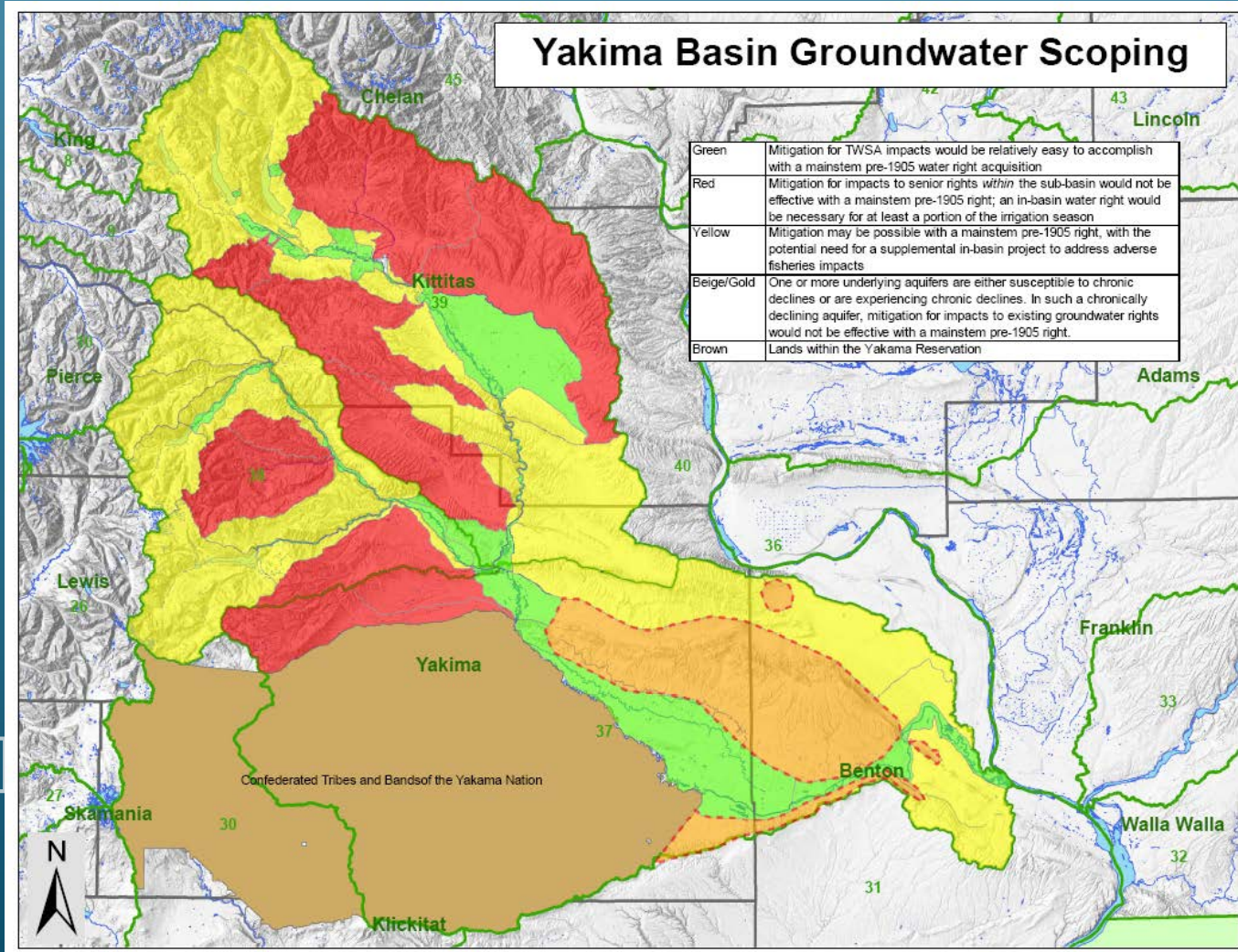
- 
- Looming need to address issue of exempt wells vs. impairment of existing rights
 - Triggers could be (one or more):
 - Petition to close basin due to impairing senior rights
 - Change/removal in exempt well statute
 - GMA, Comp Plan or SEPA challenge of a development permit
 - Comp Plan Update “legal and physical availability” June 2017
 - New GMA litigation re: “Protecting...groundwater resources”.
 - Ideally, all triggers are addressed in Program.
- 



Lucky us. Honestly.

