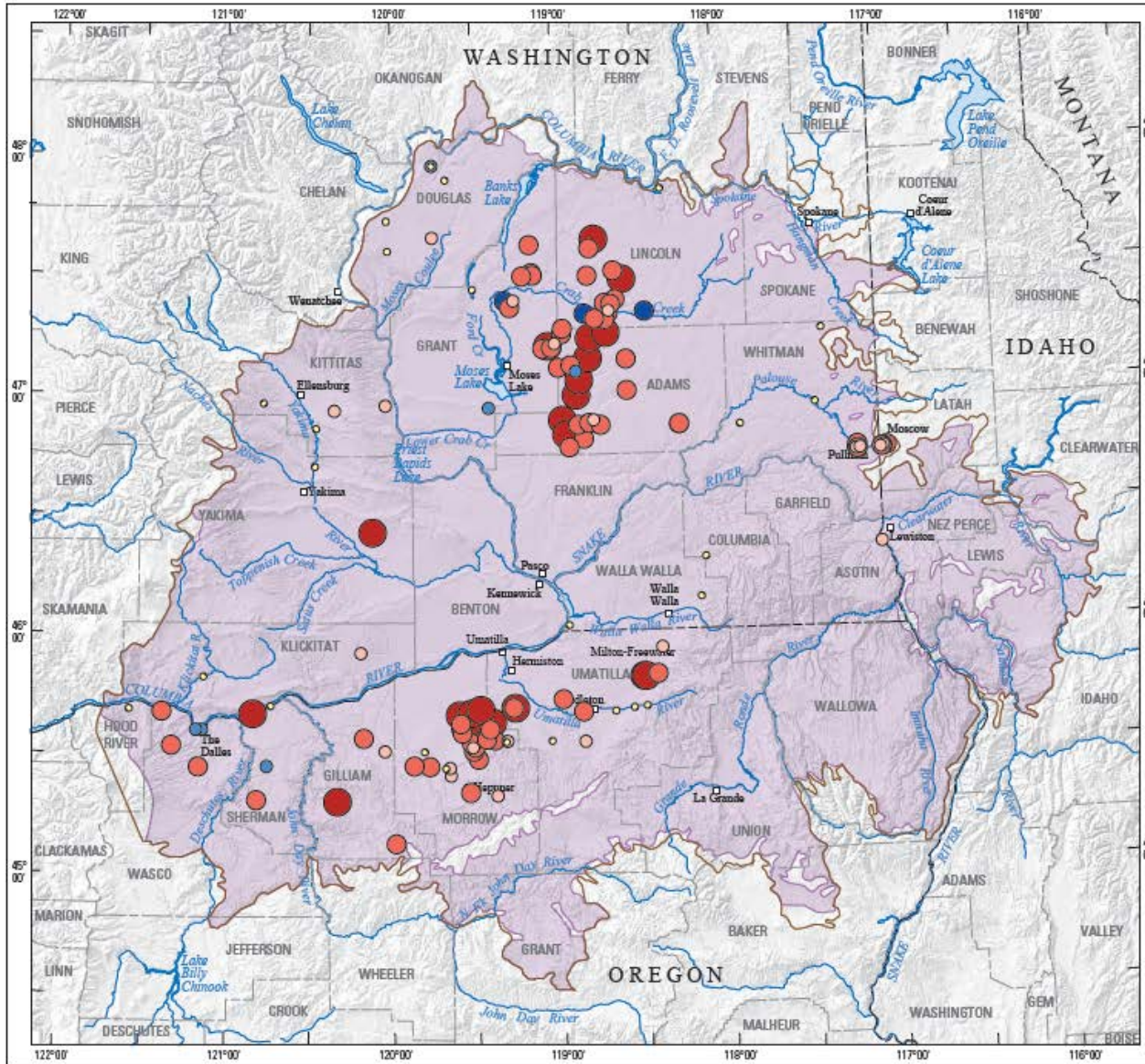


# Land Use Planning to Serve Reasonable Rural Growth, Agriculture, and Instream Flows

Tim Trohimovich

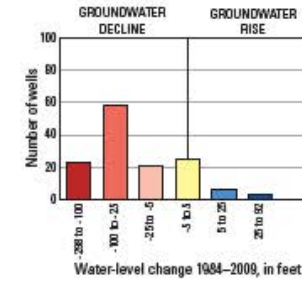
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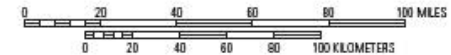


