Irrigated Ag Working Group (IAWG)

Charge from Groundwater Management Area Advisory Committee

Working Group Members

Dr. Troy Peters (GWAC-WSU); Bob Stevens (interested party) Bud Rogers (GWAC-Citizen), Chelsea Durfey (GWAC), Dan McCarty (interested party), Dave Cowan (interested party), Dave Fraser (Interested Party - Simplot Agronomist), Donald Jameson (interested party), Doug Simpson (GWAC-Farmer), Frank Lyall (GWAC-Farm Bureau), Ginny Prest (GWAC-Dept. of Ag), Jean Mendoza (GWAC-Friends of Toppenish Creek), Jim Newhouse (GWAC), Kevin Lindsey (interested party), Kirk Cook (GWAC-WSDA), Laurie Crowe (GWAC-South Yakima Conservation District), Melanie Redding (Ecology), Mike Shuttleworth (interested party), Ralph Fisher (EPA), Ron Cowin (GWAC-SVID), Scott Stephen (interested party), Stuart Turner (GWAC-Turner & Co.), Tom Tebb (GWAC-Department of Ecology), Rosalio Brambila (interested party), Vern Redifer, Jim Davenport.

Meetings/Calls Dates

Meeting: Sunnyside Valley Irrigation District Office, 120 S. Eleventh Street, Sunnyside

When: May 17, 2016, from 1:30 pm to 3:30 pm.

Call: (509) 574-2353 – Pin # 2353

Participants

Troy Peters (Chair), Kathleen Rogers, Jean Mendoza, Scott Stephen*, Ron Cowin, Dan McCarty, Anthony Dorsett, Jim Davenport, Dave Cowan, Chelsea Durfey*, Bobbie Brady (Yakima County support staff)

*via telephone

Key Discussion Points

Chair Troy Peters opened the meeting at 1:30 PM. He asked everyone to introduce themselves including those on the phone. He also asked if anyone else had additional agenda items – there were none.

List Potential Solutions to High Nitrates in the Groundwater that are in the Purview of the Irrigated Ag Committee

Troy reminded everyone of the group's list of potential solutions formulated at last month's meeting:

1. Irrigation management education;

2. Giant database;
3. Subsidize soil sampling and analysis to ensure that the right amount of nutrients is being applied;
4. Subsidize irrigation management plans (similar to nutrient management plans);
5. Education and outreach;
6. Winter recharge/dilution is the solution.

The first agenda item was to brainstorm more practical solutions and then to narrow the list to the best. Solutions could be in the form of education which would change grower behavior as they become aware of the benefits they are not realizing. Solutions could also be incentives (where the action is not economical) that would cause different behaviors. Further, he explained that a solution might be regulatory which would require the change in behavior. The following solutions were suggested and discussed by the group:

1. Jim Davenport said that he had heard an idea recently that would have the Irrigation Districts ask the landowner to demonstrate that they do annual soil testing, i.e., answering a question yes, I have done it or no, I have not. This could be done simultaneously with the confirmation by the Irrigation District that the landowner's water bill had been paid. The goal would be to put the Irrigation Districts in the position of gatekeeper not enforcer. Troy commented that the Irrigation Districts had already demonstrated the proven ability to do this effectively when they required cleanup of the return flows to drains. A member pointed out that not everyone in the valley gets their water from Irrigation Districts but it was acknowledged that most do.

   The members discussed average costs of soil sampling, where the tests were presently performed and the number and depth of the samples. The group learned that the number of samples per field is dependent on topography; the depth was dependent on the crop as the goal of the sample is to be in the root zone of that specific crop; and, the tester may procure 10 to 15 core samples, mix them together and send in one sample giving them an effectively representative sample.

2. Jim Davenport thought that since there are studies of crops which include information on which "need/use" the most nitrogen it could be presumed that some crops are better than others and a "quota" system could be developed. Jim pointed out that there was a zoning device already in place that regulates land use and that would allow for those areas zoned agriculture to be divided into categories to provide a structure for this idea. He did realize however that this idea may not be good economically and might be extreme.

3. The group discussed the following points which they felt were important to address through education:

   - Which areas can tolerate more nitrogen and which are more vulnerable to its application.

   - A high priority to educate people so that they could determine the agronomic rate of application. The member felt that if more people were educated it would be better for the soil, cost less money and potentially create a return sufficient to

cover the investment of soil sampling or hiring an independent consultant. The member went on to point out that a soil sample allows you to know what you have first and allows for better data based decisions.

The group was unsure as to how to deliver this message. Jim explained it would be important to identify the subject audience and who would best serve as the educator. Other members pointed out 1) that classes are frequently offered with varying incentives and they fail to draw a good number of people; 2) efforts like the deep soil sampling provided a great opportunity for education as people saw their results and asked what to do about it; 3) incentives could be given to those who attended educational meetings; and, 4) it is important to show growers that they could profit from education.

Jim Davenport pointed out that other groups, i.e., lawyers and doctors, were required to earn a certain number of mandatory continuing education credits annually and that perhaps this requirement would be good for growers as well.