- 
- County currently operate 29 water systems as utilities
 - Kittitas Example - pluses and minuses
 - Yakima Basin has:
 - Water Rights Adjudication and existing Water Banks and Markets
 - Well educated decision makers and history of cooperation
 - Favorable Geology
 - Technical Expertise all the way around
- 

Groundwater Mitigation Suitability Map

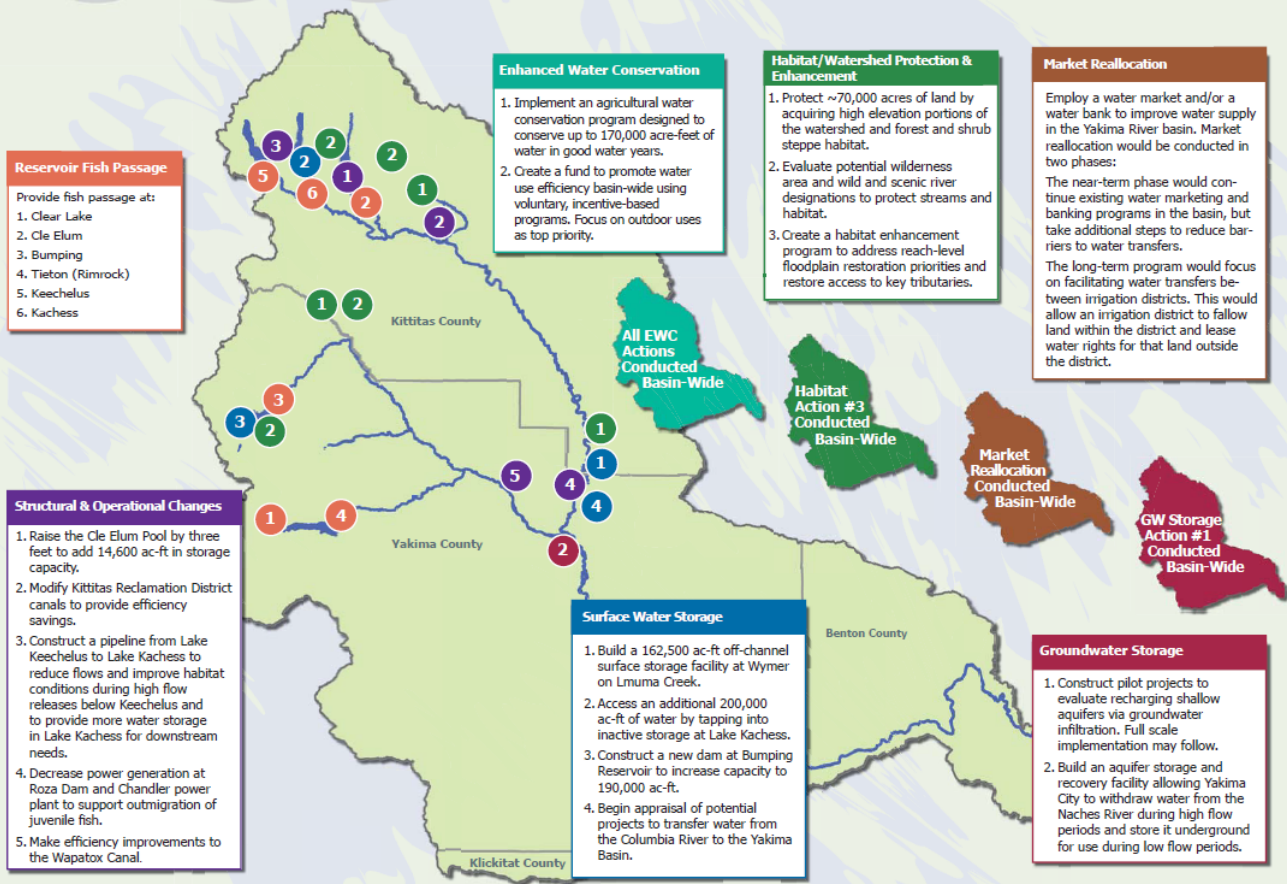


Water Resources Cooperation



BUILDING A FUTURE FOR WATER, WILDLIFE AND WORKING LANDS

YAKIMA RIVER BASIN INTEGRATED WATER RESOURCE MANAGEMENT PLAN



Reservoir Fish Passage

Provide fish passage at:

1. Clear Lake
2. Cle Elum
3. Bumping
4. Tieton (Rimrock)
5. Keechelus
6. Kachess

Enhanced Water Conservation

1. Implement an agricultural water conservation program designed to conserve up to 170,000 acre-feet of water in good water years.
2. Create a fund to promote water use efficiency basin-wide using voluntary, incentive-based programs. Focus on outdoor uses as top priority.