EXPLANATION

- Extent of Grande Ronde unit
- Columbia Plateau Regional Aquifer System
- Water-level change in the Grande Ronde unit for spring 1984 to spring 2009—in feet. The contributing unit is greater than 75 percent of open interval.
- 25 to 92 Groundwater rise
- 5 to 25
- 5 to 5
- 25 to -5
- 100 to -25
- 200 to -100 Groundwater decline



Columbia Plateau Regional Aquifer System



Digital data: U.S. Geological Survey, various scales. Projection: State Plane, Washington, South, FIPS 4602; Projection: Lambert Conformal Conic; False easting: 1640416.686667; False northing: 0.000000; Central meridian: -120.500000; Standard parallel 1: 45.823333; Standard parallel 2: 47.333333; Latitude of origin: 45.333333; Horizontal datum: North American Datum 1983; Vertical datum: North American Vertical Datum 1988.

Groundwater-Level Changes for the Grande Ronde Unit, Columbia Plateau Regional Aquifer System, Washington, Oregon, and Idaho, Spring 1984 to Spring 2009

By  
Daniel T. Snyder and Jonathan V. Hayes  
2010

# Spokane County family has to haul water for 25 years

- “Susan McGeorge, manager of Whitworth Water District, said water shortages have become more common as farm acreage is subdivided into 10-acre rural tracts for residential development. The trend increased about 20 years ago, she said. More homes meant more wells drawing water from the relatively meager sources.”
- Mike Prager, *Private wells aren't able to keep up with increased demand: Especially as housing development takes over more and more farmland* [The Spokesman-Review](#) (Jan. 13, 2013)



Susan and Val Taylor hold a Christmas picture of their family gathered around the new fire hydrant on their Colbert property in December 2011. The family had tried to dig wells and haul water for years before being hooked to Whitworth Water District lines. The water tank, at rear left, holds 350 gallons. Val said they made 67 trips to the Kellogg well in one summer.

# Letter from a Clark County farmer whose well went dry due to rural overdevelopment

I have lived on my property NW of La Center for more than 50 years. I have seen many changes through the years, as lots were developed around me. Almost all of them were 5 acre lots, so that was quite a few new wells to be drilled. I had a good supply of water from my first well, until more and more houses were allowed. Suddenly, my well dried up.

I did everything I could to bring it back, had it fracked and some other techniques used then, in the 70's to assist well output, but nothing worked. By this time I had bought some other property around me and so I had to pipe water from another well at the south end to the northern property where I had a house. I am one of the lucky ones, since I could do that. Most other people do not have that option.