Jim Davenport explained that he had asked Lisa Freund, Chair of the Education Public Outreach, to be prepared to do a cost analysis of public education programs.

4. Jim Davenport posed the question – "where is a good place to interject new ways of doing things so growers can be helped in the future?" It was agreed that the Conservation District has a lot of programs that help growers. Perhaps if it were better funded and better staffed it could provide education, information, sampling in a more complete manner to better back up the farmer in these areas. The Conservation District is already set up to do this and are technical experts to other groups. Most of their funding comes from the writing of grants and most of these grants come from the Department of Ecology. It makes it very hard to take on long-term employees with this kind of soft funding.

5. Another member suggested moisture sensors might be subsidized for growers to help with monitoring and management. The group felt this was important as water moves nitrogen. Troy explained that in his experience it wasn't enough to just have data but growers would need help interpreting it too. Moisture monitoring costs were estimated to be between $1,200-$2,000/site for a season.

6. Jim Davenport suggested it would be important over the long term to collect data on how many acres in the GWMA were fertilized with manure and how many were fertilized with commercial fertilizer. An irrigated agriculture nutrient management plan could require everyone who farms over a half acre to provide the source and type of their fertilizer and how many acres it was applied to. He also desired to see representatives of the commercial fertilizer industry at the table to talk more about this issue.

7. It was suggested that a graph or chart be prepared and money procured for its distribution. The chart would list volumes of water, soil types, compaction rate, depth of water applied and preceding moisture levels. The group all agreed that this was be very helpful and an easy reference for farmers.

8. The group also discussed the issue of subsidizing some of these efforts. A member noted that this had been done in the Columbia GWMA and the consultants submitted the

paperwork for the grower. Jim Davenport pointed out that agency law prohibits the gift of public funds. One suggestion was to charge the grower less and get funding from another source. Another suggestion was to tax everyone and then pass a loophole. An assessment could provide hard-money funding for the Conservation Districts.

9. A member voiced a concern about offering another subsidy to one of the most heavily subsidized industries. The group discussed the flaws of the dairy nutrient management act, what that act is, the fact that it is not regulated and its impact on irrigated agriculture. It currently requires that the dairy provide the landowner with a copy of the manure analysis and how many acres applied to but currently no soil sampling is required from the third party. It was suggested that soil samples from the third party could be required before a dairy would be allowed to export the manure. Additionally no data is collected as to how many acres are impacted by manure exportation. It was suggested that this be addressed as well.

Discuss and Prioritize for Recommendation to the GWAC

The group contemplated what needed to be done with these ideas. Jim passed around a handout he had prepared entitled "Winnowing of Alternatives" and went through it with a group. It provided a methodology to winnow down potential solutions to high nitrates in the groundwater that are within work group purview.

The group agreed to follow this format and to get cost estimates of initiating each suggested solution. They would also need to determine if the solution would be eligible for a subsidy and how this would work.

Conclusions. Review of Action Items. Dismiss.

Troy added that WSU has funding that might be available for education.

It was agreed that the group would continue to consider and formulate more ideas in the interim time. Further suggestions can be emailed to Troy/Bobbie and compiled for the next meeting.

It was also agreed that the group would hold another brainstorming session next month that would hopefully include more of the members of the Irrigated Ag working group. Then the group would begin to winnow out as described in the handout so that they would have a list of solutions to submit to the GWAC.

Chair Troy Peters adjourned the meeting adjourned at 3:00 PM.

The following is a record of the white board lists prepared by Troy Peters during the meeting:

<u>List One</u>

1. Irrigation Management Education target . . . who, when and how (row crops, liquid applied).
2. Giant database.
3. Subsidize soil sampling and analysis.
4. Subsidize irrigation management plans.
5. Education and Outreach.

6. Winter recharge? Dilution is the solution?
7. Evidence of annual soil testing required for water deliver.
8. Crop mix – regulated crop acres for different crops.
9. USGS model to target hot spots with education.
10. Agronomic rates.
11. Better funding to Conservation Districts.
12. Soil moisture monitoring.
13. Mandatory continuing education? For growers?
14. Depth of water penetration.

List Two

1. Education and outreach
2. Encourage better irrigation management
3. Encourage better nutrient management

List Three

1. Better funding to Conservation Districts:
   - Hard-money funding
   - Increase property tax assessment
   - Create exceptions for behavioral change like testing and monitoring
2. Require evidence of these things
3. Require soil samples from those who apply dairy waste
4. WSU Extension help

Recommendations for GWAC

Resources Requested

Deliverables/Products Status

Proposed Next Steps

- Jean brought up manure application. Scott said that there are a lot of good models out there that will tell you what to expect – he will send information directly to Jean on this.
- Dan McCarty pointed out that NRCS has a specific pot of money for air quality improvements in certain counties and wondered if this was available to the GWMA. He was asked to write up his idea and send it via email to Troy.
- Jean spoke about a list of BMP's drafted by the Department of Ecology in 1996. Several members agreed that Irrigated Ag already have an analysis of BMP's that Jim Trull did at the first meeting – Troy will find this list for the group.