

Data Collection, Characterization, Monitoring

Charge from Groundwater Management Area Advisory Committee

Working Group Members

Melanie Redding (Chair); Andres Cervantes; Bob Stevens; Charles (Pony) Ellingson; David Bowen; Chelsea Durfey; Dave Cowan; Doug Simpson; Elizabeth Sanchez; Frank Lyall; Ginny Stern; Jaclyn Hancock; Jan Whitefoot; Jean Mendoza, John Van Wingerden, Kevin Lindsey; Laurie Crowe; Lino Guerra; Mike Shuttleworth; Ralph Fisher; Robert Farrell; Ron Cowin; Scott Stephen; Steve Swope; Stuart Turner; Dr. Troy Peters

Meetings/Calls Dates

Meeting: Wednesday, November 9, 2016, 1:00-3:00 PM

Call Number: 509-574-2353 pin: 2353#

Participants

Present: Melanie Redding (Chair), Steve George, Jean Mendoza, Jim Dyjak, Kathleen Rogers, Rand Elliott, David Bowen, Stuart Turner, Sandy Braden, Margie Van Cleve, Ginny Prest, Stuart Crane, Jim Davenport, Vern Redifer, Gary Bahr*, Bob Farrell*, Steve Swope*, Pony Ellingson*, Laurie Crowe*, Lucy Edmondson*, Matt Bachmann*, Kevin Lindsey*, Ralph Fisher*, Nick Peak*, Chris Saunders, Marlene Carpenter (County support staff) *via phone

Key Discussion Points

Meeting Overview: The meeting got underway at 1:03pm. After the customary introductions, Melanie reviewed the purpose of the meeting. At the October 20 GWAC meeting, some members had expressed concerns about PGG's proposed ambient monitoring network (AMN). After much discussion, the proposal was tabled for further review at this Data working group meeting, to which all members of the GWAC were invited, to allow representatives from PGG to address whatever outstanding questions and concerns members might have. The goal of this meeting was to help members feel comfortable casting a vote for or against the AMN at the November 17 GWAC meeting.

Ambient Monitoring Network Task: Melanie gave a brief overview of the history leading up to this point. Yakima County had contracted with Pacific Groundwater Group (PGG) to design a groundwater monitoring system. On December 3, 2013, PGG issued a report laying out a realm of possible priorities that a monitoring network could address. On August 15, 2014, PGG issued an interim monitoring plan for the purpose of tracking current and future nitrate levels.

On February 19, 2015, the GWAC approved the development of an AMN which would address the GWMA goal of reducing nitrate in groundwater over time. The GWAC specified the following characteristics for an AMN; 1) 35-40 purpose-built wells, 2) linear flow patterns, 3) dispersed

enough to look at different areas of the GWMA, and 4) down to the water table/shallow aquifer. PGG was later contracted to develop this AMN based on these specifications.

Melanie stressed that no one monitoring network could answer all the questions out there. In her view, the proposed AMN before the group should be understood as a first step, and a basis to inform and supplement future nitrate monitoring and mitigation efforts. Several of those priorities, contained in the December 2013 PGG report, had been discussed at the last two Data working groups, and placed on the agenda for discussion at the October GWAC meeting, although debate over PGG's AMN had prevented the group from getting to them. Melanie reminded the group that PGG's final draft report was the issue on the table, and asked members to focus their questions on the matter before them.

GWAC Member Concerns

Proximity of monitoring wells to roadways: A member repeated concerns he had expressed at the October GWAC meeting that many of PGG's proposed wells would be located in close proximity to roads. Specifically, he was concerned that 1) runoff from roads would contaminate the nearby groundwater supply with nickel, copper, and hydrocarbons, 2) roads would create a wall of compacted soil that would prevent monitoring stations from getting a true 360-degree view of groundwater, 3) statutes in other states forbid the siting of wells in close proximity to roadways, although he wasn't sure about the status of the law in Washington on this matter, 4) some drivers in rural areas don't always stay on the road, which could potentially lead to wellhead damage.

On the first point, Steve Swope of PGG replied that the monitoring stations are designed to monitor nitrates only, and that to his knowledge, there have not been any studies showing that roadways lead to higher nitrate contamination in adjacent soils. On the second point, Steve saw soil compaction caused by roads to be a problem down to 10 feet in depth, but not something that would interfere with groundwater flow 50 feet deep. On the third point, Steve acknowledged that while there are setback rules against locating domestic wells too close to roadways, the proposed wells were observation wells, and he was not aware of any legal restraints on placing them next to roads. PGG had located many observation wells next to roadways in Washington in other projects, including the city of Olympia, for the reason that it's easy to gain legal access to them. On the fourth point, Steve said PGG had not encountered problems with errant drivers damaging wells in their prior work.

The member stated that if roadside wells were located at the far edge of county right-of-way, it might assuage some of his concerns.

First Water: A member expressed concern about the depth of the wells, the difference in monitoring first water vs. first legal drinking water, and about the possibility of monitoring a seasonal perched water table that would skew the results. Pony felt that PGG's process for siting wells was adequate to address the issue of perched water, and that they had enough depth data from USGS to be able to tap into the aquifer at the drilling site.

