



Public Services

128 North Second Street · Fourth Floor Courthouse · Yakima, Washington 98901
(509) 574-2300 · 1-800-572-7354 · FAX (509) 574-2301 · www.co.yakima.wa.us
VERN M. REDIFER, P.E., Director

May 29, 2013

Charles McKinney
Department of Ecology, Central Region Office
15 W. Yakima Ave. Suite 200
Yakima, WA 98902-3452

Re: **Lower Yakima Valley GWMA - 2013 First-Quarter Report (IAA No. C1200235)**

Dear Charlie:

Enclosed please find one (1) copy of Yakima County's first-quarter report as required under Attachment A, Statement of Work, Agreement No. C 1200235 between the State of Washington Department of Ecology and Yakima County.

This report addresses deliverables 1.1, 1.4 and 2.2 as required under the agreement.

Deliverable 2.1, invoices, to be sent under separate cover.

If you have any questions, please let me know.

Thank you.

Lisa H. Freund, Administrative Manager
Yakima County Public Services

enclosure

Yakima County ensures full compliance with Title VI of the Civil Rights Act of 1964 by prohibiting discrimination against any person on the basis of race, color, national origin, or sex in the provision of benefits and services resulting from its federally assisted programs and activities. For questions regarding Yakima County's Title VI Program, you may contact the Title VI Coordinator at 509-574-2300.

If this letter pertains to a meeting and you need special accommodations, please call us at 509-574-2300 by 10:00 a.m. three days prior to the meeting. For TDD users, please use the State's toll free relay service 1-800-833-6388 and ask the operator to dial 509-574-2300.

IAA No. C 1200235 – 1st Quarter 2013 Report
Lower Yakima Valley GWMA
May 29, 2013

TASK 1 - ADMINISTRATIVE FUNCTIONS
DELIVERABLES

1.1 Meeting Records

For each meeting of the GWAC, submit a copy of the agenda, minutes, attendance and public meeting notice at the end of each quarter.

Attachment (A) includes the GWAC meeting records of January 17, February 6, February 21, and March 21, 2013; the Data Collection, Characterization, and Monitoring Working Group meeting record of March 13, 2013; the joint Livestock/CAFO and Irrigated Ag Working Group meeting record of January 9, 2013, and the Livestock/CAFO meeting of March 13, 2013; and the Education and Public Outreach (EPO) Working Group meeting records of February 21, 2013 and March 13, 2013. *Note: the Data Collection meeting record of February 11, 2013 was not available at the time of this writing and will be submitted with the next quarterly report.*

1.4 Meeting Schedule

The GWAC agreed to continue to hold its regularly scheduled meetings on the third Thursday of each month from 5:00 p.m. - 7:00 p.m. Effective in February, the committee changed the meeting location to Radio KDNA, 121 Sunnyside Avenue in Granger. Meeting dates for 2013 are January 17, February 21, March 21, April 18, May 16, June 20, July 18, August 15, September 19, October 17, November 21 and December 19.

TASK 2 - PROGRAM FUNCTIONS
DELIVERABLES

2.2 Status Report

Submit written quarterly status reports summarizing GWAC plans, activities and work products, and describing any interlocal agreements or other contracts by the end of each quarter.

The GWAC's focus during the first quarter was to finalize and submit the approved Work Plan to the Department of Ecology; develop a preliminary budget; and to develop working group operating guidelines and formalize regular, reoccurring working group meetings.



Two-Year Work Plan

At its September 2012 meeting, the GWAC had agreed to follow the groundwater management program content, as outlined in WAC 173-100-100, to define its work plan content. It had also agreed to a draft GWMA GWAC Work Planning Framework, which became the foundation for its two-year plan.

The GWAC approved the work plan at a special budget meeting on February 6, 2013 and submitted it to the Department of Ecology on February 13. To provide a full report of the GWAC's discussions and decisions, this report includes the meeting agendas and summaries of January 17 and February 6, 2013. *Note: the approved Work Plan was submitted in the 2012 Fourth Quarter report to Ecology on February 13, 2013.*

GWAC Presentation

At the February 21, 2013 meeting, Mr. Phil Richerson with the State of Oregon's Department of Environmental Quality presented his experience with Oregon GWMA's (this presentation is available on the GWMA website http://www.yakimacounty.us/gwma/meeting_presentations.php) Mr. Richerson worked on two primary GWMA's, the Northern Mahler County GWMA (NMC) which started in 1989 and the Lower Umatilla Basin GWMA (LUB) which started in 1990. This presentation was very successful and it was suggested that the group should invite more experts for both GWAC and Work Group meetings.

Working Group Operating Guidelines

At the October 2012 meeting the GWAC agreed to organize itself into seven working groups to correspond with the seven sections of the proposed work plan framework: (a) Data Collection, Characterization and Monitoring; (b) Livestock/CAFO; (c) Irrigated Agriculture; (d) Residential, Commercial and Industrial (RCI); (e) Regulatory Framework; (f) Education & Public Outreach; and (g) Funding. In the first quarter of 2013, the GWAC began to formalize the working group operating guidelines. Meanwhile, several working groups began meeting regularly and reporting back to the GWAC.

At its March 21, 2013 meeting, the GWAC discussed how the working groups should operate and how membership will be determined. The GWAC agreed that the working groups should have a standing membership and operate in the same manner as the GWAC meetings. Meetings will be announced on the GWMA website, occur at least monthly at a regularly scheduled time and place, be open and accessible to the public, and include a set time during the meetings to take public comments. Further, a list of working groups and their purpose should be posted on the GWMA website.

The GWAC also will reaffirm its previous decisions regarding the working groups: each working group will select its chair; groups are responsible for reporting back to the GWAC with a summary of their meetings, work products and recommendations. Working groups must have proposals for any budget and explain how they will spend this budget. Other details about the working groups are reported in the GWAC meeting records of February 21 and March 21, 2013. A list of the working groups, chairs and membership is included as Attachment (B)



Working Group Activities:

Data Collection, Characterization and Monitoring (Kirk Cook, Chair)

The Data Collection, Characterization, and Monitoring Working Group met on February 11, 2013 and March 13, 2013. The group created an initial County data base. Database collection will come from several sources including: VIRE, USEPA, USGS, WDOH, and WSDA.

The Data group will interface with other working groups on several fronts including:

- Groundwater/ soil profile testing
- Best Management Practices (BMP) assessments
- Health surveys (e.g., the High-Risk Well Assessment Survey)

The Data group would like to perform a Gap analysis as this will show where the wells are located. Preparing a characterization report will be the starting point. The working group has decided that outside help will be needed and has developed a Table of Content for the Initial Characterization report that can be used as a starting point for the potential consultant. The working group thinks that they will need about \$60,000 for the short-term (six to nine months) to perform this work. The Table of Content for the Initial Characterization report is included as Attachment (C).

Livestock/CAFO (Charlie McKinney, Chair) and Irrigated Ag (Mark Nielson, Interim Chair)

The Livestock/CAFO and Irrigated Ag working groups met jointly on January 9, 2013 to discuss data needs. The Livestock/CAFO Working Group met again on March 13, 2013. The working group has scheduled a standing meeting the first Thursday of every month from 5:00 p.m. to 7:00 p.m. at Radio KDNA in Granger. They discussed the need to work with the other working groups and possibly holding another joint meeting with Irrigated Ag. They further discussed the need for technical resources and how to obtain Request for Proposals (RFPs).

Education and Public Outreach (Lisa Freund, Chair)

The Education and Public Outreach (EPO) working group met on February 21 and March 13, 2013 to begin implementing the GWAC-approved outreach program. To that end, the EPO created three surveys for the GWAC's consideration: 1) a High Risk Well Assessment survey, 2) Informational Public Questionnaire and 3) Healthcare Provider Questionnaire. The GWAC reviewed the surveys and related support materials at its March 21, 2013 meeting and, subject to suggested edits, approved the materials.

The GWAC was also presented with five logo choices with a request to choose one to represent the GWAC and the GWMA. The purpose of the logo is to create a consistent, easily identifiable "look" (brand) for the committee and its work. At the March 13 meeting the committee chose, by vote, the GWMA logo, which will be incorporated into the GWAC letterhead and in outreach materials. The surveys and supporting documents with the logo are included as Attachment (D)

Web-Based Information Application

The GWMA website continued to be refined during the first quarter of 2013. The EPO worked with the GWAC membership to provide links to existing nitrate-related agency materials; in addition, the GWAC agreed that the website should be a means to publicize both GWAC and



working group meetings, and a monthly calendar should be posted for this purpose. The website can be viewed at: <http://www.yakimacounty.us/gwma/>

Funding

The Funding Working Group, represented by Commissioner Rand Elliott and Vern Redifer, forwarded a request to Senator Jim Honeyford for an additional \$1.6 million for early program implementation and to provide potable drinking water to high risk households in the Lower Yakima Valley. Department of Ecology supported the request.

Note: while State funding was requested in this quarter, the Funding working group—as well as the Residential, Commercial and Municipal, and Regulatory Reform working groups—had not met by the end of the first quarter.

Contracts and Interlocal Agreements

No contracts or Interlocal agreements were executed during the first quarter of 2013.

Attachment A

**GWAC Meeting Records of January 17, February 6, February 21
and March 21, 2013**

Data Collection Meeting Summary of March 13, 2013

Livestock/CAFO Meeting Summary of March 13, 2013

Livestock/CAFO/Ir AG Joint Meeting Summary of January 9, 2013

EPO Meeting Summaries of February 21 and March 13, 2013

A

Attendance

GWAC Meetings

Attendance

GWAC Meetings

Yakima County

**Notice of Public Meeting
Lower Yakima Valley Groundwater Advisory Committee**

NOTICE IS HEREBY GIVEN that Yakima County is holding a public meeting of the Lower Yakima Valley Groundwater Advisory Committee on **Thursday, January 17, 2013 at 5:00 PM at the Denny Blaine Board Room, 810 E. Custer Ave. in Sunnyside WA** pursuant to Chapter 173-100-080 WAC Ground Water Management Areas and Programs.

For Additional Information

To learn more about the Lower Yakima Valley Groundwater Management Area, the Groundwater Advisory Committee, and its goals and objectives, please see the Lower Yakima Valley Groundwater Management Area on the County webpage at: <http://www.yakimacounty.us/gwma/>

For more information about the meeting, please contact Lisa Freund, Yakima County Public Services Administrative Manager at 574-2300.

Dated this 9th day of January 2013.

Publish: January 10, 2013

Bill: FC3463-100-1

YAKIMA HERALD REPUBLIC

INVOICE

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Yakima, WA 98909

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YAKIMA, WA 98901

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Yakima County

Notice of Public Meeting

Lower Yakima Valley Groundwater Advisory Committee

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For more information about the meeting, please contact Lisa Freund, Yakima County Public Services Administrative Manager at 574-2300. Dated this 9th day of January 2013.

(277415) January 10, 2013

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YAKIMA HERALD-REPUBLIC

Affidavit of Publication

STATE OF WASHINGTON,)
COUNTY OF YAKIMA)

Debbie Martin, being first duly sworn on oath deposes and says that she/he is the Accounting clerk of Yakima Herald-Republic, Inc., a daily newspaper. Said newspaper is a legal newspaper approved by the Superior Court of the State of Washington for Yakima County under an order made and entered on the 13th day of February, 1968, and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continually as a daily newspaper in Yakima, Yakima County, Washington. Said newspaper is now and has been during all of said time printed in an office maintained at the aforesaid place of publication of said newspaper.

That the annexed is a true copy of a:
Yakima County Notice of Public Meeti

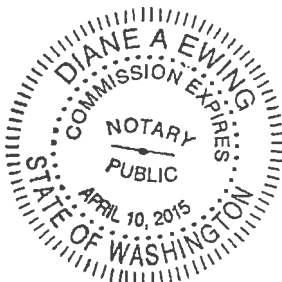
it was published in regular issues (and not in supplement form) of said newspaper once each day and for a period of 1 times, the first insertion being on 01/10/2013 and the last insertion being on 01/10/2013

Yakima Herald-Republic 01/10/13
YakimaHerald.com 01/10/13

and the such newspaper was regularly distributed to its subscribers during all of the said period. That the full amount of the fee charged for the foregoing publication is the sum of \$67.70

Debbie Martin

Accounting Clerk



Sworn to before me this 11 day of January 2013

Diane Ewing
Notary Public in and for the
State of Washington,
residing at Yakima

p-c 73

Daily Sun News

"Today's Local News Today"

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January 11, 2013

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Attn: Kelly Rae
128 N. 2nd Street 4th Floor
Yakima, WA 98901

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THANK YOU FOR YOUR BUSINESS!

Affidavit of Publication

STATE OF WASHINGTON
COUNTY OF YAKIMA SS

Timothy J. Graff, being first duly sworn on oath deposes and says that he is the Publisher of the DAILY SUN NEWS, a daily newspaper.

That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publications hereinafter referred to, published in the English language continually as a daily newspaper in the city of Sunnyside, YAKIMA County, Washington, and it is now and during all of said time printed in an office maintained at the afforesaid place of publication of said newspaper, and that the said Daily Sun News was on the 4th Day of April, 1969 approved as a legal newspaper by the Superior Court of said Yakima County.

That the annexed is a true copy of a LEGAL PUBLICATION -

Yakima County Public Services

Mtg. 1/17 FC3463-100-1

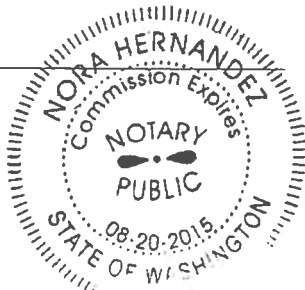
published in regular issues (and not in supplemental forms) of said newspaper once each week for a period of 1 consecutive issue(s) commencing 01/10/13 and ending on 01/10/13, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of \$ 31.50, amount has been paid in full, at the rate of \$7.00 per column inch per insertion.

Timothy J. Graff

Subscribed and sworn to before me 01/11/13

Nora Hernandez

Notary Public in and for
the State of Washington
030210-00000



Yakima County
Notice of Public Meeting
Lower Yakima Valley Groundwater
Advisory Committee
NOTICE IS HEREBY GIVEN that
Yakima County is holding a public
meeting of the Lower Yakima Val-
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Management Areas and Programs.
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and objectives, please see the Low-
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Management Area on the County
webpage at: <http://www.yakimacounty.us/gwma/>
For more information about the
meeting, please contact Lisa
Freund, Yakima County Public Ser-
vices Administrative Manager at
574-2300.
Dated this 9th day of January 2013.
PUBLISH: DAILY SUN NEWS
January 10, 2013

Meeting Time and Location

Thursday, January 17, 2013, 5:00 – 7:00 p.m.

