

## Joint Data Collection and Livestock/CAFO Meeting

### Charge from Groundwater Management Area Advisory Committee

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#### Working Group Members

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See working group memberships for Data Collection and Livestock/CAFO

#### Meetings/Calls Dates

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Meeting: Department of Ecology, 1250 West Alder Street, Union Gap

When: July 9, 2015 from 5:00pm to 7:00pm

Call: (360) 407-3780 PIN: 387313#

#### Participants

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Kirk Cook (Chair, Data Collection), Charlie McKinney (Chair, Livestock/CAFO), Dan McCarty\* (AGR), Jason Sheehan (GWAC), Jean Mendoza (GWAC), Larry Fendell (interested party), Melanie Redding\* (Ecology), Steve George (GWAC), Sue Wedam (GWAC), Jim Dyjak (GWAC), Scott Stephen, Kathleen Rogers (GWAC), Bud Rogers (GWAC), Vern Redifer, Jim Davenport\*, Lee Murdock, and Erica Naasz (Yakima County)

\*via telephone

#### Key Discussion Points

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- Nitrogen loading assessment: the big picture for all sources
- Confirm calculation method for lagoon contributions
- Focus on relevant variables and data sources for those variables

**Nitrogen loading assessment: the big picture for all sources:** Kirk announced that this meeting will be his last as the chairman for the Data Collections Working Group. Moving forward he will be acting as a consultant to the Washington State Department of Agriculture (WSDA) in the production of the Nitrogen Loading Assessment. He stated concerns about the appearance of a conflict of interest to be the chair of the committee tasked with oversight of that project. It has not been determined if this change will allow for him to continue as a member of the GWAC as a representative of the WSDA or if the organization will assign a replacement. Charlie announced that he had approached Melanie Redding from the Department of Ecology (DOE) to see if she was interested and available to be the chair of the Data Committee. Melanie Redding stated she was willing and the group agreed via consensus.

Kirk then stated that due to conversations at the last several meetings regarding groundwater loading, he has gone back and reviewed the original scope of work for the Nitrogen Loading

Assessment confirming that the assessment was never intended to estimate the concentration of nitrogen in the groundwater but rather to assess the annual loading of nitrates. Moving forward that will be the focus of the Assessment. Kirk also spoke about the process moving forward which will include a new peer review process which will include multiple hydrologists: Melanie Redding (Ecology), Ginny Stern (DOH), and Kevin Lindsay (Rep. Wa. Dairy Fed.). He also stated that he hopes to have a draft prepared and peer review ready by the next GWAC meeting – if he is provided with an agreed range of factors and values.

**Confirm calculation method for lagoon contributions:** Charlie and Kirk presented the calculations and variables used. - (See attachments) A member questioned whether the calculations have been compared to Whatcom County. Kirk agreed to look at what that County used, but provided the caveat that there are significant differences between the counties. Another member questioned the equation and leakage regarding Flexible Membrane Liners. Kirk responded that they will perform a risk analysis in terms of how to capture the leakage and assumption of breakdown, then transfer it to centimeters per second. You could then modify the Coefficient of Permeability (k) for flexible membrane 10 to -8 or -9. It was questioned how Kirk could justify his assumption. The group was reminded that they would have peer reviewers observe and comment on the assumptions. When covering the head issue the average head is 10ft per year. A member asked if there is any data to modify the 10ft. Kirk informed the group that they surveyed lagoons, noted elevation at the time and ultimate elevation, and then used average looking at the size and depth of the lagoon. The group questioned overestimations and again were reminded that all assumptions will be explained in the written chapter. The purpose of the chapter is to provide a planning document to the GWAC to look at various land uses and relative contributions for later uses. This is not to identify who is loading the most nitrogen into the groundwater.

**Focus on relevant variables and data sources for those variables:** The South Conservation District provided a random sample of 35 CAFOs within the GWMA so the individual analysis for total nitrogen ammonia can be used in calculations. Within these samples, there was a range from 350 to 1,100, the average was 787 mg/L of Nitrogen concentration which coincides with national studies.

There were questions regarding the methodologies of those samples and a request for the South Conservation District to provide their methodology. Kirk has asked the group to provide him any additional data within the next couple weeks. He reiterated that he is only interested in data sources and not anecdotal data or other types of information. If he does not receive any alternatives to consider he will be using the equation and variables presented at tonight's meeting. Any assumptions made in those calculations will be fully documented, peer reviewed, and then presented to the group to make sure everyone has a clear understanding.

To summarize, the variables used are Liner permeability (in cm/sec) example:  $1 \times 10^{-6}$  or  $-7$  cm/sec, Liner thickness (1 ft.), Lagoon depth (10 ft.), Nitrogen concentration of lagoon contents (in mg/liter = part/million), and Total area in lagoons in GWMA (in acres).

**Resources Requested**

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- N/A

**Recommendations for GWAC**

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- N/A

**Deliverables/Products Status**

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- Nitrogen Loading Assessment – CAFO Chapter: A draft is expected to be ready by the next GWAC meeting.

**Proposed Next Steps**

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Next meeting: TBD (Week before August 20, 1015 GWAC Meeting)