City of Redmond

Thank you for the opportunity to comment. Please see the City of Redmond's letter and comments attached.

Redmond
WASHINGTON

Connected Community
Enhanced Livability
Environmental Sustainability

May 5, 2021

Laurie Morgan
Washington State Department of Ecology
PO Box 47600
Olympia, WA 98504-7600

Re: Comments on Draft Critical Aquifer Recharge Area Guidance

Dear Ms. Morgan:

This letter is in response to the request for comments on the draft Critical Aquifer Recharge Area guidance. The City of Redmond appreciates your consideration of our comments. The comments are included in an Excel file as a separate attachment. The City is committed to protection of our CARA, as our aquifer is shallow and unconfined and provides 40% of Redmond's drinking water.

Additionally, the City recognizes and appreciates that Ecology incorporated many of our suggestions from the 2018 request for comments into this draft guidance.

If you would like clarification on any of the comments the City has submitted, please reach out to Jessica Atlakson, City of Redmond Environmental Geologist, at jatlakson@redmond.gov or 425-556-2874.

Sincerely,

DocuSigned by:
Steve Hitch
C8420BB0225C4BA...

Steve Hitch, PE
Engineering Manager
City of Redmond

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Section	Page	Comment
Section 1	1	The guidance notes that it is intended to help local jurisdictions understand what is required for the protection of local groundwater resources under the GMA. The rest of the guidance is focused on municipalities that can use codes or permitting requirements to protect groundwater resources. Since there are private water purveyors that provide drinking water to residents in Washington, Redmond recommends that this guidance is enhanced with additional information to assist private drinking water purveyors with methods they can use to protect their CARA.
Section 2	11	A graphic that shows a cross section of labeled aquifers (water table aquifer and confined aquifers with an aquitard) would be helpful in communicating the system.
Section 2	11	Add 'unconfined' to definition to help tie concepts together as Redmond uses the term unconfined to describe its aquifer. "A water-table, or unconfined, aquifer is water under normal..."
Section 2	11	Add to Recharge the importance that the recharging water itself should be free of contaminants. Add a list of examples of water sources that have been found to carry contaminants such as reclaimed water and stormwater from roads.
Section 2	12	Include in examples of groundwater discharge by dewatering wells that keep construction excavations or below ground structures dry and open loop geothermal systems. Dewatering systems like temporary construction dewatering can change groundwater flow direction, capturing and transporting a contaminant plume into the capture area of a supply well.
Section 2 and Section 4 (step 8)	12, 43	Dewatering can change groundwater flow direction, capturing and transporting a contaminant plume into the capture area of a supply well. Additional risks from discharges such as temporary construction dewatering include 1. the lowering of water levels that reduce availability of water to supply wells and 2. the change of supply well source area. If the new source water area has not been prioritized for wellhead protection, then supply wells may be more susceptible to contamination from the new area.
Section 2	17	Add resource protection wells to the Groundwater Monitoring, such as "Hydrogeologists use water levels from several wells, such as resource protection (monitoring) wells, to estimate the rate..."
Section 4	23	Ecology's well log map also includes resource protection (monitoring) wells. A description of that well type should be included and that type of well should be added to the description of Figure 5.
Section 4	24	Figure 5 shows a "Possible aquifer border". To be consistent with prior language, change "border" to "boundary".
Section 4	26	Last bullet under Well Logs: Since locations and extent of aquifers are interpreted from well logs, suggest editing to read "Where groundwater is observed and how far it extends below ground."
Section 4 step 2	33	It's important to include discussion about the seasonality of depth to water of a water table aquifer because the depth can significantly vary from dry to wet seasons.

Section	Page	Comment
Section 4	35	Complete the comparison of shallow well susceptibility with deep public well in paragraph that begins with "A susceptibility rating applies..."
Section 4 step 3	38	Thank you for referencing Redmond's fire code! The link you provided will soon be replaced. Please update the link to: https://redmond.municipal.codes/RMC/15.06.020
Section 4	44	Correct link to Washington Stormwater Center LID
Section 4 step 8	46	The acronym UGA is used in this section, but not defined until Section 10 (page 74)
Section 4 step 4	50	Clarify by editing to read: "All groundwater is vulnerable to contamination; some areas..."
Section 6	57-66	Please cross-check links since some lead to pages not found.
Section 11	77-78	For those jurisdictions that have groundwater monitoring programs or contract with others for data, consider providing a section explaining how they can coordinate with the state to share or provide data to state systems.
Appendix C: Code Examples	94	Please update the link for Redmond's critical area reporting requirements to: https://www.redmond.gov/DocumentCenter/View/4711/Critical-Areas-Reporting-Requirements-PDF
Appendix D	95	The digest and case search tools are valuable tools and welcome to the City for background and context.
Appendix E	98	Understanding the extent of contamination is important to characterizing a site, replace bullet 2 with: "Determining how far contamination has traveled, the different types of materials contaminated (soil, groundwater) and where the contamination is going."

Section	Page	Comment
Appendix G	109	Redmond recommends that Ecology initiate and implement an Ecology permitting process for dewatering within CARAs to support municipalities with challenges caused by temporary construction dewatering. In response to Ecology's comment to suggest language on dewatering, Redmond has crafted draft language that represents the current state: The withdrawal of groundwater for temporary construction dewatering (TCD) is not considered a beneficial use and therefore does not need a water right. TCD can have an impact on a local jurisdiction's ability to manage groundwater withdrawals to maintain availability for drinking water sources. With no water right necessary, it is up to the local jurisdiction to develop plans and ordinances. Three challenges that TCD poses to drinking water utilities include: 1. Ensuring adequate supply of drinking water during TCD. 2. Dealing with changes in drinking water quality due to TCD caused changes to groundwater flow direction and source area to the supply well. 3. Moving groundwater contaminants across property boundaries or into a supply well flow path due to changes in groundwater flow direction caused by TCD. The City of Redmond has developed municipal code (https://redmond.municipal.codes/RMC/13.25) and a Temporary Construction Dewatering Operating Policy (https://www.redmond.gov/DocumentCenter/View/8140/Temporary-Construction-Dewatering-Operating-Policy-PDF) to address some of these challenges.
Appendix G	125	In response to Ecology's comment asking for clarification on the quality assurance planning checklist, Redmond's original comment was in reference to providing guidance for developing a Quality Assurance Project Plan (QAPP) for groundwater sampling. With the new version of the CARA Guidance, we would suggest providing a reference to Ecology's Guidelines for Preparing QAPPs for Environmental Studies (https://apps.ecology.wa.gov/publications/documents/0403030.pdf) on page 51 after the bullet 'Quality assurance standards for water quality sampling'.