Denny Blaine Board Room
810 E. Custer
Sunnyside, Washington

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

Purpose of the Meeting:

- Learn about Yakima County Nitrate Treatment Pilot Program
- Review and approve GWMA Work Plan
- Discuss GWMA budget priorities for biennium ending June 30, 2013

Agenda

Time	Topic	Purpose	Lead
5:00 – 5:10 p.m.	Welcome & Meeting Overview	Introduction, meeting overview, confirm agenda	Penny Mabie, facilitator
5:10 – 5:15 p.m.	Committee Business	<ul style="list-style-type: none">• Approve Dec. 12 meeting summary	Penny Mabie
5:15 – 5:30 p.m.	Yakima County Nitrate Treatment Pilot Program	<ul style="list-style-type: none">• Learn about County's efforts to date and lessons learned that may apply to the GWMA program	Vern Redifer, Yakima County
5:30 – 6:30 p.m.	Committee Work Plan	<ul style="list-style-type: none">• Committee discussion• Committee approval for submittal to Ecology	Penny Mabie, facilitator Vern Redifer, Yakima County
6:30 – 6:45 p.m.	Budget Priorities	<ul style="list-style-type: none">• Discuss short term spending priorities for existing program budget	
6:45 – 6:55 p.m.	Public Comment	Opportunity for members of the public to make comments to the committee.	
6:55 – 7:00 p.m.	Next Steps	<ul style="list-style-type: none">• Review action items• Review next steps and topics for next meeting	Penny Mabie, facilitator
7:00 p.m.	Adjourn		

Next Meeting: February 21, 2013

Committee Members

Stuart Turner, agronomist	Turner and Co.
Helen Reddout, Wendell Hannigan (alternate)	Community Association for Restoration of the Environment
	Lower Valley Community Representative
Jean Mendoza, Eric Anderson (alternate)	Friends of Toppenish Creek
Jan Whitefoot, Jim Dyjak (alternate)	Concerned Citizens of the Yakama Reservation
Steve George, Justin Waddington (alternate)	Yakima County Farm Bureau
Jason Sheehan, Dan DeGroot (alternate)	Yakima Dairy Federation
Jim Trull, Ron Cowin (alternate)	Sunnyside-Roza Joint Board of Control
Laurie Crowe, Jim Newhouse (alternate)	South Yakima Conservation District
Mark Nielson, Heather Wendt (alternate)	Benton Conservation District
James Beaver	Benton County Commission
Robert Farrell, John Van Wingerden (alternate)	Port of Sunnyside
Rand Elliott, Vern Redifer (alternate)	Yakima County Commission
Gordon Kelly	Yakima County Health District
Bruce Perkins	Benton-Franklin Health District
Kefyalew Desta, Dr. Troy Peters (alternate)	WSU Irrigated Agriculture Research and Extension Center
Tom Eaton	U.S. Environmental Protection Agency
Elizabeth Sanchey, Tom Ring (alternate)	Yakama Nation
Lonna Frans, Matt Bachmann (alternate)	U.S. Geological Survey
Kirk Cook, Jaclyn Ford (alternate)	Washington Department of Agriculture
Andy Cervantes, Ginny Stern (alternate)	Washington Department of Health
Charlie McKinney, Tom Tebb (alternate)	Washington Department of Ecology
	Hispanic Community Representative

Committee Ground Rules:

- Come to committee meetings prepared
- Treat one another with civility
- Respect each other's perspectives
- Listen actively
- Participate actively
- Honor time frames
- Silence electronic devices during meetings
- Speak from interests, not positions.



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

3
4 **MEETING SUMMARY**

5
6 **Thursday, January 17, 2013**

7 *Denny Blaine Board Room*
8 *810 E. Custer, Sunnyside, WA 98944*

9
10
11 **I. Call to Order**

12
13 **A. Roll Call:** The meeting was called to order at 5:08 pm by Penny Mabie,
14 Facilitator.

15
16 **Members present:** Rand Elliott, Yakima County Commissioner, Vern
17 Redifer (alternate); Tom Tebb (alternate for Dept. of Ecology); Andy
18 Cervantes, Department of Health; Tom Eaton, EPA; Jim Dyjak (alternate
19 for Concerned Citizens for Yakima Reservation); Robert Farrell, Port of
20 Sunnyside, John Van Wingerden (alternate); Ron Cowin (alternate for
21 SVID); Jean Mendoza, Friends of Toppenish Creek; Mark Nielson, Benton
22 Conservation District; Stuart Turner, Turner & Co.; Steve George, Yakima
23 Farm Bureau; Jason Sheehan, Yakima Dairy Federation, Dan DeGroot,
24 (alternate); Laurie Crowe, South Yakima Conservation District; Gordon
25 Kelly, Yakima County Health District; Elizabeth Sanchey, Yakama Nation,
26 Tom Ring (alternate); Dr. Kefyalew Desta, WSU Irrigated Agriculture
27 Research and Extension Center.

28
29 Larry Fendell sat in as an alternate for Community Association for
30 Restoration of the Environment.

31
32 **Member seats not represented:** Benton County Commission; Lower Valley
33 Community Representative; U.S. Geological Survey; Washington
34 Department of Agriculture; Hispanic Community Representative and
35 Benton-Franklin Health District.

36
37 **Members absent:** Charlie McKinney, Dept. of Ecology, James Beaver,
38 Benton County Commissioner; Jan Whitefoot, Concerned Citizens for
39 Yakima Reservation, Helen Reddout, Community Association for
40 Restoration of the Environment; Jim Trull, SVID; Lonna Frans, U.S.
41 Geological Survey; Bruce Perkins, Benton-Franklin Health District; Kirk Cook,
42 Washington Department of Agriculture; and alternates: Wendell
43 Hannigan; Eric Anderson; Justin Waddington; Jim Newhouse; Heather
44 Wendt; Dr. Troy Peters, Matt Bachmann; Jacklyn Ford; and Ginny Stern
45

46 **II. Committee Business:**

47 December 12, 2012 meeting summary approved with no changes.

48
49 Refresher discussion on ground rules for committee.

50
51 Introductions: Rick Perez, possible Hispanic Community Representative, observed
52 meeting to see if he wants to become a member of the committee.

53
54 Moment of silence.

55
56 **III. Presentation on Yakima County's Nitrate Treatment Pilot Program**

57 (Vern Redifer, Yakima County)

58
59 Yakima County began the Nitrate Treatment Pilot Program based on the results
60 of the 2010 Lower Yakima Valley Groundwater Report. The County's focus was
61 on public health. It was determined that the immediate needs were to educate
62 people on the health effects of nitrate and to offer water treatment options and
63 assistance. The long term priority was to establish groundwater management
64 through a GWMA.

65
66 The grant, administered through the Department of Health, provided the County
67 a short-term opportunity to implement a nitrate pilot program. With a six-month
68 timeframe, the County understood there would not be enough money to meet
69 all needs. As such, the main goal was to treat the symptoms first by getting
70 clean water to the people affected by nitrates.

71
72 The County provided education, technical assistance and free- or low-cost
73 treatment systems (reverse osmosis filters) to those households with individuals at
74 high public health risk from nitrates. Free systems were initially offered to those
75 households whose nitrate levels tested higher than 10mg/l, had an individual(s)
76 at high public health risk from nitrates, and were low income. Later in the
77 program, when the demand for systems did not meet expected levels, the free
78 systems were offered to all households that tested at or above 10mg/l.

79
80 The County, with the help of the Yakima Health District and other partner
81 agencies, designed and implemented an outreach and education program to
82 reach the public in the program area. The Yakima Health District sent a targeted
83 message out to 350 health care providers; Radio stations (KDNA and KIT) were
84 contacted and hosted talk shows regarding the program. A kickoff news
85 conference was held and was covered by ABC and NBC affiliates, NPR and
86 local newspapers.

87
88 The County mailed or hand delivered 8,141 educational packets; flyers and
89 posters were distributed door-to-door and also to businesses and churches in the
90 program area. Yakima County created a nitrate hot-line and website. EPA
91 personally contacted households it had tested in 2010 which had high nitrate

92 levels, and also helped answer questions and offered application assistance for
93 Spanish speaking residents. A "last chance" mailing to approximately 5,500
94 households went out to those who had not responded to the first mailing. All
95 communications were bi-lingual. The County made a large effort to make
96 contact with all effected in the program area. Interpreters were provided at all
97 public meetings.

98
99 The County received 1,870 test strips back from its mailing. In addition, 271
100 households sent their water to be tested at a certified lab. Of those 271, 180 were
101 found to be above 10mg/l. All 180 households were offered free treatment
102 systems. 161 households agreed to have the treatment systems installed at no
103 cost.

104
105 During the nitrate pilot program the County was met with many challenges and
106 made some observations:

- 107 • It was difficult to convey the dangers of nitrates when there were not any
108 visible effects.
- 109 • There was a lack of interest by the public as there were no reports of
110 nitrate-related illnesses.
- 111 • Many people simply said they had been drinking the water for 60 years
112 and hadn't had any problems.
- 113 • Economics were a challenge as some households, even though they
114 were offered a free treatment system, couldn't afford the ongoing
115 maintenance.
- 116 • Many households were renters of property, as such the County needed to
117 get permission from the owners of the property.
- 118 • Others had low English literacy and didn't understand the materials they
119 were provided. The County made people available to help those
120 individuals.
- 121 • People feared government help; some possibly due to the fact that they
122 are here illegally.
- 123 • With the large program area and tight time constraints, it was difficult to
124 establish a community presence and program awareness.
- 125 • Unreliable municipal water service boundaries.
- 126 • No good source of property addresses. All returned mailings had to be
127 hand-delivered.
- 128 • Due to HIPPA laws the County was only able to ask individuals if they were
129 at high risk.

130
131 Questions regarding Yakima County's Nitrate Pilot Program, can be directed to
132 Vern Redifer.

133 134 135 **IV. Committee Work Plan**

136 Penny reminded the committee that the Work Plan is not the GWMA program; it
137 is the work to be done to develop the program. She asked if everyone had had

a chance to review the draft Work Plan; the committee members indicated that they had. Penny asked each member of the committee present if the draft Work Plan was close enough to pass it along to the Department of Ecology. A majority of the members agreed it was sufficient enough to submit to the Department of Ecology; however, it was noted that the schedule was very ambitious. Three members of the committee were opposed to the work plan as presented. Those members were asked what they thought was missing or needed to be added or deleted in order to approve the work plan by consensus and not by a majority and minority report.

Concerns noted by the members who stated they could not support the work plan as written included:

- The committee is top heavy with representatives of agricultural and as such those members will work in their favor, rather than in favor of the public. The committee is going to disqualify or throw out previous studies on nitrates. (Penny clarified that this was an erroneous statement. No commitment has been made to throw out or disqualify any studies.)

In response to Penny's request for specifics regarding concerns, Jean Mendoza, a representative for Concerned Citizens of the Yakama Reservation, as well as describing herself as a representative of health, the Hispanic community and environmental justice, asked to read a prepared statement regarding why she opposes the work plan. Penny queried the group, which responded that Jean could read her statement.

Suggestions in the statement included

- The work plan provides no assistance, redress or hope for people in the Lower Yakima Valley who use domestic well water for drinking. The cost is too much to individuals and we must assist those residents that are affected.
- The work plan assumes the existence of legacy nitrates; that needs to be proved.
- The work plan doesn't include seeking alternative solutions to available BMPs.
- Samplings must be taken of air as well as soils.
- The committee needs to develop goals and objectives for the GWMA program.
- The work plan takes enforcement and regulation off the table.
- The committee does not have the authority to redevelop BMPs.
- There is no data on the cost of soil testing. The budget is inadequate as it does not include an amount for health impacts. During the September meeting, a member of the committee wanted money set aside on the budget for education and that issue was tabled.
- The work plan states the program will implement BMPs. The GWAC will not be implementing actions; this is the plan development work plan.

Penny reminded the committee that although some items get tabled during meetings they are not forgotten. The budget for the GWMA program has not been set and in fact that topic is on the committee's agenda later in this meeting. Penny summarized the key issues of the members opposed to the work plan:

- Need to provide assistance to the people
- Need to explore and suggest alternative activities, not just BMPs
- Legacy nitrates
- Budget inadequacies, particularly regarding providing clean drinking water and education and outreach

Penny noted that some of the issues addressed may have been included in the work plan in the appendices, not in the opening narrative, such as development of goals and objectives. She noted the Appendix has a lot of information that the group is referring to. For example, it was not the intention to *not* look at alternatives; it was just not mentioned in the narrative. Suggestions were made for how to include language regarding providing assistance to the public by bringing language forward from page 8 of the attachment to the narrative.

Jean advised she would like to have a mission statement included in the narrative; that suggestion was met with agreement from the committee.

Tom Eaton noted that he was under the assumption that the whole group had agreed to the goal of reducing nitrates contamination in groundwater to below state drinking water standards.

Members were reminded that this is an advisory committee. The main focus of this committee is to find the main sources of nitrates. Everyone agrees that we need to provide clean water to the people affected. See WAC 173-100-120, at the end of the day this advisory committee will have an effect on the program with its decisions.

Members that opposed the work plan were asked if the additions discussed were made to the work plan, (e.g. mission statement, short term objective: provide clean drinking water) would the members agree to the work plan. The opposing members expressed optimism, but noted they need to see the changes in writing before agreeing. Additionally, one member would like to see the budget before agreeing. Penny and the County will make changes to the work plan and will send it out to all members for a decision at the next meeting.

Specific changes agreed to include:

- Fix III Budget – BMP language (correct "implementation" to read "identification")
- Agree to early addressing of nitrate problems
- Page 2 - under strategies, change "will" to "may"

230 **V. Budget Priorities:**

231 Yakima County provided members with a preliminary budget handout. Vern
232 Redifer advised the committee that it must spend a total of \$300,000 by the end
233 of June. \$100,000 is allocated to Program Development and Administration; the
234 remaining \$200,000 must be spent by June 30 or it will be returned to the State.
235 Vern provided some ideas for spending the \$200,000:

- 236 • Deep Soil Sampling
- 237 • Monitoring Plan
- 238 • Monitoring Plan Implementation
- 239 • Nutrient Loading
- 240 • Education and Outreach
- 241 • Possible Nitrate Treatment Program "Clone"

242
243 Some members of the committee would like to see safe drinking water added to
244 the task descriptions of the budget.

- 245 • Program Development/Administration
- 246 • Monitoring and Characterization
- 247 • Public Information and Outreach
- 248 • BMP identification and Field Research
- 249 • Safe Drinking Water (addition)

250
251 One of the members suggested that the committee start working on all task
252 descriptions splitting the \$200,000 amongst the tasks to get each of them started.
253 Another member would like to see money allocated for a community
254 assessment survey. Mention was made that quality assurance programs need to
255 be written before any sampling program can be undertaken and that can be
256 time consuming.

257
258 Vern noted that if additional money is needed above and beyond what is
259 currently budgeted, the committee will need to come up with specifics, along
260 with an explanation as to why tasks cannot be done with the current budget.
261 This packet will need to be presented to Senator Honeyford.

262
263 Vern asked the committee to forward their budget ideas, with an estimated
264 spending plan, to him next week and he will work on putting something together
265 by the next special budge meeting.
266

267 **VI. Public Comment:**

268 No comments.
269

270 **VII. Next Steps:**

- 271 • Schedule a meeting in two weeks to discuss budget.
- 272 • Penny will make changes to work plan and send to members.

273
274 **VIII. 2013 Meeting Calendar:**

- 275 • 2 weeks/(January 28 – February 5th) date to be determined

- 276 • February 21
- 277 • March 21
- 278 • April 18
- 279 • May 16
- 280 • June 20
- 281 • July 18
- 282 • August 15
- 283 • September 19
- 284 • October 17
- 285 • November 21
- 286 • December 19

287

288

289 Meeting calendar will be reassessed at the end of the year.

290

291 The meeting was adjourned at 7:20 pm.

292

293 Meeting summary approved by the Lower Yakima Valley Groundwater Advisory

294 Committee on February 6, 2013.

Yakima County

**Notice of Public Meeting
Lower Yakima Valley Groundwater Advisory Committee**

NOTICE IS HEREBY GIVEN that Yakima County is holding a public meeting of the Lower Yakima Valley Groundwater Advisory Committee on **Wednesday, February 6, 2013 at 5:00 PM at Radio KDNA Conference Room 1, 121 Sunnyside Ave. in Granger WA** pursuant to Chapter 173-100-080 WAC Ground Water Management Areas and Programs.

For Additional Information

To learn more about the Lower Yakima Valley Groundwater Management Area, the Groundwater Advisory Committee, and its goals and objectives, please see the Lower Yakima Valley Groundwater Management Area on the County webpage at:

<http://www.yakimacounty.us/gwma/>

For more information about the meeting, please contact Lisa Freund, Yakima County Public Services Administrative Manager at 574-2300.

Dated this 31 January 2013

Publish: 31 January 2013

Bill: FC3463-100-1

YAKIMA HERALD REPUBLIC

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Yakima County

Notice of Public
Meeting
Lower Yakima Valley
Groundwater Advisory
Committee

NOTICE IS HEREBY
GIVEN that Yakima
County is holding a pub-
lic meeting of the Lower
Yakima Valley Ground-
water Advisory Com-
mittee on Wednesday,
February 6, 2013 at
5:00 PM at Radio KDNA
Conference Room 1,
121 Sunnyside Ave. in
Granger, WA pursuant
to Chapter 173-100-080
WAC Ground Water
Management Areas and
Programs.