Habitat/Watershed Protection & Enhancement

1. Protect ~70,000 acres of land by acquiring high elevation portions of the watershed and forest and shrub steppe habitat.
2. Evaluate potential wilderness area and wild and scenic river designations to protect streams and habitat.
3. Create a habitat enhancement program to address reach-level floodplain restoration priorities and restore access to key tributaries.

Market Reallocation

Employ a water market and/or a water bank to improve water supply in the Yakima River basin. Market reallocation would be conducted in two phases:

The near-term phase would continue existing water marketing and banking programs in the basin, but take additional steps to reduce barriers to water transfers.

The long-term program would focus on facilitating water transfers between irrigation districts. This would allow an irrigation district to follow land within the district and lease water rights for that land outside the district.

Structural & Operational Changes

1. Raise the Cle Elum Pool by three feet to add 14,600 ac-ft in storage capacity.
2. Modify Kittitas Reclamation District canals to provide efficiency savings.
3. Construct a pipeline from Lake Keechelus to Lake Kachess to reduce flows and improve habitat conditions during high flow releases below Keechelus and to provide more water storage in Lake Kachess for downstream needs.
4. Decrease power generation at Roza Dam and Chandler power plant to support outmigration of juvenile fish.
5. Make efficiency improvements to the Wapatox Canal.

Surface Water Storage

1. Build a 162,500 ac-ft off-channel surface storage facility at Wyrmer on Lnuma Creek.
2. Access an additional 200,000 ac-ft of water by tapping into inactive storage at Lake Kachess.
3. Construct a new dam at Bumping Reservoir to increase capacity to 190,000 ac-ft.
4. Begin appraisal of potential projects to transfer water from the Columbia River to the Yakima Basin.

Groundwater Storage

1. Construct pilot projects to evaluate recharging shallow aquifers via groundwater infiltration. Full scale implementation may follow.
2. Build an aquifer storage and recovery facility allowing Yakima City to withdraw water from the Naches River during high flow periods and store it underground for use during low flow periods.

