



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

February 13, 2013

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

Re: Lower Yakima Valley GWMA - 2012 Fourth-Quarter Report (IAA No. C1200235)

Dear Charlie:

Enclosed please find one (1) copy of Yakima County's fourth-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 and 2.1 – 2.4 as required under the agreement.

It also includes the records from the GWAC meetings of January 17 and February 6, 2013, relative to the approval of deliverable 2.3 - the two-year work plan, schedule and budget.

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 – 4th Quarter 2012 Report
Lower Yakima Valley GWMA
February 13, 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 meeting records of October 18, November 15, and December 12, 2012; January 17 and February 6, 2013.

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 fourth quarter was to develop and come to agreement on the two December 31 contract deliverables to Ecology: the two-year work plan, schedule and budget for the project development of the GWMA program, and the Public Outreach and Education program.

Note: As the GWAC had not come to agreement on the work plan by December 31, Ecology verbally extended the deliverable date, and the GWAC subsequently approved the work plan at a special budget meeting on February 6, 2013. 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.

Two-Year Work Plan

At its September 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.

Creation of Work Groups

At the October meeting the GWAC agreed to organize itself into seven work groups to correspond with the seven sections of the proposed work plan framework: Data Collection, Characterization and Monitoring; CAFO and Livestock; Irrigated Agriculture; Residential, Commercial, Industrial, Municipal & Domestic (RCIMD); Regulatory Framework; Education & Outreach; and Funding. The GWAC agreed that each group would be responsible for writing and organizing its section of the work plan. Members were asked to sign up to serve on one or more committees of interest to them.

Ground rules were also established for the work groups: groups would be created by and for the GWAC; the GWAC would decide who would serve on each work group, and the charge of each group. Work groups would be responsible for reporting back to the GWAC with a summary of their meetings, work products and recommendations.

The County volunteered to have at least one county representative on each work group and to develop the framework and preliminary work plan for the GWAC's review.

The GWAC used work group breakout sessions at the November and December meetings to focus on developing five plan sections: Data Collection, CAFO and Livestock, Irrigated AG, RCIMD, and Education and Outreach. The County offered to draft the remaining two sections, Regulatory Framework and Funding. Between meetings the County took input from the GWAC and, using the plan framework as the foundation, continued to develop the work plan.

At the December meeting, following lengthy discussion, the GWAC concluded it was not prepared to approve the work plan; however, members agreed to consider it at the January 17, 2013 meeting, provided they had sufficient time to review it prior to meeting.

Ecology Deliverable Extension

With the December deliverable date approaching, the Department of Ecology's GWAC Representative, Charlie McKinney, offered to extend the work plan deliverable date to early 2013. The County offered to continue developing the plan with the GWAC's input. The committee, in turn, agreed the work groups should continue meeting between the December and January meetings to work on each section. The GWAC would then review the entire plan prior to the January 17, 2013 meeting with the intent to approve it at that meeting.

Note: led by Charlie McKinney of Ecology, the CAFO and Livestock and Irrigated Ag work groups met jointly on January 9 to discuss data needs; there were no other work group meetings between December and January.

2.3 GWAC Work Plan Approval

Submit a two-year work plan, schedule and budget for the project development of the GWMA program by the end of the fourth quarter, December 31, 2012 (extended)

At the January meeting discussion continued regarding the work plan and a preliminary, short-term budget. Several members requested language be added to the work plan before they would approve the work plan. The changes were made and presented at a special GWAC budget meeting on February 6, 2013. Following discussion, GWAC approved the work plan, opting not to include a final budget with the plan. The Work Plan is included as Attachment (B)

2.4 Education and Public Outreach Program

Submit a report describing the public outreach and education program as agreed upon by the GWAC including a web-based information application by the end of the fourth quarter, December 31, 2012.

Creation of the Education and Public Outreach (EPO) Work Group

The GWAC approved the creation of an Education and Outreach work group at its September meeting. GWAC members Jean Mendoza, Friends of Toppenish Creek; Ramon Tobias, Hispanic Representative (who later resigned from the GWAC); and Andres Cervantes of Department Of Health agreed to join the group. EPA and the Benton Conservation District offered to assign staff to the effort; Lisa Freund of Yakima County agreed to be the county representative.

