



*Groundwater Management Area (GWMA):  
The purpose of the GWMA is to reduce nitrate contamination concentrations in groundwater below state drinking water standards*

**LOWER YAKIMA VALLEY GROUNDWATER MANAGEMENT AREA ADVISORY COMMITTEE (GWAC)**

**MEETING SUMMARY**

**Thursday, January 16, 2014**

*Radio KDNA*

*121 Sunnyside Ave, Granger WA 98932*

**I. Call to Order:**

**Roll Call:** The meeting was called to order at 5:05 p.m. by Penny Mabie, Facilitator.

Member	Seat	Present	Absent
Stuart Turner	Agronomist, Turner and Co.	✓	
Chelsey Durfey	Agronomist, Turner and Co. (alternate)		✓
Helen Reddout	Community Association for Restoration of the Environment		✓
Wendell Hannigan	Community Association for Restoration of the Environment (alternate)		✓
Jan Whitefoot	Concerned Citizens of the Yakama Reservation		✓
Jim Dyjak	Concerned Citizens of the Yakama Reservation (alternate)	✓	
Jean Mendoza	Friends of Toppenish Creek	✓	
Eric Anderson	Friends of Toppenish Creek (alternate)		✓
Lino Guerra	Hispanic Community Representative	✓	
Rick Perez	Hispanic Community Representative (alternate)		✓
Robert Farrell	Port of Sunnyside		✓
John Van Wingerden	Port of Sunnyside (alternate)	✓	
Jim Trull	Roza-Sunnyside Joint Board of Control	✓	
Ron Cowin	Roza-Sunnyside Joint Board of Control (alternate)		✓
Laurie Crowe	South Yakima Conservation District	✓	
Jim Newhouse	South Yakima Conservation District (alternate)		✓
Tom Eaton	U.S. EPA	✓	
Marie Jennings	U.S. EPA (alternate)		✓
Lonna Frans	USGS Washington Water Science Center		✓

Matt Bachmann	USGS Washington Water Science Center (alternate)		✓
Kirk Cook	WA Department of Agriculture	✓	
Ginny Prest	WA Department of Agriculture (alternate)	✓	
Charlie McKinney	WA Department of Ecology	✓	
Tom Tebb	WA Department of Ecology (alternate)		✓
Andy Cervantes	WA Department of Health	✓	
Ginny Stern	WA Department of Health (alternate)	✓ *	
Dr. Kefy Desta	WSU Irrigated Agriculture Research and Extension Center		✓
Dr. Troy Peters	WSU Irrigated Agriculture Research and Extension Center (alternate)		✓
Elizabeth Sanchey	Yakama Nation		✓
Tom Ring	Yakama Nation (alternate)		✓
Rand Elliott	Yakima County Board of Commissioners		✓
Vern Redifer	Yakima County Board of Commissioners (alternate)	✓	
Steve George	Yakima County Farm Bureau		✓
Justin Waddington	Yakima County Farm Bureau (alternate)		✓
Gordon Kelly	Yakima County Health District	✓	
Jason Sheehan	Yakima Dairy Federation	✓	
Dan DeGroot	Yakima Dairy Federation (alternate)	✓	
Kathleen Rogers	Lower Valley Community Representative Position 1	✓	
Bud Rogers	Lower Valley Community Representative Position 1 (alternate)	✓	
Patricia Newhouse	Lower Valley Community Representative Position 2	✓	
Sue Wedam	Lower Valley Community Representative Position 2 (alternate)	✓	
Doug Simpson	Irrigated Crop Producer	✓	

\* Via Phone

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**II. Welcome and Meeting Overview**

Moment of Silence

**III. Committee Business:**

23 **Approve November 21 and December 19 Meeting Summaries**

24 The November Summary needs to include that Kathleen is a member of GWAC.  
25 A member suggested adding to the December Summary some key points  
26 including addressing the highest nitrate wells and to see what can be done to  
27 improve them.

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29 With the suggested changes, the committee approved both summaries. Penny  
30 will edit and finalize both November and December meeting summaries and  
31 have them posted to the website.

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33 Vern asked the group to let him know of any challenges or what is lacking when  
34 using the GWAC website. The website's purpose is to educate the public.

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36 **IV. Data Collection Planning – Kirk Cook**

37 **Non-Predictive Modeling Approach**

38 Kirk said he was focusing on some of the discussions at the end of the last  
39 meeting regarding whether or not to use a predictive model understand the  
40 Nitrate problem better. He noted that it was important to make the distinction  
41 that there is a non-predictive and a predictive model.