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Groundwater Manage-
ment Area on the County
webpage at: <http://www.yakimacounty.us/gwma/>

For more information
about the meeting,
please contact Lisa
Freund, Yakima County
Public Services Admin-
istrative Manager at
574-2300.
Dated this 31 January
2013

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Affidavit of Publication

STATE OF WASHINGTON,)

COUNTY OF YAKIMA)

Debbie Martin, being first duly sworn on oath deposes and says that she/he is the Accounting clerk of Yakima Herald-Republic, Inc., a daily newspaper. Said newspaper is a legal newspaper approved by the Superior Court of the State of Washington for Yakima County under an order made and entered on the 13th day of February, 1968, and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continually as a daily newspaper in Yakima, Yakima County, Washington. Said newspaper is now and has been during all of said time printed in an office maintained at the aforesaid place of publication of said newspaper.

That the annexed is a true copy of a:
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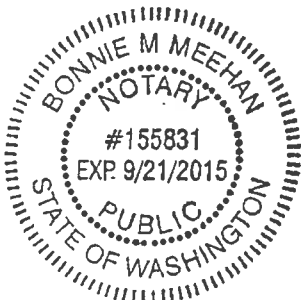
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Yakima Herald-Republic 01/31/13
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Debbie Martin

Accounting Clerk



Sworn to before me this 31st day of January 2013

Bonnie M. Meehan

Notary Public in and for the
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residing at Yakima

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Timothy J. Graff, being first duly sworn on oath deposes and says that he is the Publisher of the DAILY SUN NEWS, a daily newspaper.

That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publications hereinafter referred to, published in the English language continually as a daily newspaper in the city of Sunnyside, YAKIMA County, Washington, and it is now and during all of said time printed in an office maintained at the afforesaid place of publication of said newspaper, and that the said Daily Sun News was on the 4th Day of April, 1969 approved as a legal newspaper by the Superior Court of said Yakima County.

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Feb. 6 Mtg FC3463-100-1

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Tim Graff

Subscribed and sworn to before me 01/31/13

Nora Hernandez
Notary Public in and for
the State of Washington
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Yakima County
Notice of Public Meeting
Lower Yakima Valley Groundwater
Advisory Committee
NOTICE IS HEREBY GIVEN that
Yakima County is holding a public
meeting of the Lower Yakima Val-
ley Groundwater Advisory Commit-
tee on Wednesday, February 6,
2013 at 5:00 PM at Radio KDNA
Conference Room 1, 121 Sunnyside
Ave. in Granger, WA pursuant
to Chapter 173-100-080 WAC
Ground Water Management Areas
and Programs.
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Management Area on the County
webpage at: [http://
www.yakimacounty.us/gwma/](http://www.yakimacounty.us/gwma/)
For more information about the
meeting, please contact Lisa
Freund, Yakima County Public Ser-
vices Administrative Manager at
574-2300.
Dated this 31 January 2013
PUBLISH: DAILY SUN NEWS
January 31, 2013

Meeting Time and Location**Wednesday, February 6, 2013, 5:00 – 7:00 p.m.**

Radio KDNA in Granger
121 Sunnyside Ave
Conference rooms 1 & 2
Granger, Washington

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

Purpose of the Meeting:

- Approve GWMA Work Plan
- Discuss GWMA budget priorities for biennium ending June 30, 2013

Agenda

Time	Topic	Purpose	Lead
5:00 – 5:10 p.m.	Welcome & Meeting Overview	Introduction, meeting overview, confirm agenda	Penny Mabie, facilitator
5:10 – 5:25 p.m.	Committee Work Plan	<ul style="list-style-type: none">• Review revisions• Committee approval for submittal to Ecology	Penny Mabie, facilitator Vern Redifer, Yakima County
5:25 – 6:45 p.m.	Budget Priorities	<ul style="list-style-type: none">• Discuss spending priorities for existing program budget• Identify specific budget needs beyond existing program budget	Vern Redifer
6:45 – 6:55 p.m.	Public Comment	Opportunity for members of the public to make comments to the committee.	
6:55 – 7:00 p.m.	Next Steps	<ul style="list-style-type: none">• Review action items• Review next steps and topics for next meeting	Penny Mabie, facilitator
7:00 p.m.	Adjourn		

Next Meeting: February 21, 2013

Committee Members

Stuart Turner, agronomist	Turner and Co.
Helen Reddout, Wendell Hannigan (alternate)	Community Association for Restoration of the Environment
	Lower Valley Community Representative
Jean Mendoza, Eric Anderson (alternate)	Friends of Toppenish Creek
Jan Whitefoot, Jim Dyjak (alternate)	Concerned Citizens of the Yakama Reservation
Steve George, Justin Waddington (alternate)	Yakima County Farm Bureau
Jason Sheehan, Dan DeGroot (alternate)	Yakima Dairy Federation
Jim Trull, Ron Cowin (alternate)	Sunnyside-Roza Joint Board of Control
Laurie Crowe, Jim Newhouse (alternate)	South Yakima Conservation District
Mark Nielson, Heather Wendt (alternate)	Benton Conservation District
James Beaver	Benton County Commission
Robert Farrell, John Van Wingerden (alternate)	Port of Sunnyside
Rand Elliott, Vern Redifer (alternate)	Yakima County Commission
Gordon Kelly	Yakima County Health District
Rick Dawson	Benton-Franklin Health District
Kefyalew Desta, Dr. Troy Peters (alternate)	WSU Irrigated Agriculture Research and Extension Center
Tom Eaton	U.S. Environmental Protection Agency
Elizabeth Sanchey, Tom Ring (alternate)	Yakama Nation
Lonna Frans, Matt Bachmann (alternate)	U.S. Geological Survey
Kirk Cook, Jaclyn Ford (alternate)	Washington Department of Agriculture
Andy Cervantes, Ginny Stern (alternate)	Washington Department of Health
Charlie McKinney, Tom Tebb (alternate)	Washington Department of Ecology
	Hispanic Community Representative

Committee Ground Rules:

- Come to committee meetings prepared
- Treat one another with civility
- Respect each other's perspectives
- Listen actively
- Participate actively
- Honor time frames
- Silence electronic devices during meetings
- Speak from interests, not positions.

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

3
4 **MEETING SUMMARY**

5
6 **Wednesday February 6, 2013**

7 *Radio KDNA*
8 *121 Sunnyside Ave, Granger, WA 98932*

9
10
11 **I. Call to Order**

12
13 **Roll Call:** The meeting was called to order at 5:03 pm by Penny Mabie,
14 Facilitator.

15
16 **Members present:** Rand Elliott, Yakima County Commissioner; Vern
17 Redifer (alternate) for Yakima County; Charlie McKinney, Department of
18 Ecology; Andy Cervantes, Department of Health; Jim Dyjak, (alternate) for
19 Concerned Citizens for Yakama Reservation; Robert Farrell, Port of
20 Sunnyside; John Van Wingerden (alternate) for the Port of Sunnyside; Jean
21 Mendoza, Friends of Toppenish Creek; Wendell Hannigan (alternate) for
22 Community Association for the Restoration of the Environment; Mark
23 Nielson, Benton Conservation District; Heather Wendt (alternate) for the
24 Benton Conservation District; Stuart Turner, Turner & Company; Chelsea
25 Durfey (alternate) for Turner & Company; Steve George, Yakima Farm
26 Bureau; Jason Sheehan, Yakima Dairy Federation; Dan DeGroot
27 (alternate) for the Yakima Dairy Federation; Gordon Kelly, Yakima Health
28 District; Dr. Troy Peters (alternate) for WSU Irrigated Agricultural Research
29 and Extension Center; Rick Dawson, Benton-Franklin Health District; Jim
30 Trull, SVD; Matt Ely (alternate) for the U.S. Geological Survey; Kirk Cook,
31 Washington State Department of Agriculture.

32
33 **Members' seats not represented:** Benton County Commission; Lower
34 Valley Community Representative; and Hispanic Community
35 Representative

36
37 **Members absent:** Jan Whitefoot, Concerned Citizens for Yakima
38 Reservation, Laurie Crowe, South Yakima Conservation District; Helen
39 Reddout, Community Association for Restoration of the Environment; Tom
40 Eaton, EPA; Dr. Kefyalew Desta, WSU Irrigated Agriculture Research and
41 Extension Center; Lonna Frans, U.S. Geological Survey; Lino Guerra,
42 Hispanic Community Representative; Elizabeth Sanchey, Yakama Nation;
43 and alternates: Eric Anderson; Justin Waddington; Jim Newhouse; Tom
44 Tebb; Matt Bachmann; Jaclyn Ford; Ginny Stern; Ron Cowin; Tom Ring;
45 and Rick Perez
46

47 **II. Committee Business:**

48 January 17, 2013 meeting summary was approved by consensus.

49
50 Reminders: Please place all cell phones on silent. If you must take a call, please
51 step outside of the room so as to not disrupt the meeting. Also, before leaving
52 please check the room to make sure you have all your belongings.

53
54 Introductions of new members: Matt Ely is filling in for Lonna Frans, who just had a
55 baby girl (Alexandra), and Matt Bachmann who could not make tonight's
56 meeting. Rick Dawson is here on behalf of Benton Franklin Health District. We
57 also have new representatives for the Hispanic Community, Lino Guerra and Rick
58 Perez. Their letters of appointment are on the way.

59
60 Moment of silence.

61
62
63 **III. Committee Work Plan**

64 Vern explained changes made to the work plan as previously discussed at the
65 January 17th meeting. He also made grammatical corrections as well. Two
66 paragraphs were added in relation to "Immediate Public Health Needs", Item IV
67 of the work plan. It notes the GWAC will work with State, Federal and Local
68 governments to seek funding to assist private well owners. Charlie McKinney
69 noted that the funds were allocated to accomplish the Work Plan, and this use is
70 not covered under the Work Plan.

71
72 Penny asked the committee members if this version of the work plan could be
73 submitted to The Department of Ecology. No objection from the committee.
74 Consensus reached amongst the committee members. The work plan will be
75 submitted to The Department of Ecology.

76
77 Side note: Steve George stated he would like to change "farming community,"
78 on Page 1 of the work plan under Goals and Objectives, to "agricultural
79 community". Additionally, under GWMA Goals, it was suggested to change the
80 language "Washington State drinking water standards" to "Federal drinking
81 water standards". Penny advised the committee that both of those terms are
82 drawn from other existing documents, one of them being the GWAC's approved
83 Operating Guidelines. The committee agreed to leave the language as is in the
84 work plan, but to consider those changes moving forward.

85
86 Work plan approved by consensus.

87
88 **IV. Budget Priorities**

89 Members were reminded that the advisory committee must spend \$300,000 by
90 the end of June, the end of the state's budget biennium. The County has
91 already spent (or encumbered) \$98,000. The committee needs to spend
92 another \$200,000.

Vern took the information he received from committee members regarding cost estimates, and made a few changes to the budget provided at the previous meeting. The committee needs to make some short term decisions on the budget, but be consistent with long term goals.

Mark reminded the committee that the State Auditor frowns upon money not spent within the same biennium. Charlie McKinney, Department of Ecology, advised that some funding sources can cross bi-annually; however, this grant from the state toxics account is not one of them. He did, however, contact the Ecology water quality budget manager and was told that as long as the funds were encumbered under contract by the end of the biennium (June 30) they will provide the committee with up to a six month leeway.

Members discussed each line item on the draft budget, as to whether or not the item was needed and/or how much money should be dedicated in the short term to that item.

Facilitation: The committee discussed the need for continued facilitation of the meetings. EnviroIssues (Penny) is currently contracted through May 31st. Members decided that having Penny facilitate the meetings is beneficial while the work plan is still coming together. The members need someone neutral to keep them on task. Vern suggested extending the facilitation contract through 2013 and re-evaluate at the end of the year. Members agreed by consensus. Vern will work with EnviroIssues to extend the contract through 2013. Jean asked whether work on an evaluation plan could be added to Penny's duties.

Deep soil sampling: An estimated short term amount of \$40,000 was suggested. Kirk Cook felt this was greatly underestimated. The irrigated agriculture work group worked with Kevin Lindsey, GSI, to work up a draft, detailed preliminary budget. \$40,000 for deep soil sampling was just a starting point. The irrigated agriculture work group provided the preliminary budget to the County in response to requests for information from the last GWAC meeting. Several members of the GWAC voiced their concern that they were not provided with a copy of the preliminary budget. Kevin Lindsey explained that the preliminary budget he provided was just a starting point and was only put together in a day. He advised that more thought and planning needs to be done to complete the budget.

Penny advised the committee that the preliminary budget created by Kevin Lindsey was just rough numbers and a result of the work group responding to a request for information from the last GWAC meeting. She noted that while no decisions are being made at this point, that there was a process problem with this information, in large part due to the special budget meeting being scheduled so quickly after the last regular GWAC meeting and this short period didn't allow for information to be disseminated in a timely fashion. She reminded

the committee that all information needs to be passed along to the committee from the sub-committees for review prior to GWAC meetings. Information should not come straight to meetings without the GWAC having an opportunity to review ahead of time.

Further discussion on deep soil sampling noted that no other agency has done this before. The committee discussed that this service would need to be hired out. The deep soil sampling findings will not be enforceable. The intent of deep soil sampling would be purely for educational purposes.

Nutrient loading: The committee discussed the intent of developing "nutrient loading" data, which is so the committee can find out the breakdown of the source of nitrates; whether it is synthetic, livestock, septic systems, etc. Dr. Troy Peters advised that WSU has good models to review. One member of the committee would like to have "air pollution" included in the nutrient loading category. Charlie McKinney noted that Ecology already has a study in place that is studying airborne nitrates. He stated that Ecology can present material on the Yakima Air Winter Nitrate Study (YAWNS) to the group if people would like to hear about it. A member stated that Dr. Pius Ndgwa from the WSU School of Agriculture is also an excellent resource for air issues.

Andy Cervantes, Washington Department of Health, discussed education and outreach. The work group discussed the need for surveys as a way of finding the hotspots for nitrates. They learned that Gordon Kelly with Yakima County Health District could provide surveys at a rate of \$80.00 per home. Others, including the state DOH, could do the work at higher rates. Dr. Troy Peters stated that the committee should also educate the farmers and that this is something WSU can help with, by providing workshops. Penny reminded the members that the budget being developed is not to implement the GWMA Program; rather, this budget is for activities to help develop the program. Some members would like to see water sampling conducted as well as surveys. Andy agreed and explained that the intent of the surveys is to find the hotspots and then proceed with sampling. One member stated that before knocking on doors the public must be educated about the problem and the purpose of the surveys; otherwise, there are concerns some members of the Hispanic community will not respond.

Health assessment category: This was added from discussions in the last GWAC meeting. No money has been allocated to health assessment at this time. Jean Mendoza reminded the committee that this is something that should be done; whether by the GWAC or by the health district, as the GWAC needs to know how nitrates are affecting the community.

Lagoon Assessment: Vern noted he added the category after discussions with the Department of Ecology. He noted there are perceptions that lagoons either leak a lot or not at all, and there is no definitive answer. Helen refuted this, and noted that she has been told by lagoon liner manufacturers that the liners leak.

Best Management Practices (BMP) identification: The committee discussed the intent of this line item. Some explained that although it is a long way from implementation of the program, the committee does need to identify the current BMP's and whether or not they work. Several members felt this is not a short term need.

Irrigation Water Management: The committee agreed this is a short term need and needs to be implemented. This can provide incentives for growers.

The committee continued with further discussion of the suggested health assessment and air pollution monitoring. Some members would like to see proof of the need before considering. Dr. Troy Peters stated they could provide education to the committee; however, he was not sure it would be worth spending the time. Rand Elliott asked what effect a health assessment would have on the problem of nitrates in groundwater. A committee member stated they believe that some members of the committee don't believe nitrates are a health risk. Several members challenged this statement, noting that no one on this committee has made that statement and, in fact, this committee was formed because of the belief that nitrates are a health risk. Members noted though, that the goal of the committee is not to reduce health risks but rather to reduce nitrates in the groundwater. A member advised that there needs to be a determination of who is at risk first before providing a health assessment. Some public education upfront is needed.

The committee agreed to the starting figures for the short-term budget shown below. In the short-term no money is being allocated to "Lagoon Assessment". Stuart Turner offered to provide the committee with studies. Additionally, no money is being allocated in the short-term for health assessment.

\$11,000 is being allocated to deep soil sampling for the short-term; however, this amount may increase during 2013. The committee agreed to bump up the \$40,000 figure previously discussed to \$60,000 for monitoring for both the program development and to serve as a baseline for program implementation. \$5,000 was allocated to nutrient loading as a place holder for the short-term.