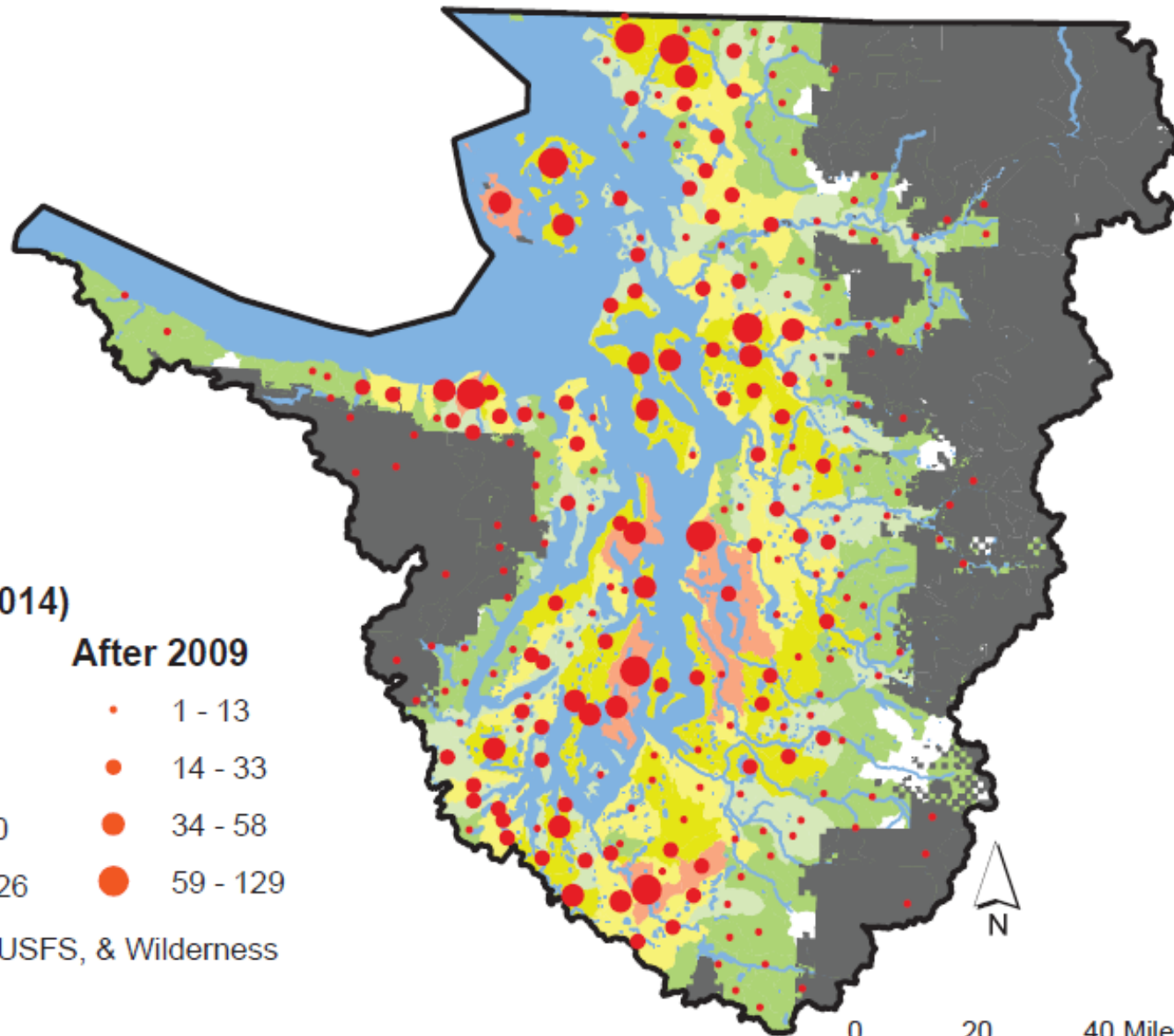
## Rapidly Increasing Permit-Exempt Wells Threaten Water For Fish

The state of Washington provides a water right permit exemption to property owners not served by a community water system, allowing users to pump up to 5,000 gallons of groundwater per day. When more water is extracted from an aquifer than is being recharged, aquifer volume is reduced and the natural outflow from the aquifer decreases. This reduces the amount of fresh water available to lakes, wetlands, streams and the Puget Sound nearshore, which can harm salmon at all stages of their life cycle.

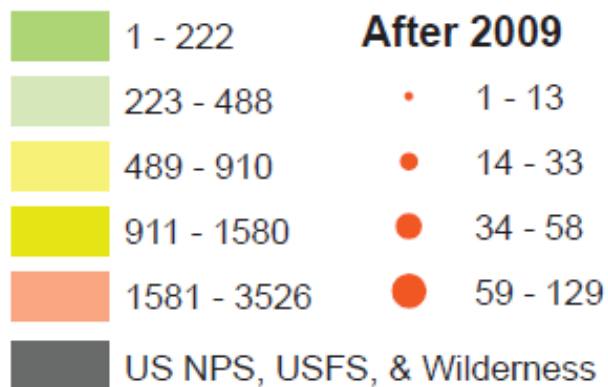
Since the 2012 State of Our Watersheds Report, all watersheds have seen an increase in water wells, except in Skagit County. Since October 2013, when the Washington Supreme Court overturned the 2006 Skagit Instream Flow Rule amendment, Skagit County has not issued building permits that rely on permit-exempt wells as their sole water source unless they are adequately mitigated. This has resulted in no new unmitigated exempt well development in Skagit County.

However, there have been between 30 and 40 replacement wells that have been allowed in the basin since that time. It is estimated that the majority of wells are drilled for home construction and are suspected as a potential cause for low flow problems found in many watersheds. The cumulative withdrawal of groundwater associated with the continued proliferation of these wells leads to concerns of associated impacts to instream flows, salmon habitat, public health and senior water rights.