All EWC Actions Conducted Basin-Wide

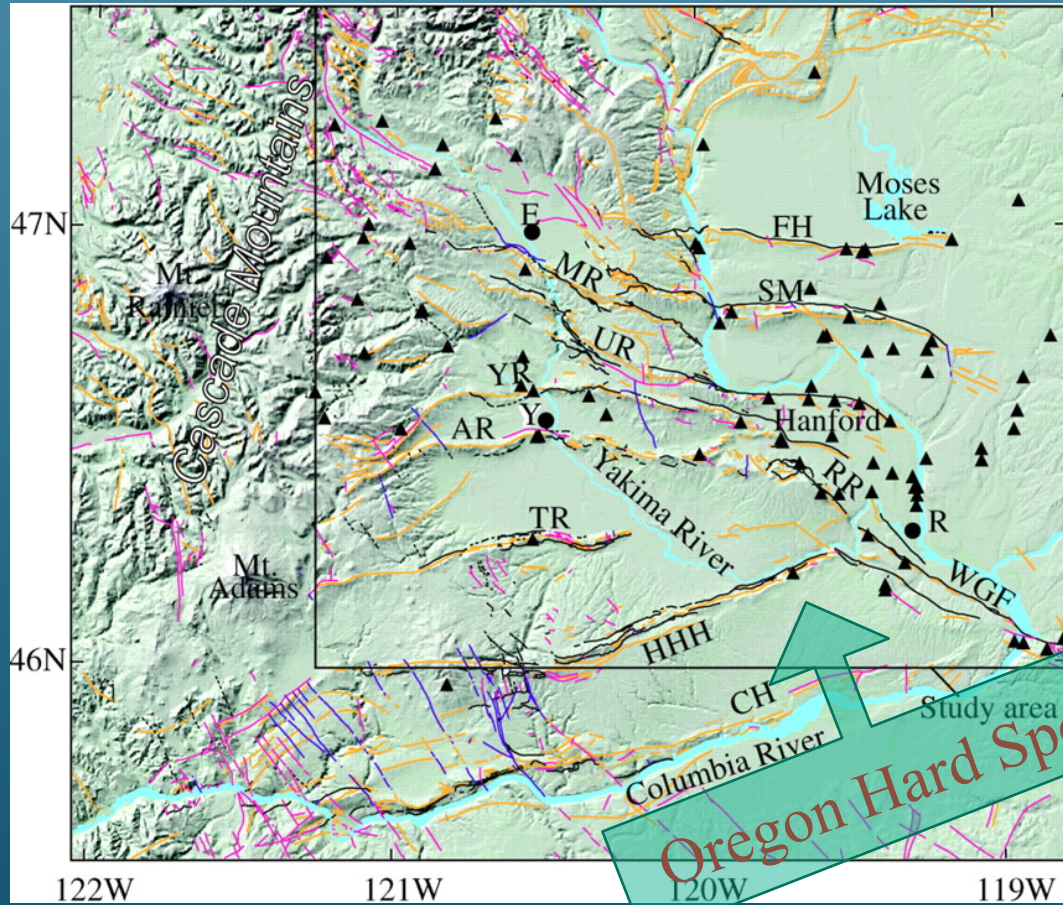
Habitat Action #3 Conducted Basin-Wide

Market Reallocation Conducted Basin-Wide

GW Storage Action #1 Conducted Basin-Wide

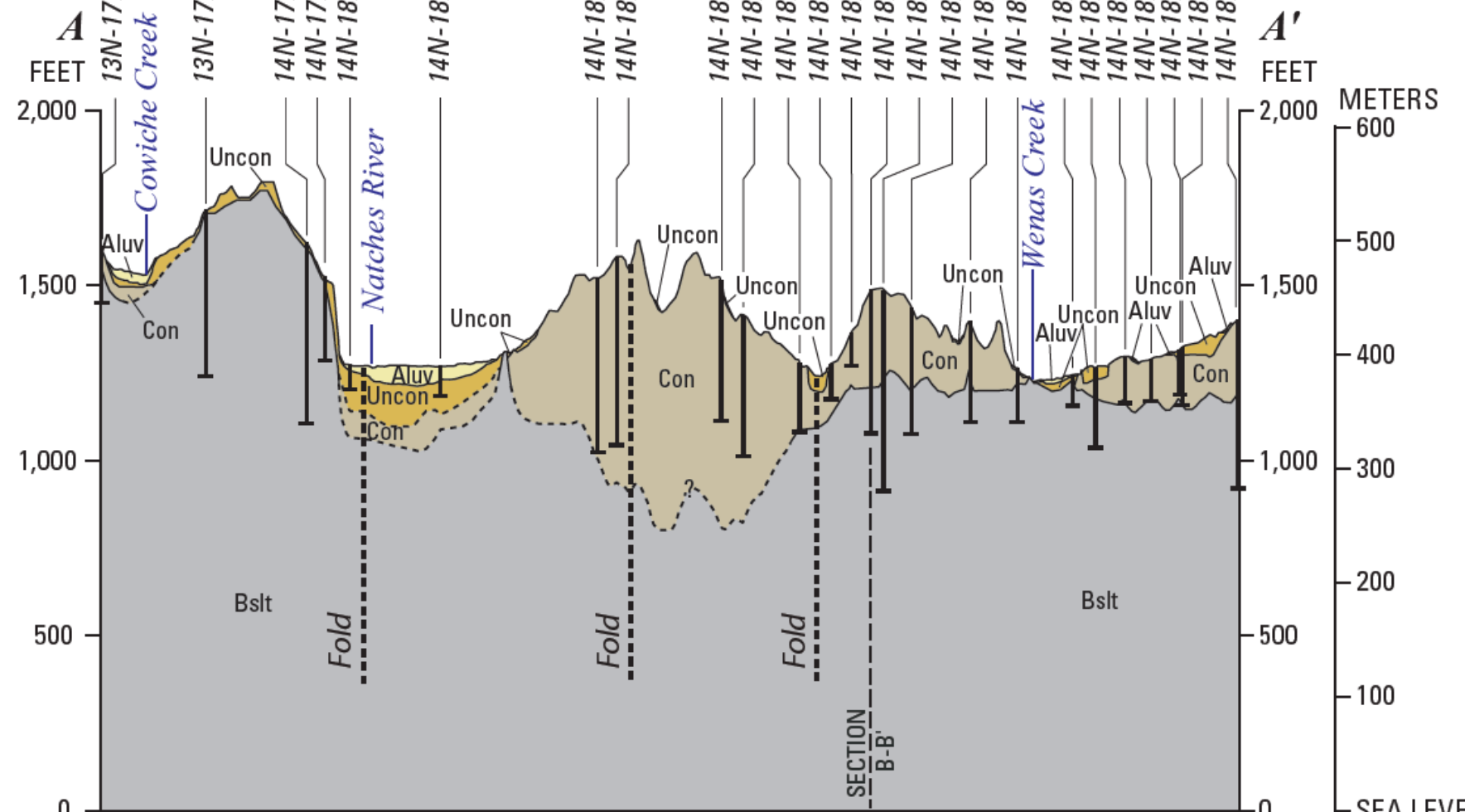
Geology

ROCK



SOUTHWEST

NORTHEAST



North American Vertical Datum of 1929 (NAVD 29)

VERTICAL EXAGGERATION X 20

Prepared in cooperation with the
 Bureau of Reclamation,
 Washington State Department of Ecology, and the
 Yakama Nation



Numerical Simulation of Groundwater Flow for the Yakima River Basin Aquifer System, Washington

