# Data Collection, Characterization, Monitoring

## Charge from Groundwater Management Area Advisory Committee

A discussion of timelines and details regarding the Nitrate Loading Assessment

## Working Group Members

Melanie Redding (Chair); Andres Cervantes; Bill Dunbar; Bob Stevens; Charles Ellingson; Charlie McKinney; Chelsea Durfey; Dave Cowan; Donald Brown; Doug Simpson; Elizabeth Sanchey; Eric Winiecki; Frank Lyall; Ginny Stern; Jaclyn Hancock; Jan Whitefoot; Jean Mendoza, Jennifer MacDonald; Jim Trull; John Van Wingerden, Kevin Lindsey; Laurie Crowe; Lino Guerra; Kirk Cook; Mike Shuttleworth; Ralph Fisher; René Fuentes; Robert Farrell; Ron Cowin, Scott Stephen; Sheila Fleming; Steve Swope; Stuart Turner; Thomas Tebb; Dr. Troy Peters

## Meetings/Calls Dates

Meeting: Thursday, December 10, 2015 10:00am

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

## Participants

Present: Melanie Redding (Chair)*, Ginny Stern*, Jean Mendoza*, Laurie Crowe*, Jim Davenport, Steve George, Jim Trull, Vern Redifer, Lee Murdock, Bobbie Brady and Chris Saunders (Yakima County Support Staff)
*via phone

## Key Discussion Points

### Update on the Nitrogen Loading Assessment

Melanie updated the group on the status of the various components of nitrogen loading assessments. The Department of Agriculture (WSDA) is still handling irrigated agriculture. Yakima County GIS is still handling residential/commercial/industrial/municipal (RCIM). Kirk Cook is still handling livestock/CAFOs. The Livestock/CAFO data and loading assessment have been delivered to the peer reviewers (Melanie, Ginny Stern, and Nancy Darling). They hope to have their work completed by end of January 2016. The work will then be returned to Kirk Cook for editing as required. The Irrigated Agriculture work, being done by Perry Beale and Kelly McLain at Department of Agriculture, should be ready to deliver to peer review by the end of January 2016. The RCIM work being done by Yakima County GIS should also be ready for submission to peer review by end of January 2016.

A member of the group asked for a definition of "land application sites," which are included in the irrigated agriculture component of the nitrogen loading assessment. WSDA has an annual

process where they map which crops are being planted on which fields. They will be attempting to create an estimate of nitrogen being applied to fields based on each crop.

Melanie asked for clarification on the difference between manure lagoons and ponds. Ponds are not built to treat manure. They're temporary storage sites which settle any solids in the manure before transferring to the main storage pond. While the size of ponds vary depending on the operation, a typical pond is usually sloped, five feet deep, with a width about three times their depth. The level of manure stored in a five-foot deep pond would typically be four feet. Typical settling times vary, as the liquid component is constantly moving from one storage basin to another. Steve George offered a tour of a manure processing operation, which was deemed agreeable.

**Update on the Ambient Groundwater Monitoring Program**

Vern reported that Yakima County has signed a contract with Pacific Groundwater Group (PGG) to design an ambient groundwater monitoring system for the Lower Yakima Valley Groundwater Management Area. PGG will start work immediately and will update the County of their progress from time to time. The contract amount is $37,500. PGG will propose the optimum number and location of monitoring wells. They will take the testing data we have and data gathered by others and will propose a number of sites and locations. They will work with the County so that these will be located in public right-of-way areas or on public property. They will also recommend a set of surface water stations that could be monitored in concert with recommended groundwater well locations. These will reflect shallow groundwater conditions during non-irrigation seasons so these statistics variables might be factored in as well.

Once PGG recommends a list of locations and number of sites the sites will be prioritized to accommodate the current available funding on hand to accomplish this task. For instance, if PGG recommends 40 sites and we have funding for 10, we will work together with PGG to determine which sites are a priority and they will direct us as to where to start. This information will be provided to Yakima County and will be shared with the Data Working Group. PGG will participate in two Data Working Group meetings and receive direction from this group.

A member asked about the drain and surface water quality testing. Vern said they would be measuring water for nitrate concentrations during non-irrigation seasons to determine a baseline.

A member noted that the Irrigation District has been doing drain monitoring already and wondered if we could get information from them so that we are not duplicating efforts. This information would help distinguish how the nitrates are moving around via surface water and might be influencing nitrogen levels. A member asked Jim Trull if he knew if the Irrigation District's testing was robust enough to help us. Jim said that his opinion was probably not on the testing for nitrates, but that PGG might have a better estimate.

**USGS**

Melanie informed the group that Ginny Stern would be present at the upcoming December 17th GWAC meeting to brief the group on the contents of the October USGS report.

## Resources Requested

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## Recommendations for GWAC

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## Deliverables/Products Status

- Nitrogen loading assessments expected to be ready for peer review by the end of January.

## Proposed Next Steps

- Check to see if Irrigation Districts' surface water testing is robust enough to be helpful in designing ambient groundwater monitoring program.