Education and outreach, with two sub-categories (surveying and test samples) was allocated \$50,000. This money will be split between education and outreach and the sub-categories.

The committee agreed to allocate \$15,000 for early work on Best Management Practices (BMPs). Irrigation water management was allocated \$11,000 for initial planning.

The short term budget thru June, 2013 is shown in the table below:

Work Item	2013 Short Term Thru June (Or Obligated to be spent by Year end)
Expenditures Thru 2012	\$ 46,253
Yakima County Lead Entity	\$ 62,000
Facilitation	\$ 39,600
Deep Soil Sampling	\$ 11,000
Long-Term Monitoring (Planning and Design)	\$ 60,000
Long-Term Monitoring (Field Investigation)	\$ -
Long-Term Monitoring (Implementation)	\$ -
Nutrient Loading	\$ 5,000
Education and Outreach	\$ 25,000
Survey & Water Quality Testing	\$ 25,000
Health Assessment	\$ -
Lagoon Assessment	\$ -
Existing BMP Identification	\$ 15,000
BMP Field Research	\$ -
Irrigation Water Management	\$11,000
Air Monitoring	\$ -
Accumulated Total	\$299,853

The committee discussed the need to provide the detailed short term budget to Ecology and decided the work plan will be turned into Department of Ecology with only the general numbers included.

V. Public Comment:

No public comment

VI. Next Steps:

- Forward GSI report to all committee members.
- Work groups will have reports ready to report to members at the next scheduled meeting. Additionally, each work group should select a leader. (Reminder: Vern noted that Yakima County has committed to provide a staff member for all work group meetings.)
- Committee members need to advise what education they need to make decisions.
- Stuart Turner will provide the committee with studies on lagoon assessment.

Reminder: Phil Richerson with the Oregon Department of Environmental Quality will be speaking at our next scheduled meeting to discuss their GWMA Programs.

Vern advised the committee that the California GWMA report is posted on the website library for anyone who would like to read it. It is a good source of information to help committee members understand more about what we are doing here and where we are headed.

VII. 2013 Meeting Calendar:

- February 21
- March 21
- April 18
- May 16
- June 20
- July 18
- August 15
- September 19
- October 17
- November 21
- December 19

Meeting calendar will be reassessed at the end of the year.

The meeting was adjourned at 7:06 pm.

Meeting summary approved by the Lower Yakima Valley Groundwater Management Area Advisory Committee on February 21, 2013.

Yakima County

**Notice of Public Meeting
Lower Yakima Valley Groundwater Advisory Committee**

NOTICE IS HEREBY GIVEN that Yakima County is holding a public meeting of the Lower Yakima Valley Groundwater Advisory Committee on **Thursday, February 21, 2013 at 5:00 PM at Radio KDNA Conference Rooms 1 & 2, 121 Sunnyside Ave. In Granger WA** pursuant to Chapter 173-100-080 WAC Ground Water Management Areas and Programs.

For Additional Information

To learn more about the Lower Yakima Valley Groundwater Management Area, the Groundwater Advisory Committee, and its goals and objectives, please see the Lower Yakima Valley Groundwater Management Area on the County webpage at:

<http://www.yakimacounty.us/gwma/>

For more information about the meeting, please contact Lisa Freund, Yakima County Public Services Administrative Manager at 574-2300.

Dated this Wednesday, February 13th, 2013

Publish: Thursday, February 14, 2013

Bill: FC3463-100-1

YAKIMA HERALD REPUBLIC

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Please confirm placement prior to deadline,
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Contact:	LISA FREUND
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Telephone:	(509) 574-2343

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Yakima Herald-Republic 02/15/13
YakimaHerald.com 02/15/13

Ad ID:	289980
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Stop:	02/15/13
Total Cost:	\$67.70
Agate Lines:	69
# of Inserts:	2
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Phone #	(509) 577-7740
Email:	ssizer@yakimaherald.com

Ad Proof

Yakima County

Notice of Public
Meeting
Lower Yakima Valley
Groundwater Advisory
Committee

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GIVEN** that Yakima
County is holding a pub-
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Yakima Valley Groundwa-
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on **Thursday, February
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Groundwater Manage-
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webpage at: <http://www.yakimacounty.us/gwma/>

For more information
about the meeting,
please contact Lisa
Freund, Yakima County
Public Services Admin-
istrative Manager at
574-2300.
Dated this Wednesday,
February 13th, 2013

(289980) February 15,
2013

YAKIMA HERALD REPUBLIC

Affidavit of Publication

STATE OF WASHINGTON,)
)
COUNTY OF YAKIMA)

Debbie Martin, being first duly sworn on oath deposes and says that she/he is the Accounting clerk of Yakima Herald-Republic, Inc., a daily newspaper. Said newspaper is a legal newspaper approved by the Superior Court of the State of Washington for Yakima County under an order made and entered on the 13th day of February, 1968, and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continually as a daily newspaper in Yakima, Yakima County, Washington. Said newspaper is now and has been during all of said time printed in an office maintained at the aforesaid place of publication of said newspaper.

That the annexed is a true copy of a:
Yakima County Notice of Public Meeti

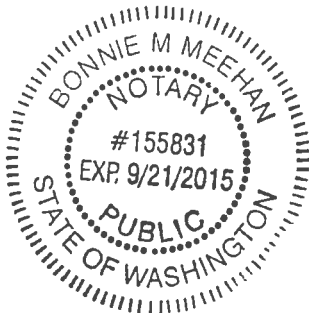
it was published in regular issues (and not in supplement form) of said newspaper once each day and for a period of 1 times, the first insertion being on 02/15/2013 and the last insertion being on 02/15/2013

Yakima Herald-Republic 02/15/13
YakimaHerald.com 02/15/13

and the such newspaper was regularly distributed to its subscribers during all of the said period. That the full amount of the fee charged for the foregoing publication is the sum of \$67.70

Debbie Martin

Accounting Clerk



Sworn to before me this 15th day of February 2013

Bonnie M. Meehan
Notary Public in and for the
State of Washington,
residing at Yakima

Daily Sun News

"Today's Local News Today"

P.O. Box 878
Sunnyside, WA 98944

Phone 509.837.4500 Fax 509.837.6397

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Yakima County Public Services
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128 N. 2nd Street 4th Floor
Yakima, WA 98901

For:

Legal Advertising

INVOICE

DATE:

February 18, 2013

INVOICE # 13-0218

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DESCRIPTION	T	AMOUNT
02/18/13 - Mtg. 2/21 FC3463-100-1 RECEIVED FEB 22 2013 YAKIMA COUNTY PUBLIC WORKS ACCOUNTING Funding Control <u>FC3463-100-1-4410</u> Authorized By: <u>Ina Beck</u> Date Authorized <u>2-28-12</u>	Feb. 14	31.50

SUBTOTAL	\$	31.50
TAX RATE		7.90%
SALES TAX	\$	-
OTHER		-
TOTAL	\$	31.50

Please make checks payable to the **DAILY SUN NEWS**.

If you have any questions regarding this invoice, please call 509-837-4500.

THANK YOU FOR YOUR BUSINESS!

Affidavit of Publication

STATE OF WASHINGTON
COUNTY OF YAKIMA SS

Timothy J. Graff, being first duly sworn on oath deposes and says that he is the Publisher of the DAILY SUN NEWS, a daily newspaper.

That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publications hereinafter referred to, published in the English language continually as a daily newspaper in the city of Sunnyside, YAKIMA County, Washington, and it is now and during all of said time printed in an office maintained at the aforesaid place of publication of said newspaper, and that the said Daily Sun News was on the 4th Day of April, 1969 approved as a legal newspaper by the Superior Court of said Yakima County.

That the annexed is a true copy of a LEGAL PUBLICATION -

Yakima County Public Services

Mtg. 2/21 FC3463-100-1

published in regular issues (and not in supplemental forms) of said newspaper once each week for a period of 1 consecutive issue(s) commencing 02/14/13 and ending on 02/14/13, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of \$ 31.50, amount has been paid in full, at the rate of \$7.00 per column inch per insertion.

Tim Graff

Subscribed and sworn to before me 02/18/13

Nora Hernandez
Notary Public in and for
the State of Washington
030110-00000



Yakima County
Notice of Public Meeting
Lower Yakima Valley Groundwater
Advisory Committee

NOTICE IS HEREBY GIVEN that Yakima County is holding a public meeting of the Lower Yakima Valley Groundwater Advisory Committee on Thursday, February 21, 2013 at 5:00 PM at Radio KDNA Conference Rooms 1 & 2, 121 Sunnyside Ave. in Granger, WA pursuant to Chapter 173-100-080 WAC Ground Water Management Areas and Programs.

For Additional Information

To learn more about the Lower Yakima Valley Groundwater Management Area, the Groundwater Advisory Committee, and its goals and objectives, please see the Lower Yakima Valley Groundwater Management Area on the County webpage at: <http://www.yakimacounty.us/gwma/>

For more information about the meeting, please contact Lisa Freund, Yakima County Public Services Administrative Manager at 574-2300.

Dated this Wednesday, February 13th, 2013
PUBLISH: DAILY SUN NEWS
February 14, 2013

Meeting Time and Location

Thursday, February 21, 2013, 5:00 ~ 7:00 p.m.

Radio KDNA in Granger
121 Sunnyside Ave
Conference rooms 1 & 2
Granger, Washington

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

Purpose of the Meeting:

- Learn about Northern Malheur County GWMA & the Lower Umatilla Basin GWMA
- Discuss development of goals and objectives for the GWMA program
- Hear from sub-committees on their work

Agenda

Time	Topic	Purpose	Lead
5:00 – 5:10 p.m.	Welcome & Meeting Overview	Introduction, meeting overview, confirm agenda	Penny Mabie, facilitator
5:10 – 5:15 p.m.	Committee Business	<ul style="list-style-type: none"> • Approve Dec. 12 meeting summary 	Penny Mabie
5:15 – 6:15 p.m.	Northern Malheur County GWMA & the Lower Umatilla Basin GWMA	<ul style="list-style-type: none"> • Learn about the two GWMA's – development, program elements, success metrics, etc. 	Phil Richardson, State of Oregon Department of Environmental Quality
6:15 – 6:30 p.m.	Goals and Objectives	<ul style="list-style-type: none"> • Discuss development of GWMA program goals and objectives • Identify next steps 	Penny Mabie, facilitator
6:30 – 6:45 p.m.	Sub-committee reports	<ul style="list-style-type: none"> • Hear from sub-committees • Provide feedback; plan for needed discussions in March 	Penny Mabie, facilitator Sub-committee leads
6:45 – 6:55 p.m.	Public Comment	Opportunity for members of the public to make comments to the committee.	
6:55 – 7:00 p.m.	Next Steps	<ul style="list-style-type: none"> • Review action items • Review next steps and topics for next meeting 	Penny Mabie, facilitator
7:00 p.m.	Adjourn		

Next Meeting: March 21, 2013

Committee Members

Stuart Turner, agronomist, Chelsea Durfey (alternate)	Turner and Co.
Helen Reddout, Wendell Hannigan (alternate)	Community Association for Restoration of the Environment
	Lower Valley Community Representative
Jean Mendoza, Eric Anderson (alternate)	Friends of Toppenish Creek
Jan Whitefoot, Jim Dyjak (alternate)	Concerned Citizens of the Yakama Reservation
Steve George, Justin Waddington (alternate)	Yakima County Farm Bureau
Jason Sheehan, Dan DeGroot (alternate)	Yakima Dairy Federation
Jim Trull, Ron Cowin (alternate)	Sunnyside-Roza Joint Board of Control
Laurie Crowe, Jim Newhouse (alternate)	South Yakima Conservation District
Mark Nielson, Heather Wendt (alternate)	Benton Conservation District
	Benton County Commission
Robert Farrell, John Van Wingerden (alternate)	Port of Sunnyside
Rand Elliott, Vern Redifer (alternate)	Yakima County Commission
Gordon Kelly	Yakima County Health District
Rick Dawson	Benton-Franklin Health District
Kefyalew Desta, Dr. Troy Peters (alternate)	WSU Irrigated Agriculture Research and Extension Center
Tom Eaton	U.S. Environmental Protection Agency
Elizabeth Sanchey, Tom Ring (alternate)	Yakama Nation
Lonna Frans, Matt Bachmann (alternate)	U.S. Geological Survey
Kirk Cook, Jaclyn Ford (alternate)	Washington Department of Agriculture
Andy Cervantes, Ginny Stern (alternate)	Washington Department of Health
Charlie McKinney, Tom Tebb (alternate)	Washington Department of Ecology
Lino Guerra, Rick Perez (alternate)	Hispanic Community Representative

Committee Ground Rules:

- Come to committee meetings prepared
- Treat one another with civility
- Respect each other's perspectives
- Listen actively
- Participate actively
- Honor time frames
- Silence electronic devices during meetings
- Speak from interests, not positions.

2013 Meeting Dates:

March 21	July 18	November – tbd
April 18	August 15	(Thanksgiving conflict)
May 18	September 19	December 19
June 20	October 17	

100



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

3
4 **MEETING SUMMARY**

5
6 **Thursday, February 21, 2013**

7 *Radio KDNA*
8 *121 Sunnyside Ave, Granger, WA 98932*

9
10
11 **I. Call to Order**

12
13 **Roll Call:** The meeting was called to order at 5:00 pm by Penny Mabie,
14 Facilitator.

15
16 **Members present:** Rand Elliott, Yakima County Commissioner, Vern
17 Redifer (alternate); Charlie McKinney, Department of Ecology, Tom Tebb,
18 Alternate; Andy Cervantes, Department of Health; Jim Dyjak (alternate for
19 Concerned Citizens for Yakima Reservation); Robert Farrell, Port of
20 Sunnyside, John Van Wingerden (alternate); Jean Mendoza, Friends of
21 Toppenish Creek; Chelsea Durfey (alternate for Turner & Co.); Jason
22 Sheehan, Yakima Dairy Federation, (Dan DeGroot, Alternate); Gordon
23 Kelly, Yakima County Health District; Jim Trull, SVID; Jaclyn Ford, Alternate
24 for Washington Department of Agriculture; Tom Eaton, U.S. EPA; Laurie
25 Crowe, South Yakima Conservation District; Elizabeth Sanchey, Yakama
26 Nation, (Tom Ring, Alternate); Helen Reddout, Community Association for
27 Restoration of the Environment; and Lino Guerra, Hispanic Community
28 Representative, (Rick Perez, Alternate)

29
30 **Members' seats not represented:** Benton County Commission; and Lower
31 Valley Community Representative

32
33 **Members absent:** Jan Whitefoot, Concerned Citizens for Yakima
34 Reservation; Steve George, Yakima County Farm Bureau; Dr. Kefyalew
35 Desta, WSU Irrigated Agriculture Research and Extension Center; Lonna
36 Frans, U.S. Geological Survey; Rick Dawson, Benton Franklin Health District;
37 Kirk Cook, Washington Department of Agriculture; Mark Neilson, Benton
38 Conservation District; Stuart Turner, Agronomist, Turner and Co.; and
39 alternates: Eric Anderson; Justin Waddington; Jim Newhouse; Matt
40 Bachmann; Dr. Troy Peters; Heather Wendt; Ginny Stern; Ron Cowan and
41 Wendell Hannington

42
43 **II. Committee Business:**

44 February 6, 2013 meeting summary was not released to the committee. The
45 meeting summary will be provided to the committee prior to our next scheduled
46 meeting for review.

Reminders:

- Please place all cell phones on silent. If you must take a call, please step outside of the room as to not disrupt the meeting.
- Before leaving please check the room to make sure you have all your belongings.
- New meeting location: KDNA Radio in Granger.

The work plan was submitted to the Department of Ecology.

Request for alternates to have alternates: Any additions or changes to the primary or alternate must go through Ecology for approval. The WAC does not speak to the details of whether or not there can be an alternate to the alternate. However, for consistency purposes the committee agrees that there should be an official primary member and one alternate. If the official primary member is seriously ill; then the alternate should step up as the primary and then a new alternate should be renamed. Reminder: As long as either the primary or alternate is at the table no one is at risk of losing their seat.

Moment of silence.