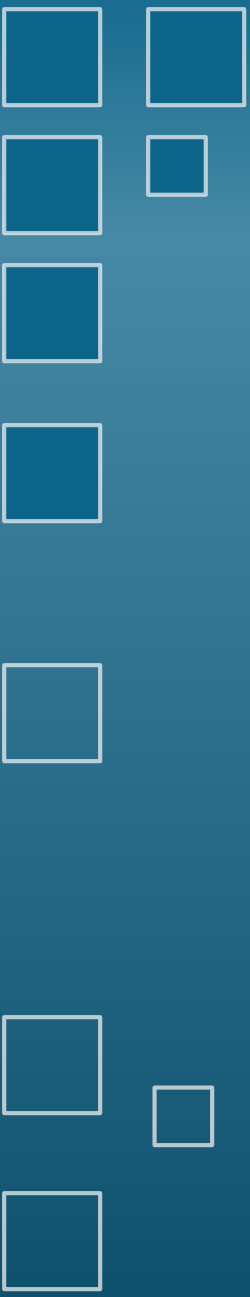


Scientific Investigations Report 2011-5155



YCWRS Elements

- County Water Utility per (RCW 36.94.020) holding Municipal Rights (RCW 90.03), serving Rural Domestic Use (GMA)
- Rural Domestic Use is the use of up to 350 gallons per day, from a single user well or small group B system, where water is recharged on-site with a septic system.
- Supply of Utility water is limited to the defined rural domestic use, water use contract is linked to well construction (including location, depth, metering), zoning, and extension of urban utilities.

