

## Data Collection, Characterization, Monitoring Work Group

### Charge from Groundwater Management Area Advisory Committee

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Compile and Manage Data

### Working Group Members

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

### Meetings/Calls Dates

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Meeting: Wednesday, September 24, 2014 from 1:30 p.m. to 3:20 p.m.

Conference Call: 509-574-2353 PIN# 2353

### Participants

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Present: Robert Farrell; Steve George; Stuart Turner; Charlie McKinney; Yakima County staff support – Vern Redifer, Don Gatchalian, Jim Davenport, Mary Wurtz, and Lee Murdock

Present via Conference call: Kirk Cook (Chair); Jaclyn Hancock; Melanie Redding; Ginny Stern; Ginny Prest; Eric Winiecki; Tom Eaton; Bill Dunbar

### Key Discussion Points

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- Presentations of dairy related data
- Discussion of the data presented
- Identification of additional data the committee would like to see

*Prior to the meeting:* There was a request that the EPA present the data collected pursuant to the Dairy Cluster Consent Order at the next available GWAC meeting to discuss the residential well, groundwater and soil data that has been collected to date pursuant to the Consent Order. Chairman Kirk Cook requested that the Data Work Group review this data prior to the meeting. There was also an invitation made to Stu Turner to present data collected which pertains to the Dairy Cluster or Dairy related data. Presenters were asked to address: What is the data? How was the data collected? What quality assurance protocols were used in the data collection? What conclusions can be derived from the data? How can the data be used by GWAC in the development of the GWMA Program?

Jim Davenport facilitated the meeting and reviewed the key discussion points to be accomplished.

*Presentations:* Tom Eaton from the Environmental Protection Agency (EPA) presented a draft summary of data collected pursuant to the Dairy Cluster Consent Order – this summary was sent out prior to the meeting for committee members to review.

Mr. Eaton provided some initial background to the report stating that the dairies are the entities responsible for collecting the data – a task they have done via a consultant. This presentation is a summary of the soil, groundwater and residential well data that has been collected pursuant to the Quality Assurance Project Plans (QAPPs) that were distributed to the workgroup earlier. Mr. Eaton pointed out that these QAPP are intended to ensure that all information, sample collection, analytical data and resulting decisions are technically sound, scientifically valid, and properly administered. He pointed out that each data set is accompanied by a “Data Validation Memo” that discusses any issues encountered in the field or in the lab with the specific data. Documented decisions are made to accept or reject specific data points where deviations from the QAPP are noted.

In addition to the information on the slides, Mr. Eaton reported that annual reports for the next eight years will assess the downward trends of soil nitrate levels at depth as well as the nitrate levels in the monitoring wells. The first of those annual reports will be released in March of 2015.

*Discussion:* There was a discussion regarding the concerns of the first EPA report and whether or not the EPA addressed those concerns in this most recent assessment – specifically if the construction methods of the wells, identification of the specific aquifer being tested, and other controls were documented. Mr. Eaton responded that data relating to these issues had been documented.

Another question was raised regarding if there was a mitigation plan if the eight years of monitoring indicated nitrate levels were rising or if it was only analyzed at the end of the eight years. Mr. Eaton responded that both the EPA and the Dairies will have a year three review – regardless of the monitoring results. The purpose of this review will be to discuss if the AOC should be amended based on new developments – one of which could be the testing results. He also pointed out the quarterly Groundwater Monitoring Data reports will be released and clarified that there was nothing in the AOC to preclude immediate action should it be merited.

There was a question regarding the location of the 26 wells and whether or not the EPA tracked the different components of the dairies to parse out specific contributing components such as runoff, animal pens, etc. Mr. Eaton responded that the only components that are being tracked right now include application, lagoons, and infiltration. This was followed up by a question if the EPA was also looking at ammonium to which Mr. Eaton responded yes.

A question was asked to Mr. Turner regarding what components his study was testing – his response was that the first study focused on lagoons and was a water only study and the second study focused on soil data from pens and 1 storage basin which had been emptied and scraped.

It was noted that the EPA presentation will be moved to the December GWAC meeting. Stu Turner's presentation will be scheduled following the Data group's review.

There was a question regarding the diversity of the site conditions in the EPA study describing the condition of where the wellheads were so there would be qualitative data available. Mr. Eaton responded that for each shallow well, a 20-foot section of well screen was installed across the water table. The bottom of the screen was installed 15 feet below the water table; the top of the screen was positioned 5 feet above the water table at the time of monitoring well installation.

There was a question regarding how the EPA plans on segregating out the current loading potential from past accumulation of nitrates thereby assigning age to various nitrate levels. Mr. Eaton responded that all of the dairies in the cluster were historical and that no segregation of age was planned. There was a suggestion that the presence of specific veterinary pharmaceuticals could be used to answer these questions.

There was a question to the EPA regarding the depth of the samples taken and discussion regarding what the needed depth should be. Mr. Eaton responded that spring pre-planting and fall post-harvest soil samples were done at one foot and two foot depths with an additional post-harvest representative soil samples at a three foot depth from each sampling unit. This was followed by discussion around various crops and their root depth with and without active watering.

There was a question regarding when the Lagoon Evaluation Plan would be available – Mr. Eaton responded that it would be by the end of this calendar year.

*Additional Data Requested:* There was a question regarding what percentage of total data was reflected in the summary report. Mr. Eaton responded that while they have collected 4 quarters of data, the sampling reports in the presentation only represented 1 quarter. Additional components such as soil data, residential well data, and the DC-3 investigation would be included in the annual report published in March of 2015. The group requested that all 4 quarters of data be included in the GWAC report. The group also requested to see the raw data and not just summarized data. Mr. Eaton responded that as data is approved it is made available on the EPA web site. Currently analysis only included showing the data in charts and graphs. Clarification was made that Yakima County is currently collecting data and would like to include the raw data into their database. Mr. Eaton responded that he will check into that and get back to the group.

There was an additional clarification made that we should not compare the two reports done by EPA and Stuart Turner, but rather information from two different sources looking at different variables. Mr. Turner clarified that the two sites he is reporting on are within the Dairy Cluster that EPA is testing.

There was a final question regarding the up gradient wells and whether or not they were located in long-term agricultural areas and the issue of identifying the age of the nitrates was again discussed. Mr. Eaton responded that efforts were made to have no agricultural areas above the up gradient wells and made reference to DC-01 had some fields above it but tested within the maximum contaminant level as shown on slide 10 of the presentation.

### **Resources Requested**

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- None at this time

### **Recommendations for GWAC**

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- None at this time

### **Deliverables/Products Status**

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- *Summary Yakima AOC Dairies – Draft Data* – filename **Presentation\_Sept\_22\_2014.pdf**

### **Proposed Next Steps**

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- The Data Committee will continue looking at these two data sets – once evaluated they will assist the GWAC in reviewing and assessing the data.
- Due to the lack of time available on the October GWAC agenda, it is recommended that the EPA present the draft summary at the December meeting to ensure there is time for discussion. This will also give the EPA time to finalize the draft with data for all 4 quarters. It was also recommended that the EPA report be sent out prior to the meeting to give committee members time to review the report prior to meeting so members can arrive prepared to ask specific questions.
- Stu Turner’s presentation will be presented to the GWAC following working group review.

**Next meeting: to be determined by Kirk Cook and Jim Davenport.**