

CARA Review Committee

December 12, 2012 Meeting Summary

Meeting Attendees

Committee members that attended the meeting:

- Steve Davenport**, Spokane County Building and Planning
 - Kitty Klitzke, Futurewise (via phone)
 - Lloyd Torgerson, Torgerson Properties
 - Ned Wendle, Mead School District
 - Guy Gregory, Washington State Department of Ecology
 - Steven Holderby, Spokane Regional Health District
 - Eric Meyer**, Spokane Regional Health District
 - Jeanne Barnes, Spokane Association of Realtors
 - Jon Rudders**, GeoEngineers, Inc.
 - Bryce Robbert, Avista Utilities
- ** alternate committee member

County staff and consultants that attended the meeting:

- Bruce Rawls, Spokane County Utilities
- Rob Lindsay, Spokane County Utilities
- Mike Hermanson, Spokane County Utilities
- Mike Murray, HDR Engineering
- Michael Kasch, HDR Engineering
- Sarah Hubbard-Gray, Hubbard Gray Consulting
- Stan Miller, Inland Northwest Water Resources

Members of the public that attended the meeting:

- Rusty Post, Washington State Department of Ecology
- Llyn Doremus, Washington State Department of Ecology

Welcome and Introductions

Sarah Hubbard-Gray, the meeting facilitator, welcomed the committee members and asked everyone to introduce themselves.

Sarah provided a reminder about the CARA Review process and milestones, and reviewed the purpose of the project which is to 1) evaluate the need for revisions of the CARA wastewater disposal standard (SCC 11.20.075) which relate to non-residential uses outside the Urban Growth Area (UGA), 2) evaluate if the standard is effective, enforceable, and equitable, and 3) make recommendations for standard revisions (if appropriate).

Sarah explained the goals for the meeting, which involved 1) getting input from the committee on the technical approach presented in Tech Memos 2 and 3, which form the foundation for upcoming technical evaluations, and 2) getting input and perspectives on establishing CARA wastewater loadings and considerations for incorporation into CARA standards.

Sarah asked if there were any comments or clarification on the October 24, 2012 CARA Review Committee meeting summary. No comments were provided.

Groundwater Quality Criteria, Groundwater Loading Limits for Wastewater, and Considerations for Establishing CARA Wastewater Loadings

Mike Murray reviewed the CARA study objectives, why a CARA standard was established, and the goals of Spokane County's CARA requirements. Mike explained that Tech Memo 2 focuses on the Water Quality Standard for Ground Water Standard (Chapter 173-200 WAC), also referred to as the Groundwater Quality Standards, to meet the goals associated with preventing degradation of groundwater quality, improving water quality of aquifers that do not meet state standards, and protecting groundwater quality from development impacts.

Mike presented a summary of the information presented in Tech Memo 2, including an overview of:

- On-site septic system components
- On-site septic system flow pattern
- Washington State Groundwater Quality Standards – need to consider to evaluate acceptable loading to groundwater
- Groundwater Quality Standards regulatory authority
- Groundwater Quality Standards goals and mechanisms, including anti-degradation, AKART and point of compliance
- Constituent focus for CARA evaluation – why nitrate is the primary constituent of concern (e.g., highly mobile and moves unchanged through soil) and that phosphorus will also be considered
- On-site septic system loading of nitrate to groundwater and Washington Department of Health nitrate-balance approach
- How Groundwater Quality Standards could be applied to CARA study

Mike Murray and Michael Kasch presented a summary of the information presented in Tech Memo 3, including an overview of:

- Constituents of concern
- Nitrogen cycle from drainfields
- Mixing zone approach
- Use of mixing zone approach used by Washington Department of Health
- Parameters to assess wastewater loading to groundwater

- Examples of sanitary wastewater nitrate loads, example calculations and discussion of default and site specific values
- Point of compliance considerations and possible locations
- Examples of mixing calculations showing variations of non-residential downgradient concentrations and variability between sites with different hydraulic conductivity
- Washington Department of Health Nitrate Mixing Analysis Spreadsheet
- Examples of how the implementation mechanisms (anti-degradation, AKART, Groundwater Standards and point of compliance) could be incorporated into CARA
- Example of allowable nitrogen loading for sites with different wastewater nitrate concentration, wastewater flow rates, and hydraulic conductivity

Sarah asked the committee members if, based on the presentation, they agree with using nitrate as the constituent of concern, using the numeric criterion that aligns with the limits used by the Washington Department of Health, and the mixing zone approach. None of the committee members expressed any concerns.

Committee members were asked to provide written comments on Technical Memos 2 and 3 by Friday December 21, 2012. It was explained that comments from the December 12th meeting and written comments will be considered during the next phase of technical work.

Perspectives on Establishing CARA Wastewater Loadings – Roundtable Discussion

During and after the presentations, a variety of questions and comments were provided by committee members and County staff, including:

- Guy Gregory indicated that point of compliance is often misunderstood and that the Washington Department of Ecology will provide written comments on Tech Memos 2 and 3, including point of compliance.
- Ned Wendle explained that typical architectural and engineering resource information on flow rates for schools are not accurate for new schools constructed with low flow / water saving features. Mead's new school uses 3 gallons/day/student, not the design rate of 15 gallons/day/student.
- As the project continues and CARA recommendations are developed, the overarching Growth Management Act implications/concerns/issues should be considered (e.g., effect of changing the regulation, land use implications). CARA regulation should not dictate land use, but should consider the effect. Lots of land is available for non-residential development inside the UGA.
- Comments and questions on how to implement the loading method, and how upgradient nitrate concentrations and other site-specific parameters will be determined:
 - Values from maps or look up tables should be provided for project proponents that want to rely on existing information – with the understanding that the values may be more conservative.

- For project proponents that want to rely on their site-specific information, they should be allowed to provide a hydrogeologic report prepared by a qualified firm/individual.
- The amount of data needed should be determined (e.g., what is required in a hydrogeologic report). Rob Lindsay explained what some other Washington counties require in their CARA regulations and associated engineering reports.
- Take advantage of available data (e.g., consider water system data for nitrates in wells close to a proposed project, developed detailed maps with representative data for different geographic areas, use Ecology EIM data that links to well logs).
- Need to determine how to establish the predicted or expected flow rate of a project.
- How will applicant provide an estimate of nitrate concentration from drainfield?
- Comments and questions on hydraulic conductivity:
 - It is difficult to get accurate numbers for hydraulic conductivity and it is very important to get the number correct.
 - How does the effect of hydraulic conductivity relate to the current low, medium and high aquifer susceptibility areas?
- Different types of treatment/nitrate reduction should be allowed (e.g., higher flows can be discharged if higher levels of treatment are incorporated into projects that meet the acceptable loading requirements).
- Additional comments and questions relating to incorporation of wastewater loadings into CARA standards:
 - Need to be fair, equitable, and consistent.
 - How will the cumulative effect be determined over time?
 - New uses for a site should be considered.
 - Changes from predicted or expected flow and loading rates should be considered. However, concern was raised about going back when costs had already been incurred by the owner.

Next Steps

Sarah explained that written comments on draft Tech Memos 2 and 3 are due by Friday December 21, 2012. Comments should be sent to Rob Lindsay.

Sarah also explained that the next CARA Review Committee meeting will be in late January or February 2013. It will be on a Wednesday from 2:00 to 4:30 pm, and a notice will be sent out at least three weeks before the meeting. Draft Tech Memo 4, that will cover predictive tools and preliminary recommendations, will be posted on the CARA web page for committee review several days before the meeting.