Meetings and Program Development

The EPO and various ad hoc community members met four times between the October and December GWAC meetings to create the EPO program (October 1 and 12; November 1 and 20).

To create the program, the EPO group developed a strategy that identified target audiences; identified the objectives for each audience; developed outreach tools to be used for each audience and evaluation measures to evaluate the outcomes of the strategy.

The EPO's proposed outreach program was reviewed by the GWAC and approved at its December 12, 2012 meeting. The program is included as Attachment (C)

Web-Based Information Application

A website was developed to support the EPO plan and objectives. It offers information about the GWAC; provides regular updates on its meetings, outcomes and work products, and offers a means for the public to communicate back to the GWAC. It can be viewed at:

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

Attachment A

**Meeting Records of October 18, November 15 and December 12, 2012; and
January 17 and February 6, 2013**

Lower Yakima Valley GWAC Meetings

Attendance

GWAC Meetings

PRIMARY (ALTERNATE)	18-Oct-2012	15-Nov-2012	12-Dec-2012	17-Jan-2013	6-Feb-2013		
Elliott, Rand	attended	absent	attended	attended	attended		
(Redifer, Vern)	attended	attended	absent	attended	attended		
Sanchez, Elizabeth	attended	attended	absent	attended	absent		
(Ring, Tom)	attended	attended	attended	attended	absent		
George, Steve	absent	attended	attended	attended	attended		
(Waddington, Justin)	N/A	N/A	absent	absent	absent		
Sheehan, Jason	attended	attended	attended	attended	attended		
(DeGroot, Dan)	attended	attended	attended	attended	absent		
Turner, Stuart	attended	attended	attended	attended	attended		
(Durfey Chelsea)	N/A	N/A	N/A	N/A	attended		
Reddout, Helen	attended	attended	attended	absent	absent		
(Hannigan, Wendell)	absent	attended	absent	absent	attended		
- ALT/Alt Rep: Fendell, Larry	N/A	N/A	N/A	attended	attended		
Mendoza, Jean	attended	attended	attended	attended	attended		
(Anderson, Eric)	absent	absent	absent	absent	absent		
Whitefoot, Jan	attended	attended	attended	absent	absent		
(Dyjak, Jim)	attended	attended	attended	attended	attended		
Crowe, Laurie	attended	attended	attended	attended	absent		
(Newhouse, Jim)	absent	absent	attended	absent	absent		
Nielson, Mark	attended	attended	absent	attended	attended		
(Wendt, Heather)	attended	attended	absent	absent	attended		
Farrell, Robert	attended	attended	attended	attended	attended		
(Van Wingerden, John)	attended	absent	attended	attended	attended		
Cook, Kirk	attended	attended	attended	absent	attended		
(Ford, Jaclyn)	absent	absent	absent	absent	absent		
Cervantes, Andy	attended	attended	attended	attended	attended		
(Stern, Ginny)	absent	absent	absent	absent	absent		
McKinney, Charlie	attended	attended	attended	absent	attended		
(Tebb, Tom)	attended	absent	attended	attended	absent		
Eaton, Tom	attended	attended	absent	attended	absent		
Kelly, Gordon	absent	attended	attended	attended	attended		
Dawson, Rick	N/A	N/A	N/A	N/A	attended		
Desta, Dr. Kefy	attended	attended	absent	attended	absent		
Frans, Lonna	attended	attended	attended	absent	absent		
- ALT/Alt Rep: Ely, Matt	N/A	N/A	N/A	N/A	attended		
(Bachmann, Matt)	absent	attended	absent	absent	absent		
Trull, Jim	attended	attended	absent	absent	attended		
(Cowin, Ron)	absent	absent	attended	attended	absent		
Guerra, Lino	N/A	N/A	N/A	N/A	absent		
(Perez, Rick)	N/A	N/A	N/A	N/A			
Tobias, Ramon	absent	RESIGNED					
(Tobias, Margarita)	absent	RESIGNED					
Morales, Robert	absent	absent	RESIGNED				
Perkins, Bruce	absent	attended	absent				
Beaver, Jim	absent	absent	absent	absent			

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, October 18, 2012 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 October, 2012

Publish: October 11, 2012

Bill: FC3463-100-1

Yakima County

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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 11th Day of October, 2012