III. Presentation by Phil Richerson with the State of Oregon's Department of Environmental Quality: (Presentation will be made available on the website)

Phil worked on two primary GWMA's, the Northern Mahler County GWMA (NMC) started in 1989 and the Lower Umatilla Basin GWMA (LUB) started in 1990. In the State of Oregon a GWMA is declared when the groundwater contamination level exceeds certain trigger levels. That trigger level is 50% in most cases.

An action plan developed by an advisory committee like this one along with DEO and ODA. The goal of the GWMA was to reduce nitrates levels to less than 7ml/l.

With respect to the Lower Umatilla Basin GWMA there was an overlap of critical groundwater areas. Most nitrate contaminants came from shallow alluvial aquifers. Most overdrafts are in deeper basalt aquifers.

In comparing the two GWMSs soil samples it was found that the Lower Umatilla Basin GWMA soils were courser and drained faster. Due to floodplains the Northern Mahler County GWMA groundwater moves faster.

In 1995 a technical report identified five sources of nitrate loading. 1. Confined animal feeding operations; 2. Irrigated agriculture; 3. Land application for food processing water; 4. Septic systems; and 5. The Umatilla Chemical Depot Washout Lagoon (washing explosives). Irrigated agriculture is the largest source

of nitrates in both GWMA. Over two-thirds of the GWMA is zoned for agricultural use.

The estimate of nitrate loading into the groundwater was broken down into three tiers:

Tier One:

81.6% Irrigated agriculture

Tier Two:

Amounts in the single digits such as pastures, food processors, and on-site septic systems.

Tier Three:

Amounts less than 1% such as lawns, depot and vegetable gardens.

CAFOs comparison:

Lower Umatilla Basin GWMA

12 permitted facilities

172,100 animals permitted

Northern Mahler GWMA

43 permitted facilities

76,150 animals

BMPs must be implemented and monitored. They are tailored to each source of nitrate. Irrigated agriculture needs to address fertilizer and irrigation water application rates in order to reduce nitrate levels. Nutrient management and water management are keys to success. There are two types of BMPs followed by CAFOs: Structural and Management. Waste collection and storage treatment are keys to success. BMPs were adopted early on in the process.

Lessons learned:

- The key to reducing nitrates from irrigated agriculture is to control both nutrient application and water application.
- Reduce CAFOs with waste collection and storage treatment.
- Document BMP implementation as it happens – hard to go back after the fact.
- Sample frequently. Started sampling 6 times a year, now 4 times a year due to funding.
- Sample and analytical procedures need to be consistent.
- Keep statistical procedures as consistent as possible.
- Use “Seasonal Kendall Technique” to evaluate individual wells – this is a non-parametric procedure.
- Identify key research early and pursue.
- Engage all stakeholders early.

- Remember that groundwater remediation is a very long process.

IV. **Goals and Objectives:**

Penny addressed the committee and advised that they needed to develop the GWMA goals and objectives. There are three possible options to come up with the goals and objectives: 1. Have the subcommittees come up with goals and objectives and bring them back to the committee for a vote; 2. Have the committee itself decide; or 3. Have a disappearing task force.

Committee members had no comment on the goals and objectives at this time. A brief discussion of the members brought to conclusion that there would be two sets of goals and objectives. One for subcommittees and then overarching goals and objectives for the committee.

Tom Tebb advised it would be good to discuss the Vital Elements report. Penny will circulate this report to committee members to review.

Goals and objectives will be discussed at our next scheduled meeting.

V. **Subcommittee reports:**

Education and Outreach:

Lisa Freund was selected the leader of the subcommittee. The subcommittee met and discussed two primary goals: 1. Educate the public, especially those at high risk of nitrates; and 2. Notify general public of the advisory committee. The subcommittee understands that there will be short term and long term action. The committee has come up with 3 surveys:

- General community research – See what the community knows about nitrates.
- High risk well users (private wells) – Ask specific questions about well construction, what takes place around the well, etc.
- Health professional survey – Contact health professionals and provide them with information on the health risks of nitrates.

The GWMA website needs some content. The subcommittee is asking those members belonging to an agency that have information on nitrates to pass that information along to the subcommittee so they may update the website so it is more informative for the public. Please forward documents or web links to Lisa or Penny.

The subcommittee has come up with some logo options to give this project its own identity. The subcommittee will bring in the surveys, letter to health professionals and logos to the next scheduled meeting for the committee's approval.

183
184 **Data Collection:**

185 Kirk Cook was selected as the leader of the subcommittee. The
186 subcommittee met and discussed creating a shared data plan using one
187 source. That source would be the County. Also, discussed creating a QA
188 - QC to make sure data is qualified. The subcommittee would like to
189 perform a GAP analysis as this will show where the wells are located.
190 Discussed irrigated water management and cropland data. Preparing a
191 characterization report will be the starting point.

192
193 The subcommittee is in beginning discussion about data needs, how to
194 obtain the data and how to manage the data.

195
196 Penny reminded the committee that there are three other subcommittees that
197 have not met. 1. Irrigated agriculture; 2. Livestock/CAFOs; and Municipal
198 industrial. These committees need to meet before the next scheduled meeting.
199 Technical subcommittees should be meeting at least monthly.

200
201 Vern and Charlie will work together on getting initial meetings set up for the
202 remaining subcommittees.

203
204
205 **VI. Side note:**

206 Charlie advised that he has a report on a Yakima Air Quality Study. If the
207 committee would like a presentation on the report, he can contact The
208 Department of Ecology or WSU. The report was provided to the members.

209
210 Vern advised that there is a funding committee of Rand Elliott and himself. They
211 have forwarded a request to Senator Honeyford for an additional 1.6 million plus
212 to provide portable water to people. Department of Ecology was in support of
213 the request. Vern can provide copies to the committee. Additionally, the
214 County has been able to move around some funds in order to provide help to
215 those people affected.

216
217 **VII. Public Comment:**

218 No public comment.

219
220 **VIII. Next Steps:**

- 221
- Discuss goals and objectives.
 - Education and Outreach subcommittee will be bringing materials in for the
222 committee to review and approve at the next meeting.
 - Sub-committees need to meet and have reports ready to report back to
223 this committee at the next scheduled meeting. Additionally, each sub-
224 committee needs to select a leader and have proposals for how they will
225 spend their portion of the budget. (Reminder: Vern suggested that Yakima
226
227

- 228 County can provide a staff member to be available for all sub-committee
229 meetings.)
230 • Committee members need to advise what education they need to make
231 decisions.
232 • Stuart Turner will provide the committee with studies on lagoon assessment.
233

234
235 **IX. 2013 Meeting Calendar:**

- 236 • March 21
237 • April 18
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247
248 Meeting calendar will be reassessed at the end of the year.
249

250 The meeting was adjourned at 7:12 pm.
251

252 Meeting summary approved by the Lower Yakima Valley Groundwater Management
253 Area Advisory Committee on March 21, 2013.

Yakima County

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Dated this **Wednesday, March 13, 2013**

Publish: **Thursday, March 14, 2013**

Bill: **FC3463-100-1**



YAKIMA HERALD REPUBLIC

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Yakima County

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Lower Yakima Valley
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Committee

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Public Services Admin-
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574-2300.

Dated this Wednesday,
March 13, 2013

(299205) March 14, 2013

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Date Authorized 4/15/2013

YAKIMA HERALD-REPUBLIC

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Yakima Herald-Republic 03/14/13
YakimaHerald.com 03/14/13

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Debbie Martin

Accounting Clerk



Sworn to before me this 14th day of March 2013

Wendie Hansen

Notary Public in and for the
State of Washington,
residing at Yakima

Daily Sun News

"Today's Local News Today"

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Sunnyside, WA 98944

Phone 509.837.4500 Fax 509.837.6397

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March 15, 2013

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128 N. 2nd Street 4th Floor
Yakima, WA 98901

For:

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COUNTY OF YAKIMA SS

Timothy J. Graff, being first duly sworn on oath deposes and says that he is the Publisher of the DAILY SUN NEWS, a daily newspaper.

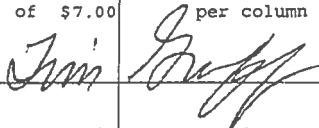
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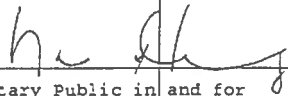
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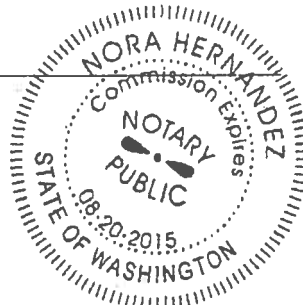
Yakima County Public Services

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published in regular issues (and not in supplemental forms) of said newspaper once each week for a period of 1 consecutive issue(s) commencing 03/14/13 and ending on 03/14/13, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of \$ 31.50, amount has been paid in full, at the rate of \$7.00 per column inch per insertion.


Subscribed and sworn to before me 03/15/13


Notary Public in and for
the State of Washington
030110-00000



Yakima County
Notice of Public Meeting
Lower Yakima Valley Groundwater
Advisory Committee

NOTICE IS HEREBY GIVEN that Yakima County is holding a public meeting of the Lower Yakima Valley Groundwater Advisory Committee on Thursday, March 21, 2013 at 5:00 PM at Radio KDNA Conference Rooms 1 & 2, 121 Sunnyside Ave. in Granger WA pursuant to Chapter 173-100-080 WAC Ground Water Management Areas and Programs.

For Additional Information

To learn more about the Lower Yakima Valley Groundwater Management Area, the Groundwater Advisory Committee, and its goals and objectives, please see the Lower Yakima Valley Groundwater Management Area on the County webpage at: <http://www.yakimacounty.us/gwma/>

For more information about the meeting, please contact Lisa Freund, Yakima County Public Services Administrative Manager at 574-2300.

Dated this Wednesday, March 13, 2013

PUBLISH: DAILY SUN NEWS
March 14, 2013

Meeting Time and Location**Thursday, March 21, 2013, 5:00 – 7:00 p.m.**

Radio KDNA in Granger
 121 Sunnyside Ave
 Conference rooms 1 & 2
 Granger, Washington

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

Purpose of the Meeting:

- Discuss development of goals and objectives for the GWMA program
- Review, make recommendations, and approve GWMA outreach materials
- Hear from sub-committees on their work

Agenda

Time	Topic	Purpose	Lead
5:00 – 5:10 p.m.	Welcome & Meeting Overview	Introduction, meeting overview, confirm agenda	Penny Mabie, facilitator
5:10 – 5:15 p.m.	Committee Business	<ul style="list-style-type: none"> • Approve Feb. 6 meeting summary • Approve Feb. 21 meeting summary • Sub-committee meeting schedule 	Penny Mabie
5:15 – 5:45 p.m.	Goals and Objectives	<ul style="list-style-type: none"> • Discuss development of GWMA program goals and objectives 	Penny Mabie, facilitator
5:45 – 6:15 p.m.	GWMA Outreach Materials	<ul style="list-style-type: none"> • Review and approve GWMA outreach materials 	Penny Mabie, facilitator EPO Sub-committee lead
6:15 – 6:45 p.m.	Sub-committee reports	<ul style="list-style-type: none"> • Hear from sub-committees (Data and Livestock/CAFO) • Provide feedback; plan for needed discussions in April 	Penny Mabie, facilitator Sub-committee leads
6:45 – 6:55 p.m.	Public Comment	Opportunity for members of the public to make comments to the committee.	

Lower Yakima Valley Groundwater Management Area Advisory Committee**Mar. 21,
2013**

6:55 – 7:00 p.m.	Next Steps	<ul style="list-style-type: none">• Review action items• Review next steps and topics for next meeting	Penny Mabie, facilitator
7:00 p.m.	Adjourn		

Next Meeting: March 21, 2013**Committee Members**

Stuart Turner, agronomist, Chelsea Durfey (alternate)	Turner and Co.
Helen Reddout, Wendell Hannigan (alternate)	Community Association for Restoration of the Environment
	Lower Valley Community Representative
Jean Mendoza, Eric Anderson (alternate)	Friends of Toppenish Creek
Jan Whitefoot, Jim Dyjak (alternate)	Concerned Citizens of the Yakama Reservation
Steve George, Justin Waddington (alternate)	Yakima County Farm Bureau
Jason Sheehan, Dan DeGroot (alternate)	Yakima Dairy Federation
Jim Trull, Ron Cowin (alternate)	Sunnyside-Roza Joint Board of Control
Laurie Crowe, Jim Newhouse (alternate)	South Yakima Conservation District
Mark Nielson, Heather Wendt (alternate)	Benton Conservation District
	Benton County Commission
Robert Farrell, John Van Wingerden (alternate)	Port of Sunnyside
Rand Elliott, Vern Redifer (alternate)	Yakima County Commission
Gordon Kelly	Yakima County Health District
Rick Dawson	Benton-Franklin Health District
Kefyalew Desta, Dr. Troy Peters (alternate)	WSU Irrigated Agriculture Research and Extension Center
Tom Eaton, Marie Jennings (alternate)	U.S. Environmental Protection Agency
Elizabeth Sanchez, Tom Ring (alternate)	Yakama Nation
Lonna Frans, Matt Bachmann (alternate)	U.S. Geological Survey
Kirk Cook, Jaclyn Ford (alternate)	Washington Department of Agriculture
Andy Cervantes, Ginny Stern (alternate)	Washington Department of Health
Charlie McKinney, Tom Tebb (alternate)	Washington Department of Ecology
Lino Guerra, Rick Perez (alternate)	Hispanic Community Representative

Committee Ground Rules:

- Come to committee meetings prepared
- Treat one another with civility
- Respect each other's perspectives
- Listen actively
- Participate actively
- Honor time frames
- Silence electronic devices during meetings
- Speak from interests, not positions.

2013 Meeting Dates:

March 21	July 18	November – tbd
April 18	August 15	(Thanksgiving
May 18	September 19	conflict)
June 20	October 17	December 19

MEETING SUMMARY

Radio KDNA

I. Call to Order

Member	Seat	Present	Absent
Stuart Turner	Agronomist, Turner and Co.		✓
Chelsey Durfey	Agronomist, Turner and Co. (alternate)	✓	
Mark Nielson	Benton Conservation District	✓	
Heather Wendt	Benton Conservation District (alternate)	✓	
VACANT	Benton County Board of Commissioners		
Rick Dawson	Benton Franklin Health District	✓	
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)	✓	
VACANT	Lower Yakima Community Representative		
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		✓
Marle 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	✓	
Jaclyn Ford	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)	✓	

Members' seats not represented: Benton County Commission and Lower Valley Community Representative

II. Committee Business:

Jean Mendoza has edits to the February 6, 2013 meeting summary. Those edits will be made and the meeting summary will be passed out again for committee approval.

February 21, 2013 meeting summary was approved by the committee.

Reminders:

- Please place all cell phones on silent. If you must take a call, please step outside of the room so as to not disrupt the meeting.
- Before leaving please check the room to make sure you have all your belongings.

- Please keep all side conversations outside of the room so members and observers can hear conversations.

Introductions.

Moment of silence.

Penny advised the committee that only three of the seven working groups met since the last meeting. It is important that the remaining groups meet and discuss their goals and objectives. It would be best if the working groups meet at least 10 days prior to the GWAC meeting in order to have materials ready for the committee's review. The working groups need to decide whether or not they will require outside technical help as well as membership.

The committee had a discussion about how working groups operate and how their membership is determined. Some committee members expressed concern that working group membership should be open to the community, in order to ensure community voices are fully considered in all discussions. Some members noted that there was an intent and a need to have additional working group members beyond the GWAC members and that those additional members should bring additional expertise to the group. Some committee members expressed a desire to have operational guidelines in place so the working group meetings can be productive. At the conclusion of the discussion, Penny summarized the outcome of the discussion as follows:

- Working groups should have a standing membership
- Working group meetings should be held in the same manner as GWAC meetings. Meetings should be announced on the GWMA website and held in a publicly accessible location. The working group meetings should be open to the public and include a set time during the meetings to take public comments.
- A list of the working groups and their purpose should be posted on the GWMA website, with a notice that working groups are seeking members with technical expertise or knowledge to assist the group.
- Chairs need to be decided on for the remaining workgroups.
- The current list of working group members will be sent to the full GWAC for validation and request for additional participation by GWAC members and alternates.

