

## Data Collections, Characterization, Monitoring Work Group

### Charge from Groundwater Management Area Advisory Committee

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A discussion of timelines and details regarding the Nitrate Loading Assessment

### Working Group Members

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Kirk Cook (Chair); Andres Cervantes; Jan Whitefoot; Jim Trull; Kevin Lindsey; Laurie Crowe; Steve Swope; Stuart Turner; Thomas Tebb; Melanie Redding

### Meetings/Calls Dates

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Meeting: Thursday, April 9, 2015 10:00 a.m. to 12:00 p.m.

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

### Participants

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Present: Kirk Cook (Chair), Jean Mendoza, Jim Trull, Charlie McKinney, Vern Redifer, Jim Davenport, Mike Martian, Cindy Kozma, Lee Murdock, Andy Cervantes\*, Jaclyn Hancock\*, Greta Smith (Yakima County Support Staff), Erica Naasz (Yakima County Support Staff)

\*via phone

### Key Discussion Points

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- Nitrogen Loading Assessment Status
- Data on UIC Wells, NPDES Permits, Nitrogen Compound Spills, and Septic Systems
- USGS
- GWAC Timeline

**Nitrogen Loading Assessment Status:** Jim Davenport welcomed the working group. Kirk began discussion regarding the CAFO group expecting field data from EPA and Dairies. He noted that site-specific data on lagoon location size and capacity is being gathered, as well as collection of area data on livestock holding area(s) and composting areas. This will be combined with site-specific soil properties and nitrogen loading parameters to estimate nitrogen loading from livestock operations within the GWMA.

This analysis will be available on a GIS platform and accompanying database, and made available to Yakima County. WSDA will confer with the Livestock/CAFO work group regarding input parameters to estimate leaching rates and below root zone nitrogen loading.

He added that he needs studies related to loss of ammonia leaching from lagoons and how they deal with them. The group discussed the value of the GID System Layers, which is that all modules can be updated as new data becomes available. The group determined that the best course of action would be to use realistic values based on agreed-upon characteristics for now. Local data can be added at a later date.

**ACTION:** Kirk hopes to have the first segment of the Nitrogen Loading Assessment completed with recommendations to the CAFO/Livestock group by April 20, 2015.

**Data on UIC Wells, NPDES Permits, Nitrogen Compound Spills, and Septic Systems:** Mike Martian and Cindy Kozma, from Yakima County GIS, presented a geomap developed for the RCIM committee which shows parcels with septic systems in the GWMA area. One of the features of the map is the ability to put a point on these parcels using the building footprint layer. They added a ten foot buffer area from the foot print of the home to make a realistic assumption of where the septic system would sit as opposed to simply adding the point to the center of the parcel. Additional data GIS has available includes soil type, rooms, baths, owner occupied, and renter occupied residences from the 2010 Census. Mike also informed the group that the GIS layers could include State Waste Discharge Permits, large onsite septic systems, and potentially capturing lawn existence for fertilizer estimates.

The group also discussed leaching from these septic systems and was informed that Melanie Redding has put together a peer review analogy to figure out leaching data from septic systems. The group decided to invite Melanie to present this data at the May 14, 2015 Data meeting. Kirk will also be researching the numbers on leakage rates from lagoons and the nitrate contributions. He needs input on parameters for what to measure for each operation given the equation will remain the same. A peer review would be necessary to determine what diet the livestock is fed in determining nitrates in manure. The group discussed hobby farms and impact of fertilizer spills, concluding that the result may be an understanding that these issues have a small impact. If that turns out to be the case, they will still address all concerns brought to the table by other members and include them with the final data.

Mike also presented a map of Underground Injection Control wells within the GWMA area. In response to Jan Whitefoot's concern that individuals were placing waste directly into UIC/Dry Wells, Kirk stated that the risk of this is minimal due to the free disposal of waste in the state of Washington. It was pointed out that the Yakima County Transfer Station also takes in household hazardous waste for free. The group discussed that with these resources in place, it is unlikely that individuals would be putting waste into a UIC/Dry well. Unless there are specific examples or occurrences which can be investigated, no further movement will be made on this issue.

**USGS:** At last month's meeting Jean asked if she could contact USGS to identify where they currently are in their process and to maintain the conversation. A draft of her letter was sent out to some workgroup members. Information about an ongoing project between USGS and Tung Nuyen, a student at WSU, was discussed. He is working on development of a nitrate transfer model for the Lower Yakima Valley area. He intends to model the movement of nitrates through the groundwater to the Yakima River. He hopes to use the Lower Yakima Valley cells and related data from USGS model for the transmission algorithms. Jim announced that he had invited him to attend the April 16, 2015 GWAC Meeting.

Regarding Jean's letter to USGS, a final draft will be presented at the next meeting for the group to review.

**ACTION:** A draft letter response to USGS is to be approved by the Data group at the May 14, 2015 meeting.

**GWAC Timeline:** The Nitrogen Loading Assessment to be moved to July 2016. The Data Working Group is to present improvement on the completion assumption of 2017.

**ACTION:** Kirk was asked to go through the timeline and make relevant changes to the dates and return them to Vern no later than the April 16, 2015 GWAC Meeting.

The discussion ended with Vern asking the group what other tasks the Data Collection Group is working on other than Nitrogen Loading Assessment. The group noted they are reviewing documents from PPG, conducting cost benefit analysis for alternative advantage costs, how to access the money, and random monitoring of shallow wells.

### **Resources Requested**

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### **Recommendations for GWAC**

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### **Deliverables/Products Status**

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### **Proposed Next Steps**

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