Residential, Commercial, Industrial, Municipal (RCIM) Work Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

Dan DeGroot, Chair (Yakima Dairy Federation), Dave Cole (Yakima Health District), Elizabeth Sanchey (Yakama Nation), Jan Whitefoot (Concerned Citizens of Yakama Reservation), John Van Wingerden (Port of Sunnyside), Stuart Turner (Turner & Co.), Tom Ring (Yakama Nation), Kathleen Rogers (Citizen Rep), Sanjay Barik (Ecology)

Meetings/Calls Dates

Meeting: September 12, 2016, 2:00-4:00 PM
Sunnyside School District Administration Building, 1110 S. 6th Street, Conference Room 20, Sunnyside, WA 98944
Call in: 509-574-2353 (pin 2353#)

Participants

Present: Dan DeGroot (Chair), Steve George, Dave Cole, Ginny Stern (Department of Health), Leslie Turner (Department of Health) and Bobbie Brady (Yakima County Support Staff)

Key Discussion Points

The meeting was called to order by Chair Dan DeGroot at 2:01 PM. Everyone introduced themselves. Dan had invited Ginny Stern from the Department of Health to discuss the conference she attended in California on groundwater where she had made a presentation. Ginny had invited Leslie Turner who is a Wastewater Management Specialist with the Department of Health Office of Environmental Health and Safety.

Report on "Sustainable Groundwater in Agriculture" (an international conference held in late June in San Francisco): Ginny began by telling the group that nearly one-third of the attendees were from out of country and that participants included representatives of research, regulatory, industry boards and the growers' industry. Ginny noted that the topics were addressed equally and that the solution sets discussed prioritized water quality and protected agricultural interests. Ginny found the session reporting on work done in Denmark and the Netherlands to be the most interesting as the goals to achieve came from the State level, but groups were allowed to determine and fine-tune options that worked locally as long as they achieved the required goals. In addition, Ginny was interested in a promising project in the inland coastal area of southern California (the Salinas areas). They had developed a regulatory monitoring program of requirements which allowed them to gather a significant amount of data. Each business owner was required to monitor one irrigation well and one domestic well on their property. The regulatory program only had monitoring requirements and lawsuits were explicitly ruled out as the group operated under the premise that the state of the groundwater under the property was

not a direct result of what was happening on the property. Ginny added that the group has been gathering sampling data under this regulatory requirement for five years and there had been no lawsuits. Several members wondered how this could happen and asked whether this was a State funded program or not. Ginny responded and said that the data collected was not paid for by the State, however the samples were turned into the State. Ginny added that an important component to this working was that industry agreed that nitrates in the groundwater were a broad scale condition and there was a regulatory requirement that every owner must collect data (which included depth and a schedule of testing) and turn it in in order to receive a permit.

A member asked if the group did inspections to confirm the integrity of the wells. Ginny said no, but added that when there is a data set of 4,000 to 5,000 samples in play it makes it easier to see where there could be issues that could be examined in-depth down the road. A member asked what consideration was given to the depths of the wells. Ginny said that these had to be estimated and the information was attached to the water quality data as another regulatory condition of the permit. Ginny noted that she is in contact with the person running the program in Salinas Valley in order to acquire additional information and added that most of the industry in this area was irrigated agriculture but there are some livestock operations.

Ginny found the most valuable lesson to be remember the goal. She believed that the Lower Yakima Valley GWMA actually had two goals: 1) to reduce the nitrate concentrations in groundwater below State drinking water standards (which was stated); and, 2) Do it in a way that protects the integrity of the agricultural economy and community (unstated). Ginny noted that the greatest innovation occurred when groups separated what needed to be done immediately (public health needs) from those these that were long term projects (reducing nitrates in the groundwater) as they believed any solution to clean water had to embrace the agricultural community with both short-term and long-term solutions.

Ginny addressed the group at the symposium with a presentation on "A Tale of Two Communities – Whatcom and Yakima Counties." Ginny explained that the two counties are dissimilar because they draw their drinking water from different sources, because the drivers of their economies are different, and also because of their approach to working through to a solution. It was Ginny's observation that the reason the group in Yakima is seeing more progress in its six years is because they chose a mechanism that allowed the group to move ahead at the local level where everyone has "skin in the game" and are doing all they can to change.