(246815) October 11, 2012

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Please confirm placement prior to deadline,
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Date:	10/09/12
Account #:	110536
Company Name:	YAKIMA COUNTY SURFACE WATER MGT DIV
Contact:	JEFF LEGG
Address:	128 NORTH 2ND STREET ROOM 408 YAKIMA, WA 98901
Telephone:	(509) 574-2277

Run Dates:
Yakima Herald-Republic 10/11/12
YakimaHerald.com 10/11/12

Ad ID:	246815
Start:	10/11/12
Stop:	10/11/12
Total Cost:	\$67.70
Agate Lines:	68
# of Inserts:	2
Ad Class:	6021
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OCT 29 2012

YAKIMA COUNTY
PUBLIC WORKS ACCOUNTING

Affidavit of Publication

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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.

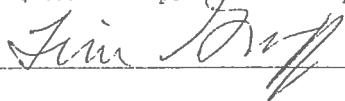
That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publications hereinafter referred to, published in the English language continually as a daily newspaper in the city of Sunnyside, YAKIMA County, Washington. and it is now and during all 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 -

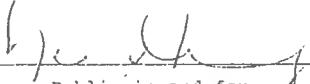
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FC3463-100-1 LYVGAC

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Subscribed and sworn to before me 10/10/12


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



S/B
 100-1

Meeting Time and Location**Thursday, October 18, 2012, 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:

- Establish committee work plan framework, including topics, work assignments, and schedule
- Hear from Education & Public Outreach Working Group; provide input on progress to date on outreach plan
- Discuss relationship between EPA regulatory actions and GWMA planning

Agenda

4:30 – 5:00 p.m.	Special Briefing: Environmental Protection Agency – “Relation Between Nitrate in Water Wells and Potential Sources in the Lower Yakima Valley”		
Time	Topic	Purpose	Lead
5:00 – 5:10 p.m.	Welcome & meeting Overview	Introduction, meeting overview, confirm agenda	Penny Mabie, facilitator
5:10 – 5:20 p.m.	Committee business	<ul style="list-style-type: none">• Approve Sept. 20 meeting summary	Penny Mabie, facilitator
5:20 – 6:00 p.m.	Committee Work plan	<p>Discuss and decide on:</p> <ul style="list-style-type: none">• Work plan framework• Working group organization• Working group assignments	Penny Mabie, facilitator Vern Redifer, Yakima County
6:00 – 6:10 p.m.	Break		
6:10 – 6:30 p.m.	Education and Public Outreach (EPO) Plan	<ul style="list-style-type: none">• Update from the Education & Public Outreach working group	Lisa Freund, Yakima County Penny Mabie, facilitator
6:30 – 6:45 p.m.	EPA Report Discussion	<ul style="list-style-type: none">• EPA update on next steps• Committee discussion with EPA on	Tom Eaton, EPA Penny Mabie, facilitator

		relationship between GWMA and regulatory pathway	
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 agenda • December meeting date 	Penny Mabie, facilitator
7:00 p.m.	Adjourn		

Committee Members

Stuart Turner, agronomist	Turner and Co.
Helen Reddout, Wendell Hannigan (alternate)	Community Association for Restoration of the Environment
Robert Morales	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, Don Young (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 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
Ramon Tobias, Margarita Tobias (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.

Next scheduled meeting dates:

November 15

December 20

LOWER YAKIMA VALLEY GROUNDWATER MANAGEMENT AREA ADVISORY COMMITTEE (GWAC)

MEETING SUMMARY

Thursday, October 18, 2012

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

I. Call to Order

A. **Roll Call:** The meeting was called to order at 5:02 pm by Penny Mabie, Facilitator.

Members present: Rand Elliott, Yakima County Commissioner, Vern Redifer (alternate); Charlie McKinney, Dept. of Ecology, Tom Tebb (alternate); Andy Cervantes, Department of Health; Tom Eaton, EPA; Jan Whitefoot, Concerned Citizens for Yakama Reservation, Jim Dyjak (alternate); Robert Farrell, Port of Sunnyside, John Van Wingerden (alternate); Helen Reddout, Community Association for Restoration of the Environment; Jim Trull, SVID; Jean Mendoza, Friends of Toppenish Creek; Mark Nielson, Benton Conservation District, Heather Wendt (alternate); Stuart Turner, Turner & Co.; Don Young (alternate), Kirk Cook, Washington Department of Agriculture; Yakima Farm Bureau; Jason Sheehan, Yakima Dairy Federation, Dan DeGroot, (alternate); Laurie Crowe, South Yakima Conservation District, Jim Newhouse (alternate); Elizabeth Sanchez, Yakama Nation, Tom Ring (alternate); and Lonna Frans, USGS;