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43 Kirk suggested that the group could carry out a Mass Balance Equation which  
44 can be done without additional data being collected. Fertilizer application  
45 guides, crops and acreage of crops, and nitrogen intake assumptions as to how  
46 much water is being applied, etc. are available to use so a general number  
47 could be produced. This would give the committee a gross idea of the mass  
48 balance, but would not include any time reference or help the committee figure  
49 out what's happening from Point A to Point B. As the equation would not include  
50 actual loading data, Kirk noted he did not think it would really tell the committee  
51 a lot.

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53 Discussion followed as to whether this approach would provide the information  
54 needed to help the program satisfy GWMA's goals. It was pointed out that the  
55 US Natural Resources Conservation Service (NRCS) did some nitrogen studies  
56 around 2000; however, Kirk said that their studies didn't have the data resolution  
57 that is available now (field-by-field crop data). Kirk noted that if they could get  
58 field-by-field fertilizer application rates, the results would be much more accurate  
59 mass balance result than the NRCS study produced. A committee member  
60 asked if anything changed as a result of the NRCS study; no one had a specific  
61 response. He also noted there is the ability to go back and plug in all the  
62 numbers for the equation to get an improved estimation as more data becomes  
63 available.

64  
65 The WSU application rate recommendations were brought up as good and  
66 reliable for crops and it was suggested that the GWMA should use that.  
67 However, some doubts were raised as to the utility since WSU no longer updates  
68 their Washington-specific recommendations; instead they participate in a  
69 broader western states consortium to generate application recommendations.

70  
71 In the end, Kirk noted, both models require data collection to build a foundation.  
72 The pathway would be the same for all of the work groups for the next 6 months.  
73 This would be a sequential process, complementary to the survey. For the non-  
74 predictive model approach, sampling would have to be done about every 5  
75 years to capture changes to the groundwater. A committee expressed concern  
76 that the cost of the study plus the ongoing monitoring would equal the cost of  
77 the predictive model estimate from USGS. Kirk replied that, very roughly, he  
78 didn't anticipate the additional sampling would add more than about 5-10  
79 percent of the total cost. He said the cost of the modeling is already included in  
80 the funding for the GWMA program. There was a concern that funding for  
81 monitoring every five years would be challenging to sustain.

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83 The discussion continued as to how the data would be collected. Abandoned  
84 wells, aquifers, etc. need to be addressed. The equation must consider the  
85 amount of nitrogen applied, when it was applied, how much water is put on it to  
86 push it down. The group noted a need to know how to collect the data. Penny  
87 queried the committee about their desired path forward. Generally, the  
88 consensus was since the committee needs to do sampling in order to collect the  
89 needed data, why delay the sampling while they continue to discuss predictive  
90 modeling; get on with the sampling. It was noted that deferring a decision on  
91 whether to pursue predictive modeling was not a delay; in fact it would allow  
92 the committee to be more informed when the decision point for pursuing  
93 predictive modeling arrives. Kirk said the next step is to figure out how to collect  
94 the needed data. Jean stated she needs more information before she can  
95 support moving forward without having made the decision whether to do  
96 predictive modeling or not. Penny suggested she speak with Kirk offline to get  
97 her questions answered.

## 98 99 **V. Overview of the Dairy Nutrient Management Program**

### 100 101 **Dairy Nutrient Management Program 101– Ginny Prest**

102 Ginny explained that all dairies must have a Nutrient Management Plan (NMP)  
103 which includes collections, conveyance, discharge and storage of all wastes,  
104 land application, and record keeping. Dairies are to register with the program,  
105 operate in a way that there is no discharge to the waters of the state, and are  
106 tasked with maintaining records that show agronomic applications of all  
107 nutrients. They are routinely inspected by the Washington State Department of  
108 Agriculture to see how they divert manure, record keeping, land application  
109 areas, storage, collecting manure and to consider if any improvements are  
110 needed. 88% of dairies in the Yakima Valley are in compliance with a 38% ppm  
111 standard. A committee member asked what the acceptable compliance rate  
112 should be – should the committee be seeking perfection?