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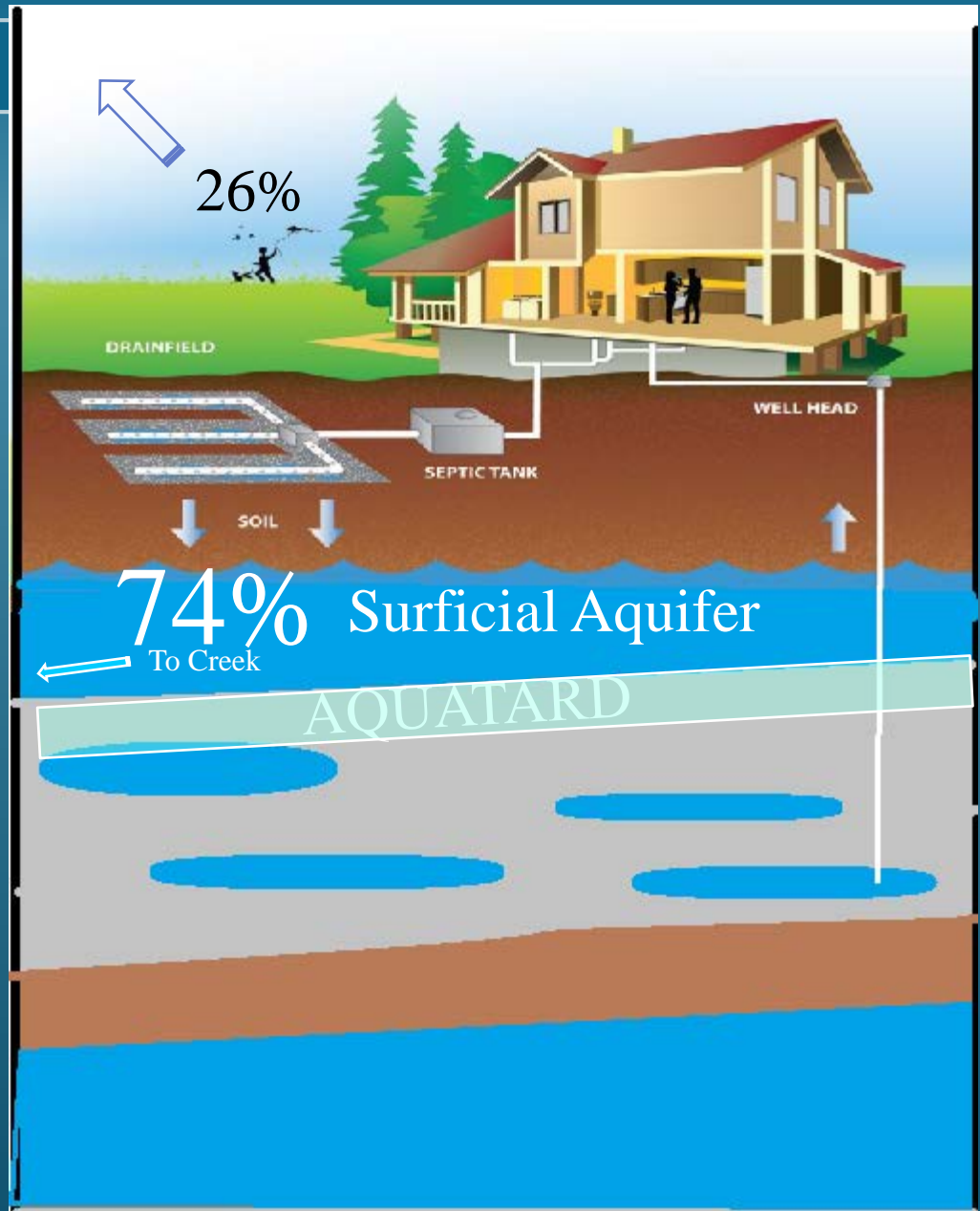
Assessment of the Availability of Groundwater for Residential Development in the Rural Parts of Yakima County, Washington

January 2016

**John Vaccaro,
Vaccaro G.W. Consulting, LLC
(Under Contract by Yakima County)
For Technical Analysis and Assessment of Groundwater
Mitigation Strategies**