A member asked whether the Department of Health tested dairy wells for nitrates. Ginny said yes certain systems were tested on an annual basis. She believed tests were done on Group A systems with more than 25 employees in a 90 day period of time with some exceptions for family farms. The requirement is that the annual nitrate test (done by certified labs) be five milligrams or repeat tests would be required every three months; however, most tests don't exceed this requirement because the wells are below groundwater level. The group also wondered if there were some dairy operations that weren't aware of this requirement as their ownership circumstances would have changed. Ginny believed Vern Redifer, Melanie Redding and PGG were all aware that this data is available and it would be a good independent data set to augment the ambient testing. Ginny said that with the help of Dave Cole they could put together the current data for the group and provide the following: 1) a list of operations that are actively

participating (Group A water Systems); 2) the data attributable to each of these operations; and, 3) a translation of the regulation so that the group would understand exactly who was required to be tested and why.

Ginny returned to the topic of the conference and indicated that there was a producer/grower association that took the lead on monitoring and assessment - she is working to get more information on this. A member was surprised that an industry group had been allowed to take on the role of data gatherer as industry in the GWMA had paid for studies and it had not been received well. Another member asked how the group finds solutions. Ginny said that the solutions have to be broad enough to bring about a consensus. Another member asked how the groups got there. Ginny said through redefining goals as noted above. A member responded that he thought this was what the Don Stuart presentation was about.

Ginny brought up a unique protection that had never been used – the Special Protection Area under Groundwater Quality Standards (which she had written) - WAC 173.200.090. It was designed for those areas in the State where groundwater is so pristine or so messed up, special rules are required. To determine if the designation is in the best interest of the public, a hearing will be held and a finding made. The Department of Ecology and Department of Health will then work together to determine the best tools to deal with nitrogen issues and to ensure that all of the players are contributing to a solution. This could be one path for regulatory enactment should the group choose. The group also discussed "sole source aquifer" which is a federal designation. Federal funding can be used as a "big stick" in this case. (Ginny noted two instances where that had happened). A member commented that the perception in the case of a sole source aquifer was that it takes local control away and therefore was not a preferred approach. Ginny also brought up designating the area as an aquifer protection area which allows a tax to be assessed which would raise funds to support aquifer protection. However, this process requires a vote. (RCW 36.36)

A member asked if Ginny heard any success stories of agriculture and industry working well with each other at the conference. Ginny said yes, she had spoken earlier about the work done in Denmark and the Netherlands. Once the state standard had been established there was a great deal of flexibility on the local level as to how to meet the standard because conditions are different from locale to locale. A member asked if the goals were performance based or if the group had determined specific practices that must be followed. Ginny said what wasn't negotiable was the standard performance number – specific practices could be chosen by each locale. Ginny reminded the group that she was compiling a list of contacts to share with Vern.

<u>On-Site Sewage Systems:</u> Ginny stated that not much had been presented about on-site sewage systems at the conference and that the contribution of this source is comparably low. Dan asked about the nitrate contribution from modern permitted, properly maintained systems. Ginny responded that waste nitrates are not dealt with effectively. Further, she believed that density is a huge issue as you lose the natural capacity of the aquifer to assimilate and disseminate. She suggested that local governments could determine that when density is at a certain number a community must shift over to a public system. Leslie said that when areas get larger they can require nitrogen abatement and that there is some current funding for septic improvements. Dan believed those with on-site sewage systems on the outskirts of cities could be required to be

added to the city system and that in the case of clusters outside of cities – where there are 10 to 40 houses together – a centralized drain system to manage the waste could be installed (similar to Buena which is pumped on a three year cycle). Ginny also mentioned Deer Park in Spokane which has a centralized sewer system with alternative treatment technology and that funding for this could come through a localized improvement district (LID).

When asked what other designs there might be Ginny mentioned infiltrating chambers (i.e., sawdust or peat moss) but noted these must be maintained and replaced periodically. In the Midwest and Canada there are some systems that built barriers the plumes must go through that have worked as well. In addition, recirculating filters, then the alder chips can be included but these are difficult to retrofit. Lastly, they mentioned that there are manmade devices that are registered for nitrogen abatement.