Working Group Chairs confirmed:

Charlie McKinney – Livestock/CAFO

Lisa Freund – Education and Outreach

Kirk Cook – Data Collection

Mark Neilson – Irrigated Agriculture (interim)

Penny advised the committee that during the May meeting she suggests a review of the Operating Guidelines to see if things are working well. That agenda item will include a discussion on whether or not the GWAC thinks they have the right membership at the table.

III. Goals and Objectives:

There was a brief discussion on the committee's GWMA Program goal statement. The committee decided that the goal statement should be over-arching and not include timeframes. After a discussion and testing for consensus, the committee decided the goal statement would be: "The purpose of the GWMA is to reduce nitrate contamination in groundwater below state drinking water standards."

One member, Mark Nielson, did not support the goal statement, but offered no minority report.

IV. GWMA Outreach Materials:

The committee was provided with three surveys for their review and approval:

- Risk Assessment for Water Supply Wells – Lower Yakima Valley
- Informational Public Questionnaire
- Questionnaire for Health Care Providers, along with an accompanying letter to providers

Risk Assessment survey: The survey is intended to be conducted by professionals. A few of the committee members voiced concerns with the risk assessment survey language; specifically concerning purpose and specificity of language. Steve George will send specific comments to Lisa for her review. The Education and Public Outreach (EPO) working group will work on clearly identifying the use of the survey, as well as clarifying some of the questions and the purpose of each question. The working group will incorporate edits received into the draft survey and send the updated risk assessment survey by email to the committee. The committee gave the EPO working group the go-ahead on the Risk Assessment survey due to the urgent timeline for getting the survey underway.

Informational Public Questionnaire: The intent of this questionnaire is to find out if the public knows whether or not they are on a public or private well and how the public is getting information on nitrates and what if anything does the public know about nitrates. The questionnaire would be handed out by agencies during meetings with the public. It could also be made available on the website. The committee will review a revised draft at their next meeting.

Questionnaire for Health Care Providers: The working group is requesting the advice and recommendation of the committee on who should sign the Health Care letter.

The committee was provided with a sheet with four different GWMA logos to choose from. Penny advised the committee to rate the four logos in order of their preference, with one being the most favored logo. Worksheets were turned into Penny and the results will be shared with the GWAC. A committee member asked why a logo was needed. The EPO working group had recommended in earlier sessions that the GWMA and GWAC should have a brand to help ensure their work was recognizable to the public.

V. Working Group reports:

Data Collection:

Kirk Cook was named chair for the working group. The working group includes two outside experts and one member of the public. The working group met and focused their discussion on three elements of work:

- Characterization report
- Creation of initial database
- Interface with other work group activities

Ali is in charge of putting together the characterization report. He is working with EPA, DOE, and other agencies. There are still several elements that are unknown. The characterization report will synthesize existing elements, update information, and identify current gaps in information

Database collection will come from several areas:

- VIRE
- USEPA
- USGS
- WDOH
- WSDA

The data collected from 1991-2001 is only a starting point. Ginny Stern with the Department of Health is working on realistic trends. There are data quality concerns with several wells.

The work group will be interfacing with other work groups on several fronts including:

- GW/ soil profile testing
- BMP assessments
- Health surveys (drinking water)

The working group went over the budget numbers for the short-term (6 to 9 months) and noted they will need somewhere between \$40,000 and \$60,000.

The working group is developing a scope as they decided that outside help may be needed. The proposed scope includes:

- Research data additions for inclusion into county GW database
 - Evaluate DOH data
 - Evaluate other data sources note previously considered
- Develop initial monitoring grid based on physical and social factors
 - Statistical monitoring procedures
 - Sampling locations
- Additional NO3 evaluations
 - QA/QC procedures
 - Document field procedures
- Sampling frequency
- Quarterly report development and review

The working group plans to have a draft to the committee by the next meeting.

Livestock/CAFO:

Charlie McKinney was appointed chair. In his absence, Steve George briefed the committee on the March 13th meeting. The working group has scheduled a standing meeting every 1st Thursday of the month from 5:00 p.m. to 7:00 p.m. They discussed the need to work with the other working groups and possibly having a joint meeting with Irrigated Ag. They further discussed the need for technical resources and how to obtain RFPs. There is a gap in the regulatory framework that needs to be looked into. The working group has no deliverables at this time.

Steve encouraged the staff from Heritage University to sign up on some of the working groups.

VI. Side note:

Each working group will be assigned their own color for written materials to make it easy for the committee to differentiate between the work groups.

The committee discussed needing to extend the time of the committee's meetings. With the working groups meeting regularly and providing the committee with materials to review, two hours does not seem enough time. The committee agreed to extend the meeting a half hour if the agenda warrants the extension.

Some members of the committee voiced interest in having a briefing on Ecology's "YAWN" report regarding nitrates in the air. After a brief discussion it was noted that the majority of the committee was not interesting in having a briefing. Members interested discussed the possibility of having a briefing before the committee's next scheduled meeting at approximately 4:30p.m. Penny will send an email to gauge interest.

216
217
218 **VII. Public Comment:**

219 Jessica Black, Heritage University – Heritage is very interested in this process as
220 their students are living in the area. Heritage has gone over the EPA's report and
221 believes it is just a starting point. There needs to be base line data. Heritage has
222 performed studies on nitrates. They have taken soil samples for testing. Samples
223 have been done of Toppenish Creek. Jessica wants the committee to know that
224 Heritage is a good resource for the committee to use.

225
226 Kathleen Rogers – Inquired if there is a Lower Valley Representative opening or
227 not? Penny responded that there has been some confusion on this matter and
228 that Ecology is working on this.

229
230 Victor Martinez – He has a place out in Zillah next to a dairy. The health
231 department came out and posted his home for non-occupancy due to septic
232 failure. He is unsure if this is the place to come to or not to discuss this matter.
233 Gordon Kelly was not present at the meeting so Rick Dawson advised Victor that
234 he would meet with him after the meeting to get him to the right people for
235 assistance.

236
237 Wendell Hannigan – Made the statement that there are a lot of multi-agency
238 bodies at the table and not a lot of citizen base. The citizens need a way to
239 comment. Additionally, he advised that Jean Mendoza brought water samples
240 from Mabton for the committee and he noticed that no one took a drink.

241
242 Kazu Sonoda, Dean of Heritage University – He advised that Heritage tested the
243 same samples as EPA and found there to be high fecal content. EPA does not
244 address this in their report. He states that when finding nitrate you will normally
245 find fecal content as well. If there is no fecal content then the nitrate is chemical
246 based.

247
248 Mr. Warner – In reading the materials, he would like to know why the committee
249 is using data collected for the Mahleur GWMA. Penny advised that the
250 committee has not accepted any data at this time. The Mahleur GWMA briefing
251 was just informational. The only data that can be used is data generated within
252 the boundaries of the GWMA.

253
254 Larry Findell – Advised that the Mahleur GWMA presentation was very helpful
255 and that the committee should look at the lessons learned.

256
257 **VIII. Next Steps:**

- 258
 - Adjust the agenda
 - Discuss goals and objectives.
 - Discuss EPO working group materials.

260

- Working groups need to meet and have reports ready to report back to this committee at the next scheduled meeting. Additionally, each working group needs to select a leader and have proposals for how they will spend their portion of the budget. (Reminder: Vern suggested that Yakima County can provide a staff member to be available for all working group meetings.)
- Mark Nielson has agreed to be interim chair for the Irrigated Ag working group and will put together a meeting prior to the GWAC meeting on April 18th.
- Penny will send an email proposal to the committee about having a briefing on Ecology's "YAWN" report.
- Stuart Turner will provide the committee with studies on lagoon assessment.

IX. 2013 Meeting Calendar:

- April 18
- May 16
- June 20
- July 18
- August 15
- September 19
- October 17
- November 21
- December 19

Meeting calendar will be reassessed at the end of the year.

The meeting was adjourned at 7:15 pm.

Meeting summary approved by the GWAC on April 18, 2013.

Data Collection, Characterization, Monitoring Working Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

Kirk Cook (Chair); Ali Sedighi; Andres Cervantes; Dr. Kefy Desta; Jan Whitetfoot; Jim Trull; Kevin Lindsey; Laurie Crowe; Lonna Frans, Matt Buchman; Lorraine Edmond; Mark Nielson; Steve Swope; Stuart Turner; Thomas Tebb

Meetings/Calls Dates

Meeting: Wednesday, January 13, 2013

Participants

Kirk Cook; Ali Sedighi; Andres Cervantes; Jim Dyjak; Kevin Lindsey; Matt Buchman; Steve Swope; Vern Redifer

Key Discussion Points

Kirk has sent 634 Nitrate data from 1991-2011. More data from the following sources will be sent to Ali (Yakima County):

WDOH (Andres Cervantes)

USGS (Matt Buchman)

EPA (data that EPA used to develop the screening analysis study, USGS has access to these data as well)

County (~180 points from Nitrate Treatment Program, the ongoing EPA monitoring wells that County has access to them, the "Risk Assessment for Water Supply Wells Survey" that will be performed in the near future)

Once all (or most!) of these data are put together, a QA/QC Plan must be developed for them and then, a gap analysis should be conducted.

Most of the wells will not have well depth information. However, those data can be considered as fuzzy data and might be useful.

Moving forward, the Data Workgroup will act as an information hub for other workgroups.

Resources Requested

N/A

Recommendations for GWAC

There is *at least* \$60,000 that can be used by the Data Workgroup before June 30th and the group should develop and submit funding request to GWAC soon (we need specifics for the money). This could include the budget for the characterization report and data gap analysis.

Deliverables/Products Status

Kirk Cook will present the outlines of this meeting to the GWAC on Thursday, March 21st and will talk about the injection wells in his presentation.

Yakima County has started working on the Area Characterization report. Once the initial report is complete, it will include recommendations on what and how to fill data gaps.

Proposed Next Steps

The group will meet every month and at least five days before the GWAC meetings. They can be in the form of conference calls or in-person meetings, based on the needs.

Livestock/CAFO Working Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

Charlie McKinney – Department of Ecology
Kirk Cook – Department of Agriculture
Dr. Key Delta – WSU
Elizabeth Sanchey – Yakama Nation
Heather Wendt - Benton Conservation District
Helen Reddout – CARE
Jaclyn Ford – Department of Agriculture
Jason Sheehan – Dairy Federation
Jim Newhouse – South Yakima Conservation District
Laurie Crowe – South Yakima Conservation District
Patricia Newhouse - Unknown
Steve George – Yakima County Farm Bureau
Stuart Turner – Turner & Co., Inc.
Ali Sedighi – Yakima County Staff Support (Not a member)

Meetings/Calls Dates

Meeting: Wednesday, March 13, 2013, 5:00 PM – 7:00 PM
Location: Radio KDNA, Granger, WA

Participants

Charlie McKinney – Department of Ecology
Helen Reddout – CARE
Jason Sheehan – Dairy Federation
Laurie Crowe – South Yakima Conservation District
Steve George – Yakima County Farm Bureau
Kathleen Rogers – Citizen
Larry Fendell – Citizen
Doug? Moore – CARE
Ali Sedghi – Yakima County staff support
Don Gatchalian – Yakima County staff support

Key Discussion Points

- Select a chairperson – Charlie McKinney
- Select a note taker – Yakima County staff
- Decide on recurring meeting frequency and location – First Thursday of every month, 5:00 PM -7:00 PM., Radio KDNA Granger
- Request additional Livestock/CAFO Workgroup members
- Discuss work by other Workgroups such as EPO, Irrigated Ag, Data
- Discuss proposed funding discussed during the February 21st GWAC meeting

Resources Requested

- Reserve meeting room for the monthly meeting
- Obtain easel, marker and tripod
- Scientist/s as future speaker to discuss effective BMPs

Recommendations for GWAC

- Hold a joint meeting with the Irrigated Ag Workgroup on data capture, data gap and study approach, e.g., Deep Soil Sampling (location, scope, purpose, intent, etc.)
- Discuss process in reviewing and providing feedback on proposed Agreements, Contracts, and Purchases
- Identify time limit (deadline) for submitting RFP
- Ask GWAC if we need to include non-regulated dairies (hobby farms) or irrigated ag (composting facility and unregulated lagoons)
- Ask GWAC when the Regulatory Workgroup will start meeting – concern about unclear regulatory authority, enforcement

Deliverables/Products Status

- None at this time

Proposed Next Steps

- Hold regular monthly Workgroup meetings
- Determine who will gather data, BMPs. data gaps
- Discuss potential scientists/experts who will be invited to speak before the Workgroup and/or GWAC on science, studies, BMPs, etc.
- Develop and submit funding request to GWAC soon (we need specifics for the money).

Irrigated Ag / Livestock –CAFO Joint Meeting

January 9, 2013, 6:30-8:30p

KNDA, 121 Sunnyside Avenue, Conf Rm 1, Granger WA 98932

Present:

Terry Keenhan – Yakima County
Charlie McKinney – Ecology
Steve George – Yakima County Farm Bureau
Stuart Turner – Turner & Co, Inc
Troy Peters – WSU
Kefy Desta – WSU
Jim Trull – RSBOJC
Gary Holwegnor – Port of Sunnyside
Bob Farrell – Port of Sunnyside

Tom Tebb – Dept of Ecology
Jean Mendoza – Friends of Toppenish Creek
Ali Sedighi – Yakima County
Chelsey Durfey – Irrigated Ag
Heather Wendt – Benton CD
Mark Nielson – Benton CD
Jason Sheehan – Yakima County Dairy Federation
Lino Guerra – CHMMET Eng, Inc
Vern Redifer – Yakima County

- CM Joint concerns on data needs for GWMA were expressed in the Irrigated Agriculture and Livestock – today’s meeting is to clarify overlaps and data needs and how to get there. Both groups say priority is to KNOW problem first.
- ST Have been working on Washington State enhancement to the NRCS 590 (nutrient (nitrogen) management) National Standard. We had an intern for 6-7 months collecting data out of Spokane NRCS. NRCS is through Federal Register – each state must modify. Farms need to do if receiving federal funds. AFO or CAFO have nutrient plan mandatory.
- CM Need to get specific on the nature of Yakima Valley - site specific investigations needed. Melanie Redding in Olympia at Ecology available for study designs. – background in hydrogeology.
- TT Have program for scientific investigation that can be available to work with County and WSU – define landscape and land use practices. This investigation staff can work with groups, such as County or WSU, that have technical staff. By this approach can generate more money as assemble more specific information and information needs.
- SG Who’s going to organize information? Offer our consultant Kevin Linsey to gather information and look at. Consultant has experience from Columbia and Umatilla GWMA’s on assembling information. We want to review the data collected.
- TP Looking at an early workshop with speakers with specific related experience in irrigated agriculture – what we learned, what we don’t know, sources of variability. Target presentations for combination of technical and layman.
- MN We are veering into information and data needs at this moment. Is this premature (in this meeting)?

Irrigated Ag / Livestock –CAFO Joint Meeting

January 9, 2013, 6:30-8:30p

KNDA, 121 Sunnyside Avenue, Conf Rm 1, Granger WA 98932

- TT Yakima County not necessarily the technical lead. \$450k set aside for data acquire / land use / public education.
- MN Where is overlap in the 2 committees & coordinators?
- TT Look for missing things in the outline, let's look at schedules.
- SG What costs a lot of money? Want UC Davis nitrate study people to focus needs. Need early implementation.
- MN Cannot get there quickly.
- ST Want to go after WQ grants that WSU can pursue by June 30th.
- VR Cost dependent on what we are going to do and what information. July 1, 2014 have 450k. We still don't know what you need.
- TT \$1.5 million?
- CM Have \$750k to write plan and educate.
- VR Money is to develop program. No really implementation. \$350k to be spent by June 31, 2013, then have to expend \$450k difference. For early implementation can go for low hanging fruit.
- MN Can do sampling early. Establish AG best practices.
- VR How much data collection do we do? That needs to be in program. Have to spend for facilitator and county then remainder – we know EPO \$ and we know have to do some monitoring – have already spent money.
- ST Want to identify already researched Irrigated Agriculture low hanging fruit (i.e., could adopt the NRCS 590. In 2 years this standard would be more aggressive than Columbia GWMA proposals).
- MN Benton County would not support NRCS590– We want to focus on transport versus loading (NRCS 590)
- ST Again Hammer versus Nail. We need baseline. Need hot spots. Use for future applications. Also identify other sources.
- MN What we see Columbia GWMA is canals diluting the nitrate concentrates since they are not lined.
- SG Not sure if OK with NRCS 590 – need to look at impact. Know cropping patterns and have seen lots of upgrades in last 10 years (i.e., hops are 99% drip irrigation). Better to assess current applications.

