



Working Group Meeting Summary – 2024 Critical Areas Ordinance (CAO) Update

Topic: Critical Aquifer Recharge Areas (CARA) – July 27, 2023 @ 1pm-3pm via Zoom

Meeting Purpose: To engage in a comprehensive discussion of Critical Aquifer Recharge Areas by reviewing and discussing the Best Available Science (BAS) summary, recommendations in the Consistency and Gap Analysis report (Chapter 6), and existing County code section KCC 19.600.

Working Group Members Present	Working Group Members Not Present
Watershed Consulting Firm	Squaxin Island Tribe
WA Dept. of Ecology	Port Gamble S'Klallam Tribe
Kitsap Public Health District	Puyallup Tribe
Kitsap Public Utilities District	Skokomish Tribe
Suquamish Tribe	Point No Point Treaty Council
Kitsap Environmental Coalition	Jamestown
Kitsap Builders Association	Kitsap Alliance of Property Owners
Futurewise	
DCD Staff	

Meeting Materials: [Working Group Guidelines and Schedule](#), [Gap Analysis Report](#), [Best Available Science \(BAS\) Summary Report](#), [KCC 19.600 – Critical Aquifer Recharge Areas](#)

Recommendation #1 – Add areas at risk of seawater intrusion as a type of Category I Critical Aquifer Recharge Area.

KCC 19.600.610.A identifies specific types of Category I critical aquifer recharge areas, which are those areas where the potential for certain land use activities to adversely affect groundwater is high. As noted in KCC 19.600.620.A.4, the County may add, reclassify or remove Category I critical aquifer recharge areas based on additional information.

To address areas identified at risk of seawater intrusion as a result of groundwater withdrawals and sea level rise, the County could consider adding areas at risk of seawater intrusion as a type of Category I critical aquifer recharge area in KCC 19.600.610.A. Such areas at risk are typically within one-half mile of marine shorelines with wells pumping from near or below mean sea level. A seawater intrusion risk assessment may be required for new wells in these areas. (*Gap Analysis, pg. 28*)

Discussion Summary: The County could consider implementing a seawater intrusion program in conjunction with a risk analysis checklist review conducted by a licensed hydrogeologist for development that may impact aquifers and private wells. Other counties with existing seawater intrusion programs are Island, Skagit, Jefferson, and San Juan. The Kitsap Public Health District currently performs comprehensive testing and mapping of new wells and may already be doing the work necessary to highlight this issue.

**This is a summarization of the working group discussion, not a transcript and does not indicate formal County recommendations or updates.*



Analysis of problem areas as identified by Kitsap Public Health District could be a solution rather than a standard “one-size-fits all” buffer around the Kitsap County shoreline. The effectiveness of a standard buffer has yet to be conclusively proven effective in other jurisdictions. Single family residence wells would not currently be included in a potential seawater intrusion program or risk assessment checklist process as they are not identified as a potential threat to groundwater in KCC 19.600.620.

Future Considerations for Recommendation #1:

- Is Kitsap Public Health Dept process already sufficient?
- Should this be handled at the county level or left to the state?
- Would single family residences be added to table 19.600.620?
- Does limiting scope to existing areas of concern properly address potential future intrusion issues?
- Should we consider reclaimed water here?
- Add wastewater treatment plant to table?
- If program implemented, would it include Category 1 or Category 2 wells? Both?
- Do we need to address/evaluate impacts to wildlife, stream flows/temps? How?

Recommendation #2 – Identify specific types of Critical Aquifer Recharge Area maps that may be produced.

KCC 19.600.610.C indicates that the County, in coordination with other agencies, will produce maps indicating the location of critical aquifer recharge areas and their defining characteristics. The County could consider identifying specific types of critical aquifer recharge areas maps that may be produced by the County, Public Health District, or water purveyors, including the following:

- Maps indicating the location of existing wells and their respective aquifers, particularly for Group A and Group B wells, to use in a well monitoring program for tracking groundwater level trends and groundwater quality changes.
- Maps of abandoned or decommissioned wells to assure the wells do not become pathways for contamination of local aquifers.
- Maps indicating the location of existing activities listed in KCC Table 19.600.620 with potential threat to groundwater quality. (*Gap Analysis, pg. 29*)

Discussion Summary: Critical Aquifer Recharge Area programs frequently include maps of group A and B wells based on soils and their ties to specific aquifers to provide public with basic info. Kitsap Public Utility District maintains a database with a map of existing wells based on longitude and latitude data. Mapping existing wells by specific aquifer would be very difficult. Although, mapping by depth below ground surface could be accomplished, the value of such map with over 10,000 dots for wells is not clear. It is questionable that a pattern would emerge that would help protect the source of aquifers. When an applicant is required to prepare a hydrogeologic report, the consultant conducts a detailed examination of wells in the vicinity and the report is reviewed by KCHD and KPUD, among others. Mapping decommissioned wells would be infeasible and impossible for wells prior to 1995. Kitsap County should consider updating all maps relating the CARA’s with most current data and resources available (GIS, topographic, LIDAR, etc.).



The Gap Analysis uses the incorrect definition of “unconfined aquifer” and outdated recharge rate data based on a 1997 assessment, Kitsap County should consider updating this data with the latest USGS model numbers to get proper percentage of precipitation in groundwater recharge. The County should consider all impacts on stream low-flows, temperature rise, and habitat. Current CAO mentions water quantity, but development standards/use table doesn’t quantify uses or thresholds. Kitsap County should consider addressing groundwater recharge in shallow areas that have a continuum with surface water.

Future Considerations for Recommendation #2:

- Are existing maps sufficient if updated with the latest data?
- Should we map/track abandoned/decommissioned wells, despite difficulty of task?
- Terms in GAP and code need updating: Impermeable layer vs. low impermeability and aquiclude.
- Polyfluoroalkyl substances (PFAS) should be considered as candidate for table 19.600.620
- Include Qva (Vashon advance aquifer), Qvr (Vashon recessional aquifer), and other notable recharge areas in maps to avoid development with potential threats to groundwater quality in those areas.
- What (if any) other activities should be added to Table 19.600.620?