Members seats not represented: Benton County Commission; Lower Valley Community Representative; Hispanic Community; Benton-Franklin Health District and Yakima County Health District;

Members absent: Jim Beaver, Benton County Commissioner; Robert Morales, Lower Valley Community Representative; Steve George, Yakima County Farm Bureau; Gordon Kelly, Yakima County Health District; Bruce Perkins, Benton-Franklin Health District; Ramon Tobias, Hispanic Community; and alternates: Eric Anderson; Ginny Stern; Dr. Troy Peters; Matt Bachmann; Ron Cowan; Margarita Tobias and Jaclyn Ford

Committee Business:

September 20, 2012 meeting summary approved.

At future meetings, handouts will be made available at the front table for members to pick up upon arrival.

47
48 The committee discussed Governor Christine Gregoire's letter dated September
49 28, 2012. The letter was provided to the members as the Yakima Valley Ground
50 Water Management Area Program was directly mentioned.
51

52 **III. Work Plan**
53

54 **Framework and Work groups (subcommittees):**

55 Penny noted that at the last GWAC meeting, the committee had asked the
56 County to flesh out the individual work plans within the GWAC work plan
57 framework. The County provided the committee with a 14-page work plan with
58 seven proposed work groups: CAFO (Concentrated Animal Feeding Operation);
59 Irrigated Agriculture; Residential, Commercial, Industrial and Municipal; Data
60 Collection, Characterization, and Monitoring; Regulatory Framework; Education
61 and Public Outreach; and Funding.
62

63 A discussion ensued among several committee members regarding the work
64 group titled "CAFO." It was pointed out that "CAFO" is a regulatory term with
65 specific elements. As such, it may not be the right name to use for the work
66 group. A suggestion was made to change the name to "livestock agriculture", to
67 be in line with the irrigated agriculture work group name, and several members
68 supported this suggestion. Some members expressed a desire to specifically
69 include dairies, suggesting "livestock and dairy agriculture." The committee
70 could not come to an agreement; and agreed that the work group for CAFO
71 can develop its own name as part of its work assignment.
72

73 There was a discussion about the Data Collection, Characterization, Monitoring
74 workgroup and what its role would be. Vern explained that as different work
75 groups meet they will identify information needed in order to make some
76 decisions. As there are several work groups and many of those may be
77 requesting the same information, the County's thinking was that the Data
78 Collection work group could support the work of the technical/source work
79 groups and work with the County to identify data needs and to request data.
80 The County is already collecting data reports and other information on the
81 GWMA website.
82

83 Penny asked the committee if the proposed seven work group structure was
84 acceptable as is; the committee concurred.
85

86 Sign-up sheets for each work group were circulated to the committee. Members
87 were requested to sign up for the workgroups they are interested in serving on,
88 either as a primary interest or secondary interest. As agreed to at the previous
89 GWAC meeting, the County will staff each group. Vern Redifer noted that to
90 schedule the meetings, the County will use doodle poll. He added that he will
91 staff the "Funding" work group.
92

93 It was further noted that work groups need to meet at least once before year
94 end to develop their work plan.
95

96 It was reiterated that all work groups work for the GWAC and will need to
97 regularly report their progress, issues and recommendations back to the GWAC.
98 The GWAC will monitor the work groups to make sure progress is being made.
99 The County will have at least one representative on each work group.

100
101 **Work Plan Framework:**

102 Yakima County provided the committee members with a populated work plan
103 framework to review. Each work group will need to use the work plan as the
104 base for their group's work plan and bring that back to the full committee for
105 review and inclusion in the GWMA work plan. Vern also noted that the County
106 has found a report on another GWMA in California that has many similarities to
107 the Lower Yakima Valley GWMA. He noted the report is posted on the GWMA
108 website at <http://www.yakimacounty.us/gwma/library.php> and suggested
109 committee members might find it useful to review.
110

