

Updates in the GWMA:

Jo Morgan informed the group that the Upper Willamette//Upper Siuslaw LAC meeting for the biennial Ag plan review is coming up. It will be held at the Monroe library, and they will go over monitoring and trends analysis and what is happening in the GWMA.

Paul Measeles provided an update for Wym Matthews. The ODA fertilizer grant is funding the next round of the lysimeter study. CAFOs are currently doing their fall, post-harvest nitrate soil sampling. Paul also mentioned that Susanna Pearlstein is looking for work back in the Pacific Northwest.

Maziar Kandelous – Would like to get the 3 GWMA's together (Southern Willamette Valley, Umatilla and Malheur) to learn from each other about things that have worked or not worked. He brought the question to the committee about whether or not they wanted to participate in something like this. GWMA committee is interested but would like additional information about format/ goal of meeting.

Paul Measeles (ODA) thinks that the agencies (ODA and DEQ) need to get together first to talk about the GWMA's. They need to agree on how to interpret the hydrogeology of the Umatilla Basin. ODA believes it is much more heterogeneous than the Willamette Valley.

Recruitment of GWMA Committee Members:

Becky Anthony (DEQ) posed question to committee about how we recruit new committee members with a lot of retirement of members looming. Suggestions for possible members were: SWCDs, watershed councils (Long Tom), small town water systems, librarian, local rural residential residents, Benton or Linn County Master Gardeners, someone representing the urban/rural connection.

- DEQ should put together a presentation to reach out and recruit city officials from Coburg, Junction City, Monroe, Harrisburg, etc.
- Jacquie Fern (DEQ) indicated that she could reach out to the Master Gardeners in Linn and Benton counties
- Other possibilities include next generation farmers in Future Farmers of America.

Updates on PINE project and new EPA grant (see presentation):

Jana Compton (EPA) asked the group if anyone had any ideas for survey questions.

Alan Henning talked about framing the interview questions and how people react to the science of what has been done.

The question was posed about why they were only surveying nine farmers? Jana indicated that the federal government has to go through a lengthy approval process to do a survey larger than 10 individuals which could take as long as 2 to 3 years.

The Indiana example (survey of 1500 farmers) was provided as an example of possible survey questions.

Xan Augerot indicated that there was no question related to post-harvest nitrate soil sampling.

Renee Brooks speculated about how much nitrogen is lost after winter.

Jana mentioned that one of the questions was whether or not farmers had a nutrient management plan in place.

Gary Horning said he does not have a “plan” but he is continually doing testing and analysis and modifying his practices to manage nutrients.

Paul Measeles thought the survey questions should focus on what is important. There are specific Nutrient Management Plans associated with CAFOs. He is aware through word of mouth that there are some farmers who abuse the fertilizer variable rate technologies.

Dave Downing inquired what was the definition of a “plan”? He saw nutrient management as a piece of clay that is continually molded and shaped throughout the growing season. It is not a “plan” in the traditional sense.

Mike Kessling thought that we cannot use Indiana as an example. They only have a two crop rotation (corn and soybeans). Oregon has a complex soil system and biology, and there has not been enough research from an agronomic standpoint.

Alan Henning wanted to know if the results generated from this study would be helpful to farmers. Would it help them to become better at what they are doing? Could it help them to adjust their plan of operation and make it more dynamic?

Gary Horning thinks that more information is good, but cautions that practices don’t change overnight (except maybe hazelnuts). Farmers do not tend to jump in overnight to a change in practices. It usually takes much longer to change things. When he switched to variable rate fertilizer he saved upwards of \$30,000.

Jerry Marguth recounted that when he made the switch to a variable rate fertilizer, he cut his fertilizer consumption by 17%. That savings combined with the yield more than paid for the equipment that was needed to apply the fertilizer. Farmers tend to look at the yield curve. They focus on the 95th%. Anything after that is just throwing money away.

Gary Horning asked if the over application of fertilizer may have been pot ash.

Mike Kessling could see this with potassium. You have to balance the soil since it produces to the most limiting factor.

Paul asked if OSU Extension had good information on hazelnuts.

Gary Horning indicated that the hazelnuts that are being planted now are all new varieties. They do not have a good track record of yield potential. This is a crop that is in its infancy. There is a need for money to do agronomic research to keep up.

Xan Augerot mentioned that almond growers from California were being brought in to advise on hazelnuts.

Gary Horning said they are actually pushing for research on hazelnuts.

Update on Legislative Session:

There were two bills directly or indirectly addressing groundwater issues in this legislative session.

- The first one addressed groundwater quantity. Since groundwater is the fall back for new water rights applications, the Oregon Environmental Council was asking the legislature to appropriate some money to perform groundwater studies for the 14 (out of 18) groundwater basins throughout the state for which there have not been studies completed . There was great support for the bill, but there was no money to appropriate.
- The second bill, HB 2404 was directed at improving education around contaminated drinking water. Testing is required for sale of a home, but OHA does not have the resources to look at the data that is generated. It had three goals:
 - Direction and funding to OHA to do more education and outreach around well water safety
 - Create a new requirement for landlords that they must test their drinking water for arsenic, bacteria and nitrate. Arsenic tests required once for life of the well; for bacteria and nitrate, if after 3 years of zero detection, then they can test every 5 years.
 - Establish new revolving loan fund for low-income land owners and landlords of any income to address drinking water issues
- The bill was amended several times but did not pass due to the appropriation of funds (most bills that had a fiscal impact did not pass)
- Since the 2018 legislative session is an abbreviated version and only one bill can be brought forward from each legislator, it will not be put forward.
- It will likely be brought forward in the 2019 legislative session.

It was mentioned that Denise Kalakay from Lane Council of Governments used 319 money to look at the OHA real estate transaction data and generate maps; maps are available on SWV GWMA [website](#).

Bill Emminger from Benton County Health said that if they extrapolated their data, up to 400-500 homeowners exceed MCLs for arsenic, nitrate and/or bacteria; this was not a randomized study, so there are limitations to its applicability.

Update on Oregon Capstone Project study:

Primary research question: Are time and convenience barriers to people testing their well water? Based on this study (77 participants, randomized study), the answer is yes, i.e. participants that could have OSU student come to their home and test their water were more likely to have their water tested than participants who were asked to take their well water sample to a local testing facility.

Recommendations from Capstone Project study in regards to focus areas moving forward:

- Accessibility of treatment systems
 - Provide testing at community events
 - Renter assistance grants, subsidies, outreach
- Testing services in key areas
 - Water treatment vendors at community events
 - Outreach to local businesses
 - At home testing for vulnerable populations, e.g. elderly
- Targeted outreach
 - Demographic specific outreach

- Students are assets! People willing to talk to/ work with students more than they may be willing to work with agency reps
- Performance evaluation
 - Compare GWMA population to larger population by re-administering survey
 - Determine progress over deadline every 1-3 years.

GW Flow Path Outreach to Landowners:

- Paul has provided technical assistance to 3 landowners around GW-20. Two have been fairly receptive, one is more resistant to changing current practices.
- Paul asked for review of monitoring data to select another well.
- Indicated that to move on to the next well, we would have to determine whether or not there is any human influence through stable isotopes before ODA can participate with technical assistance.

Discussion on the decommissioning of old wells. OWRD would like to know where they are as they are discovered, so they can provide information to property owner about how to properly decommission an old well. Improperly decommissioned wells provide a direct, preferential flowpath from the surface to the aquifer, which can contaminate the aquifer.