A member asked how we map out technology for these systems in this plan. Leslie responded that you need to monitor the area first to determine there is an issue. Or, a special protection area could be established where there is gathered data indicating the area is nitrogen sensitive. In that case it wouldn't matter what kind of entity you were; a target number would be established and everyone would be required to get their numbers down. All on-site sewage system owners would be told "here's what it takes to get your system to a health happy level." Another option would be to control the issue locally – "no more building or you have to do this to regulate nitrates." The cost would be approximately $15,000 per household or you could do a group system and it would be financed into the cost of the house. The Department of Health or a local ordinance could set these standards. Dan wanted to know how this could be done without an excess of rules. Another idea was that it could be the condition of the sale of property.

Dan addressed improperly built systems. Ginny indicated that monitoring at the distribution box for nitrates would be ideal and that operational constraints would need to be put on systems to determine if you had a problem or not. Ginny had not seen a County-wide effort like this done in the State. Dan next asked how the group could require people to test their on-site sewage systems for nitrogen. Leslie said that nitrogen testing can be required by the local health department if deemed necessary, however nitrogen testing is not required by the WAC. Operations and maintenance (O & M) is required by the WAC but isn't being done consistently. She said that a nitrate test actually costs about $32 for a lab to do. Any entity allowed to sample for nitrates must be approved by the local health authority. They have certified O & M providers. A member suggested that when a system is pumped the pumper could test for nitrates at the distribution box. However, another was concerned that a pumper might not have enough expertise to sample. A member wanted to know what could be done if the nitrate test results were high. Leslie said that high nitrates were not currently considered to be a system failure. Ginny suggested that this would need to be a local ordinance requiring the homeowner to treat the water or do a nitrogen abatement. Dan asked how long it takes before effluent reaches groundwater. Ginny said that in the mid-Columbia Basin's BMP's took a number of years for the ambient to change.

A member wondered how incentives might be funded to help people pump their systems more frequently. Another member suggested that the County could make arrangements with service providers in order to reduce costs. Another member suggested that the group ask Vern what they

did at Buena. Dan also mentioned overloading systems with too many people in a household, older homes with bad systems and rental systems with improper usage. Leslie said must first prove there is an issue with an existing system and that currently there is no way to approach this. Ginny said that an increased amount of water going through a system pushes the nitrogen through faster which overloads soils and causes a failure. In addition, perennially saturated areas don't allow for denitrification. Dan thought that the group could come up with rules for new construction which would make it easier to establish what old construction must do.

Dan asked Ginny and Leslie their top three septic improvement recommendations. Leslie directed the group to her handout: "Recommendations of the On-Site Wastewater Treatment Systems Nitrogen Reduction Technology Expert Review Panel Final Report" submitted to the Wastewater Treatment Workgroup – Chesapeake Bay Partnership (August, 2013) pages 10 and 11. She also noted that under Best Management Practices constructed wetlands or Anne Arundel County Integrated Fixed-Film Activated Sludge (IFAS) were are not allowed in Washington State.

In summary, the following ideas were discussed: 1) new construction requirements; 2) old construction pumping on a routine basis; 3) identify failing systems over time – the group liked combined systems, sewer districts expanding, retrofitting; and, 4) time of sale requirement. Ginny said that Island County created a coordinated sewer system – she will provide a contact name to Dan. Dan asked Dave to provide a costs for a range of options. Dave indicated that he would talk with his designers to see if they could provide costs.

The meeting was adjourned at 4:10 PM.

Resources Requested

Recommendations for GWAC

Deliverables/Products Status

Proposed Next Steps

- Ginny and Dave will compile a list of operations actively participating in dairy well nitrate testing; the data attributable to each of these operations; and, a translation of the regulation explaining who is required to test and why.
- Ginny is obtaining more information on the producer/grower association that took the lead on monitoring and assessment and will provide it to Dan
- Ginny will compile a list of conference project contacts and provide it to Vern
- Dan will check with Vern to find out what pumping format they used at Buena.
- Ginny will provide Island County contact information to Dan
- Dave will provide costs for a range of on-site septic system options