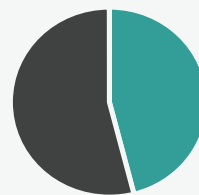


Fluoridated Drinking Water

Fluoridating drinking water is one strategy used to improve oral health outcomes. In Washington, 46% of the population (approximately 3.3 million) received fluoride-treated drinking water. Some areas in Washington have naturally occurring fluoride, and some Group A public water systems fluoridate drinking water (see figures). Group A water systems are regulated public systems serving 25 people or more. An individual's exposure to fluoride in drinking water may be uncertain due to their consumption of bottled water and beverages or consumption from a nonfluoridated water supply.

DOH, along with partner agencies, is working to promote the individual and community-wide health benefits along with cost savings from drinking water with fluoride. These include reduced health inequities associated with dental caries, and health benefits regardless of age, income, race or geographic location.



46%

of Washington residents receive fluoride treated drinking water



By county, the range of Washington residents receiving fluoride treated drinking water is from 2% to 80%

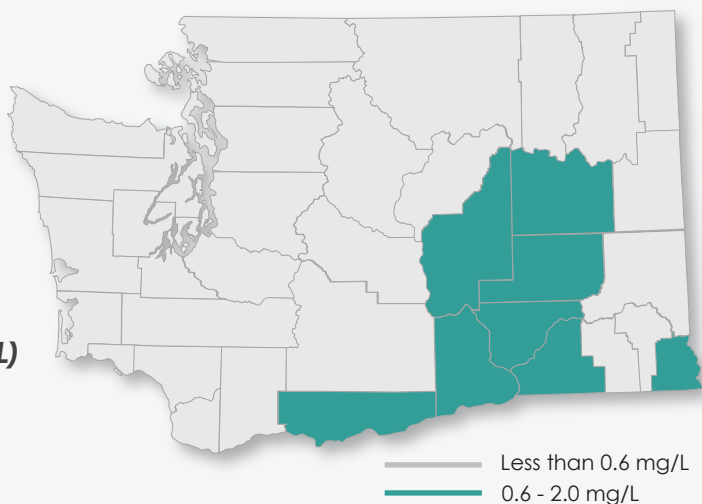
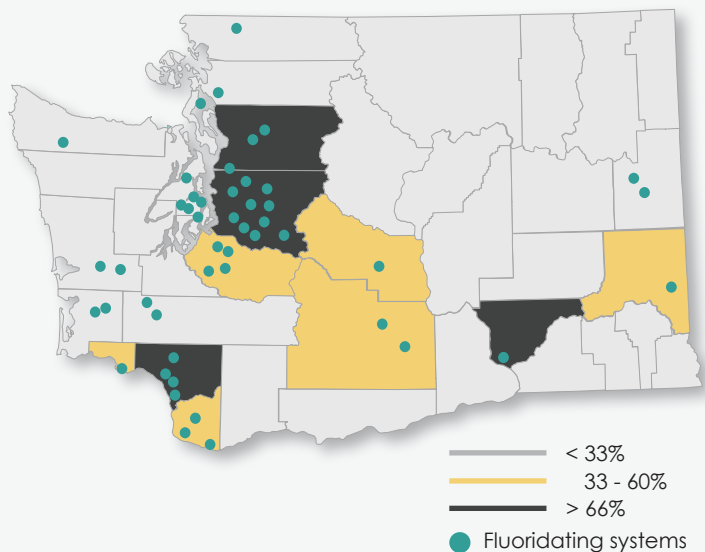
Fluoridated Water

- The map below shows Group A public water systems that supply 100% of their service area with water treated with fluoride and the percent of the population in each county served by these systems.
- This map does not represent the approximately 20% of the total state population that is not served by Group A systems, those populations that live in counties with significant naturally occurring fluoride in groundwater (Adams, Asotin, Benton, Franklin [included below because it also fluoridates Group A systems], Grant, Klickitat, Lincoln, and Walla Walla—see map of Naturally Occurring Fluoride Average by County) or Group A systems with less than 100% of their population receiving treated water (often because of connections between water systems that may allow for a mixture of fluoridated and unfluoridated water).

- The map below shows counties that have sources with significant naturally occurring fluoride. In these counties, the average fluoride levels of tested Group A public water systems are at dentally significant levels (0.6 – 2.0 mg/L) (data from samples between Jan. 2000 and May 2015).

