

Washington Association of Sewer & Water Districts

May 7, 2021

Ms. Laurie Morgan
Hydrogeologist
Washington Department of Ecology
PO Box 47600
Olympia, WA 98504

RE: Comments on draft Critical Aquifer Recharge Areas guidelines

Dear Ms. Morgan:

Thank you for the opportunity to comment on the revised Critical Aquifer Recharge Areas guidelines. We recognize that this detailed document assists jurisdictions in meeting Growth Management Act (GMA) requirements and helps ensure the protection of groundwater sources used for drinking water.

The Washington Association of Sewer and Water Districts (WASWD) represents about 180 public sewer and water districts in the state, serving nearly 25% of our state's population. These districts provide cost-effective sewer and water services for residents and businesses in the state's largest population centers as well as the smallest rural communities. Safe drinking water is a major concern to both our membership and the customers they serve. Protection of groundwater utilized for drinking water from all sources of pollution is a primary focus of our organization.

We appreciate the statement on page 2 that "prevention of groundwater contamination is far less expensive than clean-up." This is a fact we promote particularly with regard to the use of underground injection control (UIC) wells in CARA, wellhead protection and sole source aquifer areas. We agree that the land use element of GMA mandated comprehensive plans must "provide for protection of the quality and quantity of groundwater used for public water supplies" (RCW 36.70.3308). The detailed comments below reflect an emphasis on precluding the impact to and degradation of groundwater resources as is directed in the state Anti-degradation Policy (WAC 173-200-030).

On page 15, under Susceptibility Factors, UIC wells should be mentioned as increasing susceptibility to pollution. Some possible language might be:

Deep UIC wells utilized for stormwater disposal may increase the susceptibility of underground sources of drinking water by penetrating upper confining layers. In certain soil types, even shallow UICs could present a possible threat to groundwater sources of drinking water.

This statement tracks well with the last sentence in the second bullet under this section, which states "Care should be taken with presuming a confining layer is protective, because layers may not be laterally extensive and may have some feature that allows leakage".

Page 19, Section 4, lists the characterization steps for groundwater resources and how to protect them. The 8 steps listed are then described individually as to how to interpret, develop and use this information at the municipal level. We commend the authors for their efforts to clearly explain each step and direct those planning to available resources for the information needed. However, based on discussions we have had with Ecology and Department of Health, further resources, information, and mapping are needed.

On page 34, Groundwater Quality Sample Results, there is a discussion of samples showing contamination from man-made sources traveling from the land surface to a well. There is no mention of direct injection of stormwater via UIC as a conduit for man-made sources of pollution, and there should be.

On Page 34, there is a description of DOH requirements for Group A purveyors to do a susceptibility assessment for each well, including whether or not there is a confining layer above the aquifer, and time of travel information. It is not clear whether or not there is a requirement for the planning municipality to work with the purveyors to obtain and utilize this information. Please clarify how this requirement on purveyors fits into the planning effort for GMA. If there is not a requirement to work with purveyors, please add language stating that it is good policy to include utilities in GMA planning in order to protect drinking water sources. WASWD members believe that local water purveyors should play an active role in planning for aquifer protection. Also mentioned is the susceptibility of shallower individual wells, and that they should be considered in the susceptibility analysis for CARA designation. A "should" is not a "shall", so this statement does not seem sufficiently protective for individual wells, especially in areas that are predominantly agricultural and more rural, where adequate planning staff might be problematic.

Page 36 discusses the inventory of existing and potential sources of contamination, and then briefly discusses stormwater infiltration and registration of UIC wells. This section would be a good spot to further discuss the crossover of several programs. We believe there are many efficiencies to be gained, especially in inventories and inspections, if these similar programs enact better cooperation and data sharing. A much more robust discussion of NPDES stormwater permits and the extensive requirements in them for inspections, spill control, and spill response is warranted. Also, Ecology sponsors the Local Source Control program, which gives grants to different agencies to do inspections to ensure wastes are properly handled, and good housekeeping practices are being utilized.

On page 40, in Protect by Minimizing Activities and Conditions That Pose Contamination Risks, the following statements are made:

Anywhere chemicals are stored, handled, transferred, or used is a potential spill or leak risk. Well owners do not have the regulatory authority that cities and counties do to stop contamination risks or events. Public Water Supply Systems and residents on single wells rely on cities and counties to implement regulations that clearly address protection of the aquifer resource for new developments and existing land uses. Typically, cities and counties have different departments that administer different aspects of protecting Critical Aquifer Recharge Areas. These include planning, development services/building permits, public works, and water resources protection (stormwater, groundwater, surface water). Ideally, the relevant departments work together so that everyone involved knows about projects early.

We would agree with these statements and argue that the use of deep UIC wells in CARA areas is a

bad idea that opens up drinking water sources to potential contamination. Further, water purveyors need to be included in the early planning stages of any UIC well projects as they may impact aquifer recharge. Please add language stating that the providers of drinking water should be notified and invited to the preliminary discussions on these projects.