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114 A member questioned whether this was just a paperwork drill, since as long as  
115 dairies have a nutrient plan, they're complying with the law. Beyond the  
116 existence of a plan, the Department of Agriculture has no enforcement authority

117 with whether dairies are meeting the requirements in the nutrient plan. Ginny  
118 said the Department of Agriculture does have enforcement authority if dairies  
119 discharge to surface waters of the state or if they don't maintain records. It was  
120 mentioned that two newer, larger dairies also have Yakima County-issued  
121 Conditional Use Permits that require them to comply with the nutrient  
122 management plan and enforcement is done by the County.

123  
124 A statement was made by a group member that the agronomic rate information  
125 is old and not useful, so how would one write an adequate nutrient  
126 management plan with outdated data. Tom Eaton advised that NRCS has  
127 several websites with details on crops, stage, etc., and it has a list of all the  
128 nutrients. A question was raised as to why other agriculture industries don't have  
129 to complete nutrient management plans but the dairies do. A member noted  
130 that dairies are required to test their soil every year and are constantly  
131 comparing results to the previous year in an effort to stay way below acceptable  
132 nitrate rates. Once the dairymen were made aware of what was acceptable,  
133 they complied. Vern asked how the manure that is exported from the dairies is  
134 accounted for. It was noted that approximately 40% is going out of the county  
135 via third parties to soil amendment companies and the third party accepting the  
136 manure has to sign an agreement that requires them to follow the rules of  
137 nutrient management.

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139 **Concentrated Animal Feeding Operation (CAFO) Permit – Charlie McKinney**

140 Charlie explained that under federal law, dairies are considered point sources for  
141 pollution. Per the Clean Water Act of 1972, the CAFO Permit is really a National  
142 Pollutant Discharge Elimination System Permit (NPDES) type of permit and only  
143 differs in size and location. Criteria for a CAFO is that the facility must, for 45 days  
144 or more in a 12 month period, operate with confined animals and not crops.  
145 CAFOs are permitted by either voluntary application or are required if a CAFO  
146 proposes to or does discharge to waters of the state. Charlie explained the  
147 results of a litigation regarding who is required to have CAFO permits. The Court  
148 of Appeals said that only dairies that discharge into Washington waters had to  
149 have a CAFO permit. The permit works much the same as the Department of  
150 Agriculture's Nutrient Management Plan (NMP).

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152 **Clean Water Act and Safe Drinking Water Act – Tom Eaton**

153 The Safe Drinking Water Act does not have a special provision for dairies but it  
154 does permit the Environmental Protection Agency to take action if warranted.  
155 EPA did utilize this action against some dairies in the Valley. In December 2012, at  
156 the Departments of Ecology and Agriculture request, EPA provided their  
157 perspective on protection of groundwater as the agencies considered  
158 modifications to the requirements for livestock operations. EPA advised  
159 prohibiting construction of manure lagoons on sites that have a significant risk of  
160 nitrate transportation to the ground. Second, EPA's recommended requiring  
161 additional steps to ensure manure application fields are not a source of nitrate to  
162 the groundwater, especially third party appliers that are not currently regulated.  
163 He explained EPA thinks of manure as a waste, not a product, so extra care  
164 needs to be taken. Third, EPA recommended imposing groundwater monitoring

165 requirements on large livestock operations that are potential significant sources  
166 of nitrates to a drinking water aquifer. When asked about what parts per million  
167 (ppm) of nitrate in the soil should not be exceeded to assure protection of  
168 groundwater, Ginny noted she is not sure if 45 is the right number or not. A study  
169 on the west side of the state said the rate should be 15 and Idaho has a limit of  
170 10. Collecting groundwater data will help inform what the right level should be.  
171 Copies of the letter from EPA to Department of Ecology and Department of  
172 Agriculture regarding Groundwater are available to the GWAC.

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174 Penny suggested that the discussion be brought back at the next meeting. A last  
175 comment was that most of the current construction has the contractor following  
176 all sorts of requirements.

## 177 178 **VI. Working Group Report Outs**

### 179 180 **Irrigated Agriculture:**

181 The group met today and is making excellent progress on deep soil sampling.  
182 Confidentiality is still a big issue, but the discussion has moved away from  
183 client/attorney confidentiality. Instead, the group is exploring a way to use  
184 absentee-type ballots without disclosing the sampling address. South Yakima  
185 District's role will change in this. It is important to continue publicity and  
186 education outreach, and determine how to get grower participation. There are  
187 some concerns about what to do before we get to the deep soil sampling in the  
188 Fall; the 2014 task list is required by February and it members of the group are  
189 committed to meeting that deadline.