Existing Private Wells: Some members disagreed with the approach of drilling new purpose-built wells rather than relying on existing private wells for data-gathering. They felt that this approach would be cheaper than drilling new wells from scratch, would be located in fields, thus

giving a better sense of land-use practices and BMP effectiveness, and had already been used as the approach in Whatcom County. Vern stated that the County's preference for purpose-built wells was because it can take years to get private landowners to grant permission to monitor their property; often they want monetary compensation, which can inflate the costs; and they can revoke permission to use their wells at any time. The benefit to drilling new purpose-built wells is that the implementing agency can maintain control over them. They had also been advised by a member of the Umatilla GWMA to go with purpose-built wells, not private. PGG did not have a stated preference, other than the fact that they had been directed by the GWAC to pursue purpose-built at the February 2015 meeting.

One of the members who had long expressed a preference for private wells stated that he was prepared to reluctantly concede the issue for the sake of not struggling with siting, and gaining a faster real-time report card on nitrate trend-lines. Jim Davenport suggested that a possible forward course could involve authorizing PGG to take GWAC members to their intended drilling locations to see if they were satisfactory. The member was eager to pursue that course, pending authorization from the GWAC.

Existing Public Wells: Another member questioned why some of the existing public wells shown on PGG's attachments, especially those within the EPA cluster, couldn't be used for data gathering. Pony reiterated that PGG had been asked to devise a purpose-built system. Some of the existing public wells don't have construction records or well logs, and Pony felt it would be a difficult task to locate all the existing public wells, which have inexact coordinates. On the EPA wells, it was agreed that they could be included in the study, and that this would be put in writing.

Randomness of Well Sites: A member spoke on behalf of another GWAC member who was not present, relaying their concerns that none of PGG's proposed wells were located in an Urban Growth Area (UGA). They felt this would miss out on tracking nitrate contributions from high-density septic system clusters, and that PGG should talk with the RCIM work group to select a site in a UGA. Steve stated that this concern had been addressed in Section 4.0 of PGG's latest report.

Another member expressed concerns about avoiding well locations next to unlined canals. Given the volume of unlined canals in the Sunnyside Valley Irrigation District alone, the member felt this would be avoiding a very common influence on nitrate concentrations, skewing the data gathered. Steve stated that PGG's goal had been to avoid known dominant biases in locating wells. The member felt this was putting a thumb on the scales.

Melanie was wary of "tampering" with PGG's suggested well sites to address UGA or other concerns, fearing that this would invalidate the randomness and introduce bias. She felt these concerns, while valid, would be better addressed in future monitoring projects.

Adequate funding: Some group members were concerned that the price tag associated with the AMN would deplete resources for implementing future projects. David Bowen stated that Lower Valley nitrate contamination was the number one priority in his division of Ecology, and that there was no intention of letting this fall off the radar screen in terms of funding. As far as appropriations from the state for future projects, Rand Elliott stated that he would need a concrete proposal before approaching lawmakers with a request for funds.

In terms of the existing GWAC budget, Vern stated that this had been included on the October GWAC agenda, and briefly discussed. A more in-depth discussion of the budget, and how money might be reallocated to reflect the group's priorities, is on the agenda for the November GWAC, although members would need time to develop their proposals before any votes get taken.

Historical Nitrate Trends: Another member was concerned that by relying on randomly-dispersed purpose-built wells, the GWMA would be getting a record of current and future nitrate levels, but sacrificing a record of past nitrate trends. Steve replied that this had not been part of the mandate they received from the GWAC in February of 2015.

GWAC: Melanie asked group members who had not been ready to cast a vote at the last GWAC meeting whether their concerns had been addressed sufficient to vote on the AMN proposal. One member on the phone needed time to discuss the matter with her department. Another member could not support PGG's proposal unless a program addressing hotspots and other priorities using existing private and/or public wells was conducted simultaneously. Other members still had reservations, but were willing to support an AMN, as long as it was understood as a building block to future endeavors, not the be-all/end-all, and as long as PGG was willing to accommodate concerns about siting as the program was being implemented.

Jim Davenport's Role: Members inquired as to Jim Davenport's future role with the GWAC. Jim answered that he was still under contract with Yakima County to provide assistance to the group, although this did not formally include his role as facilitator. Several members expressed a desire to see Jim continue facilitating GWAC meetings, and hoped the full GWAC membership would ratify that role at the next meeting.

The meeting adjourned at 3:50pm.

Resources Requested

Recommendations for GWAC

PGG's final draft AMN proposal will be placed on the November 17 GWAC agenda for a vote.

Discussion of future projects and priorities such as monitoring hot spots, informed by utilizing data from existing private and EPA wells, will be included on the November 17 GWAC agenda.

Discussion of the GWAC's budget status will be included on the November 17 GWAC agenda.

Deliverables/Products Status

Proposed Next Steps

Melanie will send members a copy of PGG's August 15, 2014 QAPP "Interim Final Groundwater Monitoring Plan."

PGG will stay in contact with interested GWAC members about physically touring the well sites before drilling takes place, once authorization is received.