Page 43, under Ensure Contamination Prevention Plans and BMPs are Followed, please add language as indicated in our comments referring to page 36 discussing the NPDES stormwater permit inspections, and Local Source Control program. The NPDES program has ordinances that are required in each jurisdiction that ensure the ability to enforce these regulations, and the jurisdictions involved are enthusiastic about sharing what works and what doesn't.

Page 57, under Working with State and Federal Laws and Rules. This section is exhaustive in its listing of relevant statutes. The great difficulty lies in ensuring that they all work together and do not contradict one another. In the Stormwater section, the Manuals and deep UIC wells are mentioned, along with the statement that local jurisdictions may impose additional limits on the total depth of deep UIC wells based on specific hydrologic conditions and other considerations. We propose that these wells should be authorized only under waste discharge permits from Ecology that have specified monitoring, maintenance and inspection requirements. The potential of these wells to contaminate groundwater used for drinking water is too great to be left to individual jurisdictions. This section should mention the dangers of injection below confining layers and that development proponents should consider other alternatives for stormwater as required by the Manuals.

Page 76, Compliance Monitoring and Program Integration reads as follows:
Ordinances and plans by themselves do not protect the functions and values of Critical Aquifer Recharge Areas ♦ Protection requires monitoring for compliance, together with technical assistance and, if necessary, enforcement. Monitoring for compliance also requires having the authority to inspect and require correction.

Add to this, from Page 97, the PCHB statement on one of their decisions:

If BMPs are relied upon for protection of critical areas, some form of monitoring and enforcement must be included to ensure that the plans are actually implemented and followed. ARD v. Shelton 98-2-0005 (FDO 8-10-98).

We would agree with both of these statements. Adequate monitoring and enforcement of regulations intended to protect drinking water sources are crucial, and is why we object to rule authorization of deep UIC wells in CARAs.

Overall, this guidance document provides a robust detailing of the steps, laws and considerations that need to be examined by those responsible for GMA planning to protect CARAs. Examples from real jurisdictions as provided in the appendices are very helpful, and provide a further resource for someone to call for additional information, or to inquire about how particular actions are working over time. As indicated, further discussion on the possible dangers of UIC wells that breach confining layers is warranted, as well as a better discussion of how inspection programs associated with NPDES permits provide important protection of CARAs.

Thank you for your efforts on this document.

Sincerely,

Judi Gladstone
Executive Director



**Washington Association
of Sewer & Water Districts**

EDUCATE ■ ADVOCATE ■ COLLABORATE

May 7, 2021

Ms. Laurie Morgan
Hydrogeologist
Washington Department of Ecology
PO Box 47600
Olympia, WA 98504

RE: Comments on draft Critical Aquifer Recharge Areas guidelines

Dear Ms. Morgan:

Thank you for the opportunity to comment on the revised Critical Aquifer Recharge Areas guidelines. We recognize that this detailed document assists jurisdictions in meeting Growth Management Act (GMA) requirements and helps ensure the protection of groundwater sources used for drinking water.

The Washington Association of Sewer and Water Districts (WASWD) represents about 180 public sewer and water districts in the state, serving nearly 25% of our state's population. These districts provide cost-effective sewer and water services for residents and businesses in the state's largest population centers as well as the smallest rural communities. Safe drinking water is a major concern to both our membership and the customers they serve. Protection of groundwater utilized for drinking water from all sources of pollution is a primary focus of our organization.

We appreciate the statement on page 2 that "prevention of groundwater contamination is far less expensive than clean-up." This is a fact we promote particularly with regard to the use of underground injection control (UIC) wells in CARA, wellhead protection and sole source aquifer areas. We agree that the land use element of GMA mandated comprehensive plans must "provide for protection of the quality and quantity of groundwater used for public water supplies" (RCW 36.70.3308). The detailed comments below reflect an emphasis on precluding the impact to and degradation of groundwater resources as is directed in the state Anti-degradation Policy (WAC 173-200-030).

On page 15, under Susceptibility Factors, UIC wells should be mentioned as increasing susceptibility to pollution. Some possible language might be:

Deep UIC wells utilized for stormwater disposal may increase the susceptibility of underground sources of drinking water by penetrating upper confining layers. In certain soil types, even shallow UICs could present a possible threat to groundwater sources of drinking water.

This statement tracks well with the last sentence in the second bullet under this section, which states “Care should be taken with presuming a confining layer is protective, because layers may not be laterally extensive and may have some feature that allows leakage”.

Page 19, Section 4, lists the characterization steps for groundwater resources and how to protect them. The 8 steps listed are then described individually as to how to interpret, develop and use this information at the municipal level. We commend the authors for their efforts to clearly explain each step and direct those planning to available resources for the information needed. However, based on discussions we have had with Ecology and Department of Health, further resources, information, and mapping are needed.

On page 34, Groundwater Quality Sample Results, there is a discussion of samples showing contamination from man-made sources traveling from the land surface to a well. There is no mention of direct injection of stormwater via UIC as a conduit for man-made sources of pollution, and there should be.