Percent of Population Fluoridated Water at Dentally Significant Levels (0.6 - 2.0 mg/L) Washington State Sentry Database, 2000-2016

Naturally Occurring Fluoride Average by County Washington State Sentry Database, 2000-2015



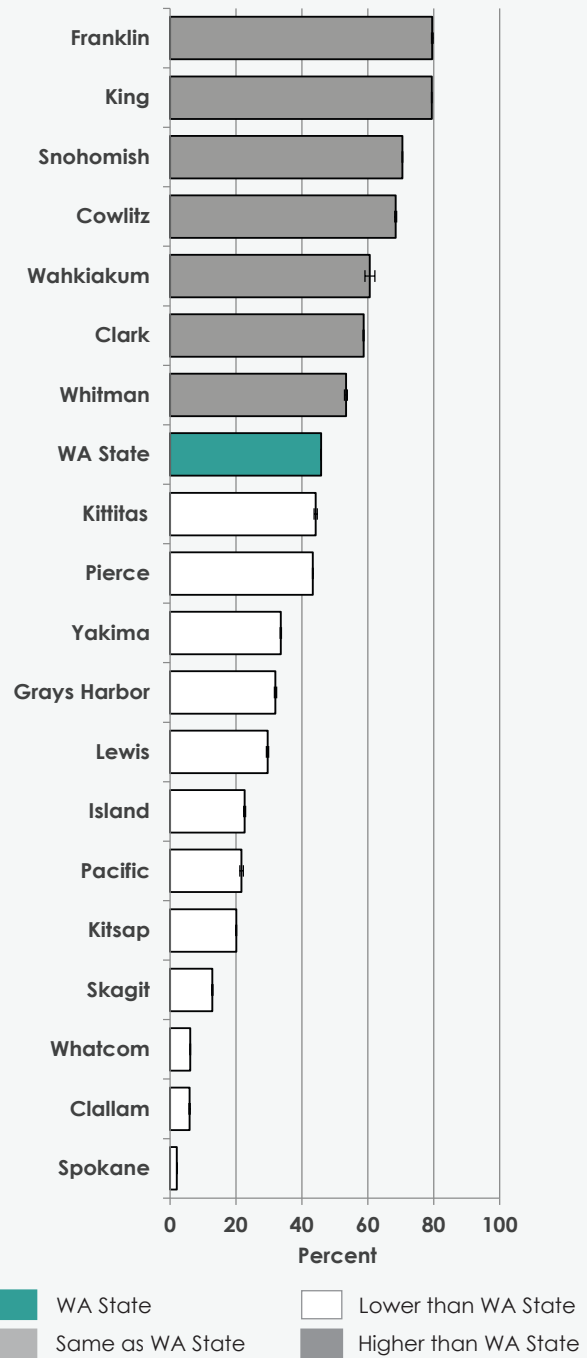
Geographic Variation

- Across counties in Washington State during 2016, 2 to 80 percent of the population on Group A systems received fluoride-treated water. Approximately half of our counties have at least one Group A system that treats with fluoride (N=19 counties).
- In 2016, Clark, Cowlitz, Franklin, King, Snohomish, Wahkiakum and Whitman counties had a higher percentage of the population receiving fluoridated drinking water from Group A systems compared to the state.
- Clallam, Grays Harbor, Island, Kitsap, Kittitas, Lewis, Pacific, Pierce, Skagit, Spokane, Whatcom and Yakima counties had a lower percentage of the population receiving fluoridated drinking water from Group A systems compared to the state.

Disparities

- Counties with high percentages of priority populations such as people of color, children under 19, or people with low income or limited English proficiency may not have fluoride available to them in their tap water (i.e., Adams, Grant, Okanogan and Chelan).
- The 2012 and 2014 BRFSS telephone survey questions that provide an indication of the prevalence of oral disease include: 'Have you had any permanent teeth removed because of tooth decay or gum disease?' and 'Do you have a painful or aching mouth?' Residents of Garfield, Mason and Skamania counties do not have access to fluoridated tap water; and BRFSS results indicated higher rates of oral disease for adults in these counties.

Percent of County Population that Received Fluoridated Drinking Water from Group A Systems Washington Counties Sentry Database, 2016



Note: Chart displays data for Group A public water systems delivering fluoridated water to 100% of service area. Systems that are either not fluoridated or not at 100% of service area are not included in numerator. Denominator is entire population of county/state.

How is Washington promoting fluoridated drinking water?

DOH and partners work to improve overall oral health outcomes. Availability of fluoridated drinking water is one method that leads to better outcomes. Agency activities promoting the inclusion of fluoride in drinking water include:

- Review and promotion of established evidence-based best practice models.
- Support to the Washington State Board of Health on their recommendation to support and promote community water fluoridation.
- Training of water system operators and engineers in the safe delivery of optimally fluoridated water, along with the public health benefits of water fluoridation.
- Providing information support to community leaders addressing water system fluoridation concerns.

Further actions to improve oral health in Washington can focus on cities or counties that do not currently fluoridate their public water systems. Outreach could include facilitating routine dental visits, the promotion of the benefits of water fluoridation by dentists, recommendation of other sources for fluoride (toothpaste), or assistance with establishing and monitoring fluoride in their public water system. Culturally aware messaging in additional languages such as Spanish, Vietnamese and Russian would reach populations with limited English Proficiency on the value of fluoride for improved oral health.

See also [Oral Health \(Tooth Decay\)](#)

Evidence-based interventions to promote oral health including community water fluoridation are available from in the [CDC Community Guide](#).

Technical Notes

Confidence Intervals: Definition and examples are described in [Appendix C](#)