Irrigated Ag / Livestock –CAFO Joint Meeting January 9, 2013, 6:30-8:30p

KNDA, 121 Sunnyside Avenue, Conf Rm 1, Granger WA 98932

- MN Benton CD did 10 foot soil samples in individual fields. Observed significant vertical loss of nitrogen through column beyond root zone. Farmers surprised, since fertilized expensive.
- TT Conflict between what we are doing now versus what we did before and probably what we could do – not clear where we are and changes in impacts.
- SG NCRS590 may come.
- CD We will save money by not over-applying.
- SG Need to sample what is leaving growth zone.
- ST BMP is defined as technically possible/practical/economically feasible. Farms have to stay in business.
- MN Agree with TT. Need to go for early implementation items.
- VR Deep soil sampling is not in outline. What info do we need to define what we need?
- MN Farmers may not want to provide.
- TT Do we hold harmless during investigation phase to get information?
- JT Make sense to define problem then enter process. Have responsibility to know where problem in order to relieve others of concern. Easier to sell if we can show how benefit them financially. Demonstrate not wasting nutrients – would like as much testing upfront. Any resistance to wells?
- VR We did not directly sample, we used test strips for several hundred wells then ended up as well tests in lab. Yakima County well levels above 10 mg/l about 12%.
- ST Stop collecting that data?
- VR Don't know how representative that data was – inconsistent responses and approximate methods to address immediate needs. Need to establish consistent timelines. Concerns about legacy that still is to contribute – we need agreement in group on what problem is.
- JS Referring to section 2-1-2 water goals should be: 1) Find bad wells work on them first 2) find water contributes to aquifer – believe abandoned wells big problem. FIX NAIL.
- MN Disagree about abandoned wells.
- LG Fixing nails is buying water at local store. Have kick of information – by cost.

Irrigated Ag / Livestock –CAFO Joint Meeting January 9, 2013, 6:30-8:30p

KNDA, 121 Sunnyside Avenue, Conf Rm 1, Granger WA 98932

- VR Had only 6 month window – extensive outreach (flyers, meetings) gave free EPA testing. Had \$400k to buy Culligan reverse osmosis filters – had to give back a lot of money to Ecology – owners would not accept – many refusals not consider problem. Public health.
- TT Maybe not done for testing and filters. We also must for aquifers. Problem need aquifer testing network.
- MN Purpose is groundwater characterization.
- TT Decades of sampling says we have problem.
- ST 1) Can do nitrate testing with handheld tester; 2) in monitoring wells, not want to repeat EPA mistakes- get more accuracy.
- CM We are in agreement that need long term monitoring for baseline.
- TT There are lots of wells that are not recorded since before 1970, including abandoned wells.
- VR We get more monitoring and data on couple thousand wells – many not have casings or sealed
- JM How much cost to better well data?
- ST Bring researches in to look at data – California studies show irrigated Ag is 96% of problem. In Yakima, focus on CAFOS has created a blind spot to the real problem.
- VR The residential contribution to the problem contribution is probably small. Still need to help them as users. Studies indicate it will take a long time before all wells meet clean water standards. Need to focus on shorter term goals and not yet look beyond 20 years. Need water for people today also.
- ST Maybe many wells we cannot fix.
- SG Can we summarize now – only 15 minutes left.
- TT Desire for studies. Desire for how money prioritized. Whatever we do now need to deal with short term for contaminated wells.
- GL Lots of people paying lots of money for bottled water
- VR Everybody who wanted filtration systems got one – had more to give.
- JS Maybe open again as education in the program progress.
- VR Priority to help people.

Irrigated Ag / Livestock –CAFO Joint Meeting January 9, 2013, 6:30-8:30p

KNDA, 121 Sunnyside Avenue, Conf Rm 1, Granger WA 98932

- JS Separate wells and continue
- TT Need early characterization of both soil & water and their interaction.
- JS What about amnesty to increase information availability?
- TT We did 10 foot samples. We paid and we did not have to share – stayed confidential
- JS Look at for amnesty so not lose data like this.
- TT How did you handle this issue in Columbia basin MN?
- MN We said this issue could be bad for issue capture and asked contributors what would you like to do?
- TT Don't want to ignore bad problems.
- ST Did calculations to show how bad.
- VR Confidentiality important. Not want punishment. All EPA test data is confidential – found problems but it is not available. So mark X where number of bad locations.
- ST Not like their data – went back got different results. Still make data collected not threatening.
- MN Need data compiled versus categories (soil type, crop, etc). Need deep soil program & keep data sources concealed.
- JS Legal stuff stopped information sharing.
- MN At the end we could not service everybody as the demand outstripped the available resources.
- VR I remember a paper from California where they gathered the groundwater with nitrate to re-pump on land & recycle.
- TT Conflict or do something now (short term) vs long term needs. Need conversation around volunteering versus enforcement. Use and expand what did Columbia GWMA did. Need academic workshop & hold harmless.
- CM Are irrigated crops a source?
- MN We need nitrogen budget balance to establish percentages and volumes of source, application, source and escapement. There are numbers and rates & methodology that can be used with relative confidence with more data and work. Believe EPA did a bad job and not capture this.

Irrigated Ag / Livestock –CAFO Joint Meeting

January 9, 2013, 6:30-8:30p

KNDA, 121 Sunnyside Avenue, Conf Rm 1, Granger WA 98932

CM Need to estimate escapement.

ST Know atmospheric loss.

MN Water management issues need to be identified (hammer).

CD What about use it or lose for use of irrigation water rights?

TT Can bank the water.

MN Data acquisition is critical group for these other 2 groups.

JS Do early action plans to get short term stuff.

MN Took 2 years to get to early implementation.

VR Let's define something we want

HW We want first 1) Agriculture application water management. 2) Deep soil sampling.

MN Need continued water sampling and baseline.

VR Need specifics for our \$ asks.

HW We can give costs for.

SG Third should be outreach and education

SM Think we need long term baseline.

TT WSU meeting with experts should help us move to costs and scientists help define.

MN Hiring USGS and got shotgun approach – not helpful.

SG Define timeline for and with WSU – need characteristics information into the years budget for research grants and other issues– need data characterization in this years budget - need longer term statistics – in fill with labs.

TT What can Irrigated Ag do? How can EPA help?

SG Doing more innovation (ie slow release nitrogen).

CM May need subcontractor to concentrate on what to do.

VR We have to decide when to go for more money

**Irrigated Ag / Livestock –CAFO Joint Meeting
January 9, 2013, 6:30-8:30p**

KNDA, 121 Sunnyside Avenue, Conf Rm 1, Granger WA 98932

- TK Will NRC590 soon become mandatory and supercede or contribute to efforts?
- MN No -resistance has moved this back.
- JS What technical people do we need?
- SG Need to focus on funding right away. Put in a form for legislature.
- TT Needs to come from agencies (ie Farm Bureau)
- CM Need 3 areas for moving forward.
- VR We are waiting then for information from Heather and Mark on first 2 items- agriculture water management and deep soil sampling first.

Education & Public Outreach Working Group
Thursday, February 21, 2013
8:00 AM
Yakima County Courthouse - Room 418

AGENDA

EPO Lead

Direction Short-Term

Direction Long-Term

Media costs

Survey expectations

Education and outreach expectations for groups (GWMA and Stakeholders) wanting to provide information and links – possibly vetting process and format requirements, etc.

EDUCATION & PUBLIC OUTREACH Working Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

Andres Cervantes, Jean Mendoza, Tom Tebb, Rachel Little, Elizabeth Torres, Gretchen Stewart, Mark Nielson, Nieves Negrete, Patricia Newhouse, Tom Eaton, Dean Effler, Joye Redfield-Wilder, Wendell Hannigan, Stuart Turner

Meetings/Calls Dates

Meeting: Thursday, February 21, 2013 8:00 AM-10:00 AM

Participants

Andres Cervantes, Tom Tebb, Joye Redfield-Wilder (Ecology); Rachel Little, Benton Conservation District; Dean Effler, Elizabeth Torres, Jean Mendoza (via phone) and Lisa Freund (Yakima County)

Key Discussion Points

EPO Lead Confirmed (Lisa Freund)

Identified Short-Term/Long-Term Goals and Outreach Materials

Outreach Materials discussed:

1. Surveys (1. High Risk Well Users; 2. Community Awareness and 3. Health Professional Survey);
2. A draft letter to health professionals suggested by Dean Effler; (Tom Tebb will provide additional language to Dean)
3. Other Communications: FAQs/focus sheets and information to new mothers (need GWAC agencies and others to submit project-relevant materials).
4. Media: Web, print, newspaper, social media, radio, community events, TV
5. Project Logo

Resources Requested

Requesting partner agencies identify and forward their project-relevant FAQ/Focus materials to the EPO for web and print outreach. Please submit as Web links and/or in electronic format.

Recommendations for GWAC

EPO is requesting the GWAC's approval to continue developing/finalizing the three surveys and print materials for the GWAC's final review and approval at the March 21 meeting; and to approve a project logo design (three logos will be forwarded for the GWAC's consideration).

Deliverables/Products Status

1. Surveys (1. High Risk Well Users - survey is complete. Needs EPO & GWAC approval. 2. Community Awareness - Jean has submitted a draft survey. Needs EPO review & GWAC approval 3. Health Professional Survey. Not started. Dean/Jean to submit a draft?
2. GWMA Web site - has been developed and is online; needs Agency FAQs/Fact Sheets; needs EPO review and refinement. <http://www.yakimacounty.us/gwma/>
3. Letter to health professionals - Dean will revise the draft based on today's EPO comments. EPO will review and make recommendations on letter to the GWAC. (Note: Tom Eaton suggested at the 2/21/13 GWAC meeting to solicit a healthcare professionals organization to endorse/sign the letter)
4. Media: Web, print, newspaper, social media, radio, community events, TV - to be determined based on other outreach instruments (surveys, print materials, etc.)
5. Project Logo - five logos have been created. EPO needs to review and cut choices to three; bring three choices to GWAC, which will determine final logo.

Proposed Next Steps

The EPO will create a packet of outreach materials for the GWAC's review prior to the March 21 meeting. The packet will include the three surveys, a letter to health care professionals, and logos.

The EPO will ask the GWAC to review/make suggestions and approve materials at March 21 meeting.

Next meeting of the EPO will be early March (date to be determined).

EDUCATION & PUBLIC OUTREACH Working Group

Charge from Groundwater Management Area Advisory Committee

Create and present a packet of outreach materials for GWAC review and approval at its March 21, 2013 meeting.

Working Group Members

Andres Cervantes, Jean Mendoza, Tom Tebb, Rachel Little, Elizabeth Torres, Gretchen Stewart, Mark Nielson, Nieves Negrete, Patricia Newhouse, Tom Eaton, Dean Effler, Joye Redfield-Wilder, Wendell Hannigan, Stuart Turner

Meetings/Calls Dates

Meeting: Wednesday, March 13, 2013 2:00 PM-4:00 PM

Participants

Andres Cervantes, Joye Redfield-Wilder (Ecology); Rachel Little, Benton Conservation District; Dean Effler, Jean Mendoza, Gretchen Stewart (via phone), Patricia Newhouse, Jim Dyjak, and Lisa Freund (Yakima County)

Key Discussion Points

I. Outreach Materials:

1. Surveys (1. High Risk Well Users; 2. Public Informational Questionnaire and 3. Health Care Professional Questionnaire);
2. Agency Web Links
3. Letter to health professionals with attachments;
4. GWAC Logo

II. Temporary EPO Coordinator (March 25-April 30)

Resources Requested

N/A

Recommendations for GWAC

EPO is requesting the GWAC to review and approve the three surveys, healthcare provider letter and attachment. In addition,

Healthcare provider letter: the EPO is recommending that the letter be signed jointly by the Benton Franklin Health District & Yakima County Health District, and/or the GWAC. Health districts to determine who their agency contact(s) will be.

GWAC Logo: Approve a GWAC logo from the 4 choices provided.

Information only: Andres Cervantes will serve as the temporary EPO coordinator March 25-April 30, 2013.

Deliverables/Products Status

1. Surveys - 1. High Risk Well Users 2. Public Informational Questionnaire and 3. Health Professional Survey are complete and approved by EPO. Requesting GWAC approval.
2. GWMA Web links - related agency Web links have been reviewed and organized. Requesting GWAC approval of proposed links.
3. Letter to health professionals - letter is complete. Requesting GWAC approval.
4. GWAC Logo - five logos were created; EPO reviewed and reduced choices to four; the choices will be presented to the GWAC with the request to approve one.

Proposed Next Steps

The EPO will ask the GWAC to review and approve materials at its March 21 meeting.

Patricia Newhouse will present Spanish-language informational documents to ESL class, obtain feedback and report back to the EPO.

Next meeting of the EPO is Thursday, April 4, 2013 at 9:00 a.m., Yakima County Courthouse Fourth Floor, room 419.

Attachment B

GWMA Working Groups List



2013

Lower Yakima Valley GWMA

GWMA WORKING GROUP GWAC MEMBERS

DRAFT FOR REVIEW ONLY

Livestock CAFO	Irrigated Agriculture	Residential, Commercial, and Municipal	Data Collection, Characterization, Monitoring	Regulatory Framework		Education & Public Outreach		Funding
				Chair:	County Support:	Chair:	County Support:	
Chair: Charlie McKinney	Chair: Mark Nielson	Chair:	Chair: Kirk Cook	Chair:	County Support: Vern Redifer	Chair: Lisa Freund	County Support: Lisa Freund	Chair:
County Support: Ali Sedighi	County Support: Ali Sedighi	County Support: Ali Sedighi	County Support: Ali Sedighi	County Support: Vern Redifer	County Support: Vern Redifer	County Support: Lisa Freund	County Support: Lisa Freund	County Support: Vern Redifer
GWAC Members: Kirk Cook	GWAC Members: Chelsea Durfey	GWAC Members: Donald Gatchalian	GWAC Members: Andy Cervantes	GWAC Members: Andy Cervantes	GWAC Members: Andy Cervantes	GWAC Members: Andy Cervantes	GWAC Members: Andy Cervantes	GWAC Members: Jean Mendoza
Dr. Kefy Desta	Kirk Cook	Dr. Kefy Desta	Dr. Kefy Desta	Charlie McKinney	Charlie McKinney	Jean Mendoza	Jean Mendoza	Thomas Tebb
Elizabeth Sanchez	Dr. Kefy Desta	Elizabeth Sanchez	Jan Whitefoot	Dan DeGroot	Dan DeGroot	Stuart Turner	Stuart Turner	
Heather Wendt	Dr. Troy Peters	Gordon Kelly	Jim Trull	Jaclyn Ford	Jaclyn Ford	Thomas Tebb	Thomas Tebb	
Helen Reddout	Elizabeth Sanchez	Jan Whitefoot	Laurie Crowe	Jason Sheehan	Jason Sheehan	Tom Eaton	Tom Eaton	
Jaclyn Ford	Jean Mendoza	Jim Dyjak	Lonna Frans	Jean Mendoza	Jean Mendoza			
Jason Sheehan	Jim Trull	John Van Wingerden	Mark Nielson	Laurie Crowe	Laurie Crowe			
Jean Mendoza	John Van Wingerden	Robert Farrell	Stuart Turner					
Jim Newhouse	Laurie Crowe	Stuart Turner	Thomas Tebb					
Laurie Crowe	Lino Guerra	Tom Ring						
Lino Guerra	Lonna Frans							
Steve George	Robert Farrell							
Stuart Turner	Ron Cowin							
	Stuart Turner							
	Thomas Tebb							