General Concept

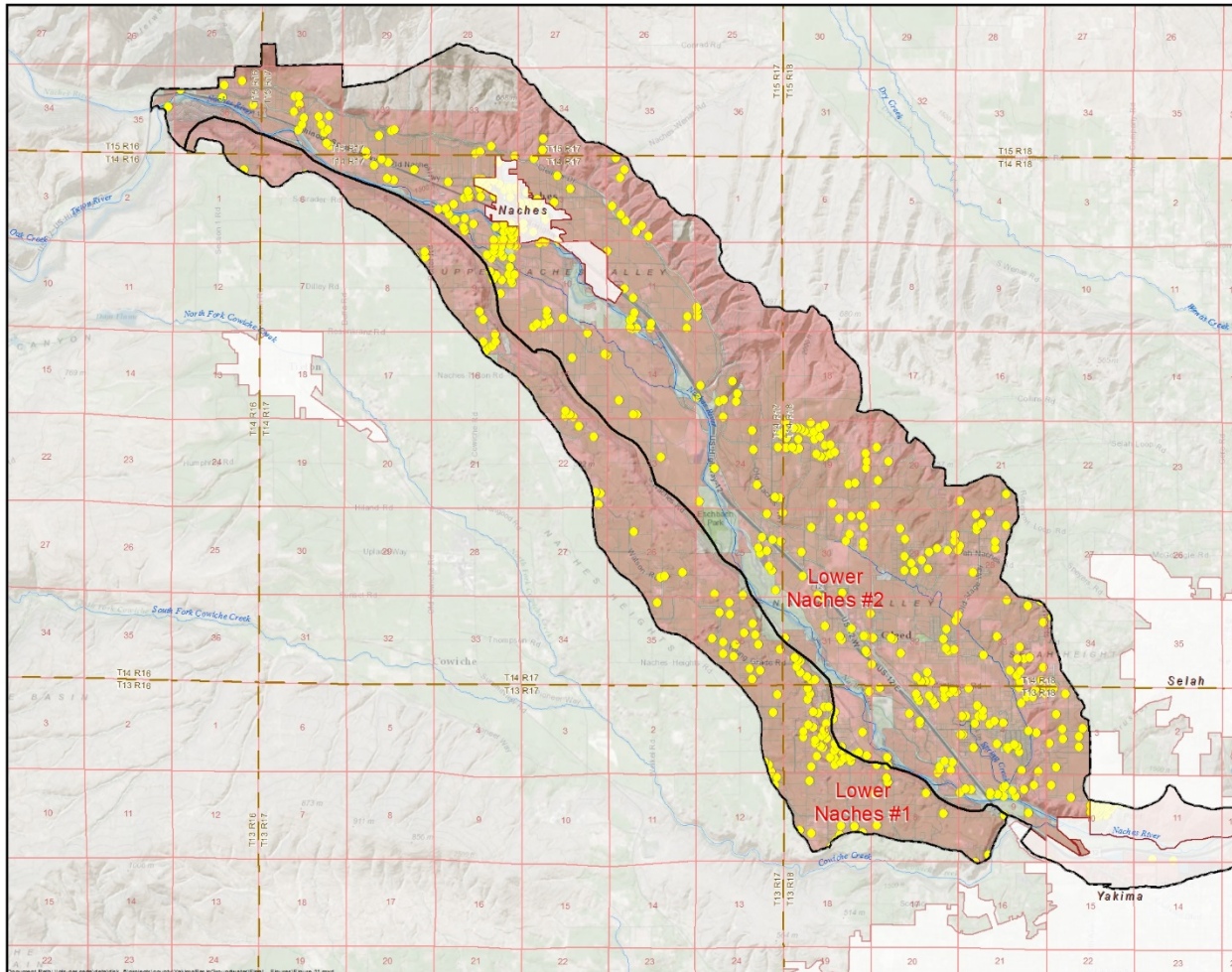
Tribs (No Market)
Mainstem (Market)
Declining Basalts



**Yakima County
Rural Domestic
Groundwater Plan**

**Lower Naches
Sector 1 & 2
Groundwater Domain**

Figure 11



**Undeveloped Residential Parcels
Landuse Code**
 ● 91 Residential land Undeveloped
 - Source: County Assessor's Use-Code
 ■ Relevant Lands

GIS Mapping Disclaimer:
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 3. Any other actions or reactions that may arise that were not contemplated by the disclaimer.

0 0.275 0.55 1.1 1.65 2.2 Miles

Map Date: September, 2015
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Administrative Process

Purchase Senior Surface Rights
(Est. 12 AF/yr)





Convert to Municipal Rights at
Conservancy Board (SEPA as County
Action to Establish Utility)

Water Budget Neutral
Application/Determination (GW
Availability Report as Mitigation Plan)*

Secure new GW Rights in 13
Groundwater Bodies, consistent with
WBN Determination





* (Wishing and good intentions
don't make it so...)

- 
- This all takes time, probably cannot complete by Comp Plan Adoption (June)
 - Complete WBN Determination and open store prior to all GW permits ?
(Transition from Exempt Well Statute with mitigation to full Utility)
- 
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Current Activities

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- A vertical column of three white-outlined squares on the left side of the slide.
- Finalizing Technical Details with Ecology
 - Developing MOU with Ecology
 - Looking for leverage opportunity with water purchase
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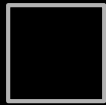
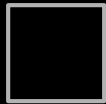


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Questions?