Northwest Indian Fisheries Commission & Member Tribes,  
*2016 State of Our Watersheds: A Report by the Treaty Tribes in Western Washington* p. 9  
accessed on Oct. 20, 2016 at: <https://geo.nwifc.org/sow/>



**Total Wells (2014)**



Data Sources: USGS 2014,<sup>2</sup>WADNR 2014b,<sup>3</sup>WAECY 2013,<sup>4</sup>WAECY 2015<sup>5</sup>

Northwest Indian Fisheries Commission & Member Tribes, 2016 *State of Our Watersheds: A Report by the Treaty Tribes in Western Washington Puget Sound Regional Report* p. 18 accessed on Oct. 20, 2016 at: <https://geo.nwifc.org/sow/>



North Branch of the Whitechuck Glacier  
in 1973



North Branch of the Whitechuck Glacier  
in 2006

Source: Mauri S. Pelto, The Death of a  
Glacier: North Cascade Glacier Climate  
Project accessed on Oct. 24, 2016 at:  
[http://www.nichols.edu/departments/glacier/  
deathglacier.htm](http://www.nichols.edu/departments/glacier/deathglacier.htm) Photos from Neil Hinckley  
1973 and Leor Pantilat 2006.

# Solutions: Match planned growth with available water resources

- Focus growth into areas with available water
- Match planned growth with available water resources. “[A] county [or city] can make its densities consistent with water availability ...”  
*Whatcom County v. Hirst et al.*, Case No. 91475-3 Slip Op. Justice Madsen, concurring p. 5 (Oct. 6, 2016)
- A jurisdiction could prepare a programmatic study, determine available water, and then plan for that level of growth
- But, in Okanogan County at full build-out of under the comprehensive plan and zoning
  - The Upper Methow would have 127 parcels unable to be supplied by well water or surface water out of a total of 1,948 possible parcels
  - The Lower Methow would have 24,313 parcels out of a total of 26,133 possible parcels unable to be supplied by well or surface water



# More Solutions

- Focusing development into cities and towns at higher densities conserves water and so allows more growth with less water.  
*Growing Toward More Efficient Water Use: Linking Development, Infrastructure, and Drinking Water Policies* p. 8 (EPA 230-R-06-001: January 2006)
- Existing water resources can be extended to serve more development with water conservation or reuse measures such as limiting lawns and requiring landscaping with native vegetation. For example, Seattle's water use, and the water use of the other areas it serves, has declined as the city and region have grown over the last ten years. "In fact, regional water consumption is at its lowest level in 50 years."

# More Solutions

- A county or other entity, such as a water provider, water improvement district, or private party can provide water mitigation, such as a water bank
  - Water banks already exist in Kittitas County, Clallam County, and King County and are under consideration in other areas
  - A potential source of water for water banks is to help fund water conserving improvements for senior water rights holders and then sell or transfer the no longer needed water for mitigation
- A county or city must require applicants for building permits and subdivisions to document that the building and lots will have the legal right to use the proposed water source and that the water is physically available in the needed quantities and meets drinking water standards. RCW 19.27.097(1); RCW 58.17.110; *Guidelines for Determining Water Availability for New Buildings* (Ecology Publication 93-27: April 1993)

# More Solutions

- Ground water storage of winter high flows is an option in certain areas
- In the right circumstances, a county could “ensure there are limited impervious surfaces so that more water goes into streams.” *Whatcom County, Justice Madsen, concurring Id.* Counties and cities can require low impact development standards to increase storm water recharge into aquifers and rivers and streams
- Allowing rain water harvesting can make water available in areas where all surface and ground water resources are already allocated

# More Solutions

- Water providers can extend water service into rural areas at a rural level of service. RCW 36.70A.030(17). Piped water must be provided throughout cities, towns, and urban growth areas
- Trucking water is solution in some circumstances
- Cisterns and similar technologies too
- Water desalination is an expensive solution in use in some coastal areas of Washington State

# More Solutions

- Adopt meaningful protections in comprehensive plans and development regulations including critical areas regulations to protect the water we have
  - Prevent pollution of surface and ground water
  - Prevent salt water intrusion into aquifers
- Plan for water for economic beneficial uses such as agriculture, forestry, and industry

# Kittitas Settlement Agreement Upheld by the Growth Management Hearings Board

- The county adopted the policies and regulations which Commissioner Jewel will discuss
- Two private water banks intervened before the Growth Management Hearings Board
- Argued the phase in period and temporary use of leased water violates GMA
- The Board found Kittitas County in compliance with GMA
- Superior court appeal by private water banks was filed late and dismissed
- The permanent system started on December 2, 2015
- Fought over the program in legislature, but no bills adversely affecting the program passed