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191 A member expressed caution about if the bar code system is used, would the  
192 hard copy afterwards end up as a public record. It was suggested that the  
193 landowner would keep that part of the questionnaire so it would not be part of a  
194 public record.

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196 In addition, a Committee Chair's Conference call was held earlier in the week.  
197 One of the discussion items was how to formalize a process that would allow  
198 working group chairs to request additional tasks from the consultants. Requests  
199 would be made to Vern, who would review and determine if it was an  
200 appropriate task (within the scope and budget) for the consultants. Vern noted  
201 he was not making decisions on where the GWMA spends their money as he is  
202 only the auditor. Vern advised that through 2013, the GWAC has spent around  
203 \$320,000.

### 204 205 206 **Data Collection:**

207 The group did not meet. This group is working with Vern and Jim on the  
208 confidentiality issue. They have no plans yet for their February meeting.

### 209 210 **CAFO/Livestock:**

211 The group did not meet. They have a meeting scheduled for February 6<sup>th</sup>.



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**Residential, Commercial, Industrial and Municipal:**

They did not meet in December but will meet next Thursday. This working group would like more people to join them as they are a small group.

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**Education and Outreach:**

Lisa Freund noted that the GWAC had tasked the EPO with creating a 2013 year-end report and a news release from Rand Elliott identifying the GWAC's accomplishments. Those items are done and the latest quarterly report is on the GWMA website in addition to the five previous quarterly reports. The high risk well assessment survey continues to move forward. The group sent out 600 direct mailings and submitted news releases to the newspapers. Gordon Kelly, with the Yakima Health District, added that the first results came from the initial pilot testing in November and December. They are currently in the middle of the second phase with 57 contacts, 18 sample collections and 29 more surveys that are yet to be scheduled. The Health District is getting feedback from residents that are not in the GWMA area (The Nation, West Valley & Moxee). Gordon feels this second phase will have a higher success rate. The EPO will continue to work with Gordon to evaluate the results. Next week there will be paid radio spots on KIT and KDNA regarding well surveys and inviting participation. Gordon will also monitor how people are hearing about the GWAC and/or the survey so that EPO will be able to evaluate outreach efforts.

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**Funding Group:**

Vern stated that this group has not met.

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**Regulatory:**

The group had a conference call with the intent to go over their purpose. They did not reach consensus. The group is currently discussing if they should limit their work to get knowledge and educate the GWMA or brainstorming. They will need another meeting to clarify what their intention is. Penny suggested that the group refer to the adopted GWAC work plan for guidance.

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**2014 Task Lists and Scheduling:**

Penny went back to the work plan and asked that all working groups finish their 2014 work items. She reviewed a task list work sheet that she emailed to each of the group chairs. She showed an example of what she's looking for from each of the working groups. Penny would like this work sheet completed and returned to her before February's GWAC meeting. That way, the committee can answer

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260 "What is the GWAC Doing?" She will combine all the task lists into an overarching  
261 GWAC task list. The worksheet will note any task that requires the committee's  
262 approval will be brought back to the group. Penny is on a mission to keep all the  
263 groups thinking of what needs to be done to develop the GWMA program.  
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265 **VII. Public Comment:**

266 If the GWMA is going to have some sort of data gathering, what is the point of a  
267 model?  
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270 **VIII. Next Steps:**

- 271 • Each working group will complete their 2014 task list

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273 **IX. Next Meeting:**

274 Topics for next meeting

- 275 • Discuss / Review 2014 Task List for each Working Group.
- 276 • Continue soil monitoring discussion from January Meeting.
- 277 • Jean made a recommendation for a presentation for the GWAC. An  
278 attorney at the University of Washington who specializes in Environmental  
279 Law would like to talk to the group about environmental issues. Jean  
280 believes it would be a great opportunity for the group to hear from  
281 experts on this subject. A discussion about when the presentation would  
282 take place, what it would cover and how/if it applies to the group's  
283 mission took place. The group also expressed concern about using regular  
284 GWAC meeting time for this type of presentation, and whether it would  
285 be setting a precedent. Vern suggested getting a synopsis or abstract of  
286 the presentation and bringing it back for the committee to review.  
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288 **X. 2014 Meeting Calendar**

289	February 20	June 19	October 16
290	March 20	July 17	November 20
291	April 17	August 21	December 18 (TBD
292	May 15	September 18	based on need)

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294 The meeting was adjourned at 7:18 pm.

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296 Meeting summary approved by the Lower Yakima Valley Groundwater Advisory  
297 Committee on February 20, 2014.