On Page 34, there is a description of DOH requirements for Group A purveyors to do a susceptibility assessment for each well, including whether or not there is a confining layer above the aquifer, and time of travel information. It is not clear whether or not there is a requirement for the planning municipality to work with the purveyors to obtain and utilize this information. Please clarify how this requirement on purveyors fits into the planning effort for GMA. If there is not a requirement to work with purveyors, please add language stating that it is good policy to include utilities in GMA planning in order to protect drinking water sources. WASWD members believe that local water purveyors should play an active role in planning for aquifer protection. Also mentioned is the susceptibility of shallower individual wells, and that they should be considered in the susceptibility analysis for CARA designation. A “should” is not a “shall”, so this statement does not seem sufficiently protective for individual wells, especially in areas that are predominantly agricultural and more rural, where adequate planning staff might be problematic.

Page 36 discusses the inventory of existing and potential sources of contamination, and then briefly discusses stormwater infiltration and registration of UIC wells. This section would be a good spot to further discuss the crossover of several programs. We believe there are many efficiencies to be gained, especially in inventories and inspections, if these similar programs enact better cooperation and data sharing. A much more robust discussion of NPDES stormwater permits and the extensive requirements in them for inspections, spill control, and spill response is warranted. Also, Ecology sponsors the Local Source Control program, which gives grants to different agencies to do inspections to ensure wastes are properly handled, and good housekeeping practices are being utilized.

On page 40, in Protect by Minimizing Activities and Conditions That Pose Contamination Risks, the following statements are made:

Anywhere chemicals are stored, handled, transferred, or used is a potential spill or leak risk. Well owners do not have the regulatory authority that cities and counties do to stop contamination risks or events. Public Water Supply Systems and residents on single wells rely on cities and counties to implement regulations that clearly address protection of the aquifer resource for new developments and existing land uses. Typically, cities

and counties have different departments that administer different aspects of protecting Critical Aquifer Recharge Areas. These include planning, development services/building permits, public works, and water resources protection (stormwater, groundwater, surface water). Ideally, the relevant departments work together so that everyone involved knows about projects early.

We would agree with these statements and argue that the use of deep UIC wells in CARA areas is a bad idea that opens up drinking water sources to potential contamination. Further, water purveyors need to be included in the early planning stages of any UIC well projects as they may impact aquifer recharge. Please add language stating that the providers of drinking water should be notified and invited to the preliminary discussions on these projects.

Page 43, under Ensure Contamination Prevention Plans and BMPs are Followed, please add language as indicated in our comments referring to page 36 discussing the NPDES stormwater permit inspections, and Local Source Control program. The NPDES program has ordinances that are required in each jurisdiction that ensure the ability to enforce these regulations, and the jurisdictions involved are enthusiastic about sharing what works and what doesn't.

Page 57, under Working with State and Federal Laws and Rules. This section is exhaustive in its listing of relevant statutes. The great difficulty lies in ensuring that they all work together and do not contradict one another. In the Stormwater section, the Manuals and deep UIC wells are mentioned, along with the statement that local jurisdictions may impose additional limits on the total depth of deep UIC wells based on specific hydrologic conditions and other considerations. We propose that these wells should be authorized only under waste discharge permits from Ecology that have specified monitoring, maintenance and inspection requirements. The potential of these wells to contaminate groundwater used for drinking water is too great to be left to individual jurisdictions. This section should mention the dangers of injection below confining layers and that development proponents should consider other alternatives for stormwater as required by the Manuals.

Page 76, Compliance Monitoring and Program Integration reads as follows:

Ordinances and plans by themselves do not protect the functions and values of Critical Aquifer Recharge Areas – Protection requires monitoring for compliance, together with technical assistance and, if necessary, enforcement. Monitoring for compliance also requires having the authority to inspect and require correction.

Add to this, from Page 97, the PCHB statement on one of their decisions:

If BMPs are relied upon for protection of critical areas, some form of monitoring and enforcement must be included to ensure that the plans are actually implemented and followed. ARD v. Shelton 98-2-0005 (FDO 8-10-98).

We would agree with both of these statements. Adequate monitoring and enforcement of regulations intended to protect drinking water sources are crucial, and is why we object to rule authorization of deep UIC wells in CARAs.

Overall, this guidance document provides a robust detailing of the steps, laws and considerations that need to be examined by those responsible for GMA planning to protect

CARAs. Examples from real jurisdictions as provided in the appendices are very helpful, and provide a further resource for someone to call for additional information, or to inquire about how particular actions are working over time. As indicated, further discussion on the possible dangers of UIC wells that breach confining layers is warranted, as well as a better discussion of how inspection programs associated with NPDES permits provide important protection of CARAs.

Thank you for your efforts on this document.

Sincerely,

A handwritten signature in blue ink that reads "Judi Gladstone". The signature is written in a cursive style with a large initial "J".

Judi Gladstone
Executive Director