Updated May 2, 2013

Attachment C

Area Characterization Report

Table of Content



- 7.6.3 Relationship with Well Use
- 7.6.4 Relationship with Irrigated and Non-Irrigated Areas
- 7.6.5 Relationship with Soil and Crop Types
- 7.6.6 Relationship with Well Age
- 7.7 Time Trends in Groundwater Nitrate Concentrations
- 8. NITRATE MOVEMENT IN THE VADOSE ZONE
 - 8.1 The Nitrogen Cycle in Soils
 - 8.1.1 Soil Nitrogen States
 - 8.1.2 The Soil Nitrogen Transformations
 - 8.2 The Soil Water Budget
 - 8.2.1 Precipitation
 - 8.2.2 Evapotranspiration
 - 8.2.3 Irrigation
 - 8.2.4 Soil Water Storage
 - 8.2.5 Root Water Uptake
 - 8.2.6 Runon and Runoff
 - 8.2.7 Downward and Upward Flow
 - 8.3 Assessment of Agricultural Nitrogen Management Options
 - 8.3.1 Site and Soil Properties
 - 8.3.2 Fertilizer Selection
 - 8.3.3 Crop Selection
 - 8.3.4 Irrigation Management
 - 8.3.5 Data Collection Requirements for Site Monitoring

Area Characterization Report

TABLE OF CONTENT

1. INTRODUCTION
2. BACKGROUND
3. GROUNDWATER MANAGEMENT AREA DELINEATION AND RATIONALE
4. LAND/WATER USE MANAGEMENT JURISDICTIONS
5. AREA DESCRIPTION
 - 5.1 Topography
 - 5.2 Climate
 - 5.3 Population
 - 5.4 Land Use
 - 5.4.1 Production Agriculture
 - 5.4.2 Land Application of Wastewater and Process Water
 - 5.4.3 Dairy and Livestock Farming
 - 5.4.4 Domestic Sewage Systems
 - 5.4.5 Other Land Uses
 - 5.5 Historical and Current Water Use and Water Resources
 - 5.6 Projections of the Future Groundwater Supply Needs
6. HYDROGEOLOGY
 - 6.1 Stratigraphy
 - 6.2 Groundwater Occurrence within the Aquifers
 - 6.2.1 Hydraulic Characteristics and Properties of the Aquifers
 - 6.2.2 Geologic Controls on Groundwater Flow in the Aquifers
 - 6.2.3 Flow Directions and Quantity of Groundwater Flow in the Aquifers
 - 6.2.4 Water-table Contour and Potentiometric Maps of the Aquifers
 - 6.2.5 Perennial Streams and Springs
 - 6.2.6 Aquifer Recharge and Discharge Areas
 - 6.2.7 Distribution and Quantity of Natural and Man-induced Aquifer Recharge and Discharge
 - 6.3 Vadose Zone Geology
 - 6.4 Soils
7. GROUNDWATER QUALITY RELATIVE TO NITRATE
 - 7.1 Natural Sources of Groundwater Nitrate
 - 7.2 Presence of Nitrate in Groundwater Before Advent of Large-Scale Irrigation
 - 7.3 Historical Data Availability and Limitations
 - 7.4 Historical Presence and Distribution of Nitrate in Groundwater
 - 7.5 Objectives and Limitations of the Previous Baseline Sampling Results
 - 7.6 Current Occurrence and Distribution of Nitrate in Groundwater
 - 7.6.1 Regional Observations
 - 7.6.2 Relationship with Well Depth

Attachment D

- 1. High Risk Well Assessment Survey**
- 2. Information Public Questionnaire**
- 3. Medical Provider Cover Letter, Questionnaire,
Methemoglobinemia Fact Sheet and GWMA Program Map**



RISK ASSESSMENT FOR WATER SUPPLY WELLS - LOWER YAKIMA VALLEY (GWMA 2013)

Answers to the following questions will help assess the potential health risks for private well owners. Specifically, those risks associated with high levels of nitrate in the well. Potential Public Health Risk (PHR) has a checkbox highlighted in yellow, were those considered a potential High Public Health Risk (HPHR) will also have a bold border. Of those boxes checked in a potential High Public Health Risk, recommendations for testing, repairs, or maintenance will be identified.

As a general rule the Washington Departments of Health and Ecology recommend private groundwater wells be tested for nitrate every three years and bacteria every year.

Classify the surrounding area as	<input type="checkbox"/> Farm	<input type="checkbox"/> Rural	<input type="checkbox"/> Rural Community Sub-Division	<input type="checkbox"/> Suburb
Does the home have a treatment system installed?	<input type="checkbox"/> Yes		<input type="checkbox"/> No	
If yes what kind?	<input type="checkbox"/> POU	<input type="checkbox"/> POE	<input type="checkbox"/> Ion Exchange / Water Softener	<input type="checkbox"/> Other
Does the home have bottled water?	<input type="checkbox"/> Yes		<input type="checkbox"/> No	
Sample Scheduled or Taken?	<input type="checkbox"/> Nitrate	<input type="checkbox"/> Nitrate Test Strip	<input type="checkbox"/> Coliform	<input type="checkbox"/> Other
GPS Coordinates	X: _____		Y: _____	

<p>High Risk: (80% of PHR and HPHR boxes checked) Possible water supply contaminated and for the long term, may need testing, improvements, repairs, or replacement. You should test your water immediately. If tests are positive for Fecal or E.Coli bacteria, or higher than 10 mg/L for nitrate you should consider using an alternative source of drinking water for daily uses, until the observed risk(s) can be corrected. If you believe you or your family is experiencing health effects associated with your drinking water, you should discuss the test results with your health care provider.</p> <p>Moderate Risk: (60% of PHR and HPHR boxes checked) Your well may be a potential health threat to anyone consuming the water, and the well may be susceptible to contamination. Recommend regular well maintenance and frequent water tests for coliform bacteria and nitrate.</p> <p>Low Risk: Recommend regular well maintenance and water tests for nitrate and bacteria.</p>	Section Summary (Potential at bottom of section)		Boxes Checked	
			HPHR	PHR
	1	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	2	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	3	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	4	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Total	Yes: _____ No: _____		
<input type="checkbox"/> High		<input type="checkbox"/> Moderate	<input type="checkbox"/> Low	

Section 1: General Population Questions	Yes	No	Unk	Comments
1. How many residents live in your household? *(Indicate number of members in household)				
2. Are there very young children less than 1-yr old in your household?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Are there pregnant women in your household?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Women who can possibly become pregnant in your household?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Are there chronically ill people in your household?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Would you be willing to provide your household income?				
7. What is the primary language spoken in your home?				
Total High Risk Boxes Checked:	At Risk Population:		Yes: <input type="checkbox"/>	No: <input type="checkbox"/>

Section 2: General Water Quality Questions (Total Points Possible: 30)	Yes	No	Unk	Comments
8. Has the well been tested for Total Coliform (Bacteria)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
a. If yes, did the previous test show a positive result for coliform bacteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. If yes, did the previous test show a positive result for Fecal or E. Coli bacteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Has the well been tested for nitrate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

a. If yes, did the previous test show a test result lower than 10.0 mg/L?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. If yes, did the previous test show a test result higher than 10.0 mg/L?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Does the well water have an unusual taste, odor, or color?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Total High Risk Boxes Checked:		Potential Public Health Risks:	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
Section 3: Sanitary Control Area Risk Factors	Yes	No	Unk	Comments
11. Do neighbors live on small lots with onsite septic systems (less than 1-acre)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
a. Is the well within 50 ft of a septic tank or 100 ft of a drainfield?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Are there abandoned or unused wells within 600 ft of your well?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Is there surface water within 100 feet of the well? (like springs, ponds, lagoons, rivers, unlined irrigation ditches or wetlands)	<input type="checkbox"/>	<input type="checkbox"/>		Surface Water Type
a. Is there surface water within 200 feet of the well?	<input type="checkbox"/>	<input type="checkbox"/>		Surface Water Type
13. Do you use the area surrounding the well as a pasture or have structures to house personal animals?	<input type="checkbox"/>	<input type="checkbox"/>		Type: _____ How Many: _____
a. Does your neighbor use the area surrounding near the well as pasture or have structures for housing personal animals?	<input type="checkbox"/>	<input type="checkbox"/>		Type: _____ How Many: _____
14. Do you see large mounds of manure near your well, within 100-ft?	<input type="checkbox"/>	<input type="checkbox"/>		Yours: _____ Neighbors: _____
a. Do you see large mounds of manure near your well, within 200-ft?	<input type="checkbox"/>	<input type="checkbox"/>		Yours: _____ Neighbors: _____
15. Have you seen manure spreading near your well, within 100-ft?	<input type="checkbox"/>	<input type="checkbox"/>		How Often: _____
a. Have you seen manure spreading near your well, within 200-ft?	<input type="checkbox"/>	<input type="checkbox"/>		How Often: _____
16. Is your well located within 100-ft of any type of agricultural field or orchard?	<input type="checkbox"/>	<input type="checkbox"/>		Crop: _____ Distance: _____
a. Is your well located within 200-ft of any type of agricultural field or orchard?	<input type="checkbox"/>	<input type="checkbox"/>		Crop: _____ Distance: _____
17. Have you sprayed or seen any chemicals sprayed within 100-ft of your well?	<input type="checkbox"/>	<input type="checkbox"/>		How Often: _____ How Close: _____
a. Have you seen any chemicals sprayed within 200-ft of your well?	<input type="checkbox"/>	<input type="checkbox"/>		How Often: _____ How Close: _____
Total High Risk Boxes Checked:		Well Susceptible to Surface Contamination:	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
Section 4: Well Construction	Yes	No	Unk	Comments
18. Do you know how old your well is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____-yr
19. Do you have a copy of the well log?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20. Do you know how deep your well is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____-ft
21. Is it a hand dug well?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22. Is it a driven well (sand point)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
23. Does the well appear poorly maintained (wellhead or pump house condition)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
24. Does the well appear to have a broken wellhead seal or holes in the casing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
25. Is the wellhead subject to flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Total High Risk Boxes Checked:		Well Vulnerable to Surface Contamination:	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>

Please return this survey to: Lower Yakima Valley Groundwater Management Area, c/o Yakima County Public Services
Department, 128 N 2nd St, Fourth Floor, Yakima WA 98901

Lower Yakima Valley Groundwater Management Area

Informational Public Questionnaire

The purpose of this questionnaire is to learn more about water quality and nitrates in drinking water from people who live here. Thank you for sharing your ideas.

1. Where does the water in your home come from?

PRIVATE WELL

SHARED WELL

COMMUNITY WATER

2. If you have a private or shared well, where do you get your drinking water?

TAP WATER

BOTTLED

TREATED WATER

3. If you are on a community water system, where do you get your drinking water?

TAP WATER

BOTTLED

4. Are you aware of the potential health hazards in drinking water with high levels of nitrates? YES NO

5. Has your well water been tested for nitrates? YES NO DON'T KNOW

6. Has your well water been tested for bacteria? YES NO DON'T KNOW

7. Do you own your home or rent? OWN RENT

8. If you rent, do you feel comfortable asking your landlord to have the water tested? YES NO

9. Who would you trust to give you reliable information about nitrates in drinking water?

10. Are you aware of anyone in your home that has become ill from drinking water? YES NO

Please describe: _____

Has this been confirmed by a physician? YES NO DON'T KNOW

11. Are there things that you do to make sure your drinking water is safe? YES NO

Lower Yakima Valley Groundwater Management Area

Informational Public Questionnaire

Please describe _____

12. Do you live in the Lower Yakima Valley? YES NO VISIT DON'T KNOW

13. How long have you lived in your home? Years _____ Months _____

14. Is there a child under the age of six months in your home? YES NO

15. Have you heard of the Lower Yakima Valley Ground Water Management Area (GWMA)? YES NO

16. Where have you heard of the GWMA? Please circle all that apply:

RADIO TELEVISION NEWSPAPER NEIGHBORS AT WORK HEALTH CARE Other

(END OF SURVEY QUESTIONS)

If you wish to receive additional information on nitrates in drinking water and the Lower Yakima Valley Groundwater Management Area, you may either visit www.yakimacounty.us/GWMA/ or provide the following:

Name: _____

Mailing Address: _____

Phone: _____

E-mail: _____

Thank you for participating in this survey. We will use the information to increase our understanding of what people know about groundwater contamination and to improve our efforts to educate people on how to identify and prevent nitrate contamination of the groundwater.

Please return this survey to: Lower Yakima Valley Groundwater Management Area, c/o Yakima County Public Services, 128 N 2nd St, Fourth Floor, Yakima WA 98901.



Dear Medical Provider:

The Lower Yakima Valley Ground Water Management Area Advisory Committee (GWAC) is working to address nitrate contamination and its sources in a wide area where elevated levels of nitrate have been identified in private drinking water wells (see attached map).

This letter is being written in cooperation with the Benton-Franklin and Yakima County Health Districts, which are active members of the advisory committee, and is designed to alert you to the health risks associated with nitrate contamination.

Attached is a handout to provide you with a brief refresher about methemoglobinemia in infants. Symptoms are common and have the potential of being under diagnosed.

At greatest risk are infants younger than six months of age because of the immaturity of their enzyme systems which convert methemoglobin back to hemoglobin.

Maternal exposure to environmental nitrates and nitrites may increase the risk of pregnancy complications such as anemia, abortion, premature labor, or preeclampsia. Study of other potential reproductive, developmental, or carcinogenic effects has not produced conclusive results.

If you are concerned about a patient the appropriate testing should be done to verify your diagnosis. Upon confirmation you should report the condition to the communicable disease section at the Yakima or Benton-Franklin Health Districts depending on your patient's county of residence. Environmental Health personnel at each district should be able to assist you with water quality information, if available, as well as assist the family with sampling of their water as needed.

Yakima County Health District Communicable Disease Report Line: 509-249-6521; for information about water quality, treatment, options, call the Environmental Health help desk at 509-249-6508. Benton-Franklin Health District: 509-460-4200.

We hope you will consider discussing the drinking-water conditions of your patients as you treat them, especially if they reside in the Lower Yakima Valley and exhibit symptoms of methemoglobinemia.

Suspected sources of nitrate contamination are from a variety of land uses, including commercial fertilizers for crop production, animal manures, septic systems and land application of waste water.

More information about the Lower Yakima Valley Ground Water Management Area is available online at: <http://www.yakimacounty.us/gwma/>

Sincerely,

Andre Fresco, Administrator
Yakima County Health District

Amy D. Person, M.D., District Officer
Benton-Franklin Health District

attachments: Methemoglobinemia in Infants
LYVGWMA Vicinity Map

Questionnaire for Health Care Providers

Nitrate contamination of drinking water is a growing concern in the United States and around the world. The Lower Yakima Valley has a history of elevated nitrates in groundwater wells that sometimes exceed drinking water standards. In 2011, the Lower Yakima Valley Groundwater Management Area (GWMA) was formed to address nitrate contamination.. The most pressing health issue related to elevated nitrate levels in drinking water is methemoglobinemia in very young children. You can help us gather critical information by completing and returning this questionnaire. We understand that confidentiality prevents sharing of patient information and ask that you provide general information only. Thank you very much for sharing your time and expertise.

1. During the past five years have you cared for infants with signs and symptoms of methemoglobinemia, such as cyanosis in the absence of heart and lung pathology? YES NO

Comments:

2. Are you aware of the relationships between methemoglobinemia and

- | | | |
|--|-----|----|
| a. infants (<6 mo.) and well water contaminated with nitrates? | YES | NO |
| b. diarrhea in infants? | YES | NO |
| c. sepsis in infants? | YES | NO |

3. Do you question about the use of well water when dealing with infants <6 mo. YES NO

4. Do you question about the use of well water when dealing with pregnant women? YES NO

5. Do you encourage families with a newborn to have their well tested for bacteria and nitrates to find out if it's safe before using it to mix formula for their new infant? YES NO

6. How would you like to learn more about nitrate related problems?

ON-LINE _____ WORKSHOPS _____ WRITTEN SELF STUDY _____ HEALTH DEPARTMENT

MAILING _____ OTHER (Please describe) _____

Questionnaire for Health Care Providers

7. Please share your thoughts on this subject

(END OF SURVEY)

If you wish to receive additional information on the Lower Yakima Valley Groundwater Management Area, you may either visit www.yakimacounty.us/GWMA/ or provide the following:

Name: _____

Mailing Address: _____

Phone: _____

E-mail: _____

Thank you for participating in this survey.

Please return this survey to: Lower Yakima Valley Groundwater Management Area, c/o Yakima County Public Services, 128 N 2nd St, Fourth Floor, Yakima WA 98901.

http://www.nap.edu/catalog.php?record_id=4795