111 **Education and Public Outreach Plan (EPO):**

112 Jean Mendoza provided the committee with a progress report on the Education
113 and Public Outreach work group outcomes, and provided a handout for the
114 committee to review. The work group has completed the following for the
115 committee's consideration: 1. a proposed goal statement; 2. target audience list
116 and key groups within that list to target and 3. objectives to carry out the goal
117 statement. The work group requests the committee review its work and provide
118 feedback on their goal statement, target audiences and objectives. Committee
119 members need to provide their comments to Penny by Thursday, October 25th.
120

121 Mark Nielson of the Benton Conservation District requested his name be deleted
122 from the work group as Rachel Little has agreed to be the agency
123 representative. Charlie McKinney has agreed to be the information conduit for
124 the Department of Ecology and pass along any information the Department
125 needs to be aware of.
126

127 The committee discussed the need for the EPO to focus on nitrates. The
128 importance of this work group is to communicate with the public, keep the
129 public apprised of what this committee is doing and to provide education as the
130 program progresses. They remanded the goal statement back to the work
131 group, asking that "educating the public" and "informing the public of the GWAC
132 process" be incorporated into the statement.
133

134 **EPA Report Discussion:**

135 Tom Eaton noted EPA's Nitrate Study has been published. EPA's goal is still to
136 come up with a comprehensive plan to address nitrates in groundwater; that is
137 why they are participating in the GWAC. Tom noted that EPA is not aware of all
138 potential sources of nitrates or the causes. There are no future plans at this time

139 for additional EPA studies. The EPA is accepting comments until the end of
140 November for any of those committee members who would like to comment. As
141 an outcome of the report, EPA is working with five dairies; however, that work is
142 confidential at this time.

143 A member suggested the committee dismiss the findings of the EPA Nitrate
144 Study. When another committee member noted that it was fully anticipated that
145 robust discussions about data sources and other information will occur at the
146 working group level, the suggestion was withdrawn.

147 **IV. Public Comment:**

150 Kevin Lindsey addressed the committee and asked that they take the EPA's
151 report with a "grain of salt". He noted the report does not seem to meet
152 regulatory guidance for data analysis and developing a report under normal
153 groundwater regulations.

155 Sarah Stout – Questioned a lack of data in the EPA's report. She noted the EPA is
156 working with dairies, but the dairies have limited resources.

158 Pony Ellison – Commented that it wasn't correct that EPA was not working on
159 any other reports. He noted EPA is working with the U.S. Geologic Survey on
160 modeling work. Lonna Frans, USGS, noted that they were working with a
161 different group in EPA to do the groundwater modeling in the Lower Yakima
162 Valley.

164 **V. GWAC business:**

166 A request was made for a discussion about whether there is a conflict of interest
167 for any committee member(s) who engage in lawsuits over the issue of
168 groundwater contamination in the Lower Valley. Penny advised that this issue
169 will be put on the agenda and addressed at the next scheduled meeting.

171 Penny reminded the committee about their ground rules and their agreement to
172 speak from interests, not from positions. The committee has a very important
173 issue in front of them and needs to collaborate on a solution. She suggested
174 committee members consider where their energy is best spent, in order to help
175 move the GWMA program forward. She noted the committee has spent a lot of
176 time on debating organizational issues; she expressed concern for making
177 progress on substantive issues if committee members can't find a way to find
178 compromises and come to agreement.

179 **VI. Next Steps:**

181

- 182 • The next scheduled meeting is on Thursday, November 15, 2012 at 5:00 p.m.
183 at the Denny Blaine Board Room.
- 184 • Members need to review the work plans provided by Yakima County and
provide Penny with any comments.

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- Members need to review the Education and Public Outreach information provided and comment on the goal statement, objectives and target audiences. Comments should be forwarded to Penny no later than Thursday, October 25th.
- Penny will circulate the sign-up lists again, organize the information for work groups, and provide the list of each work group to committee members. Committee members who have agreed to join work groups will receive doodle polls to organize meeting times.

193

194 **VII. 2012 Meeting Calendar:**

195 November 15

196 December - TBD

197

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

199

200 The meeting was adjourned at 7:03 pm.

201

202 Meeting summary approved by the Lower Yakima Valley Groundwater Management

203 Area Advisory Committee on 12-20-12.

204

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, November 15, 2012 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 8th Day of November, 2012

Publish: Publish: November 8, 2012

Bill: FC3463-100-1

YAKIMA HERALD REPUBLIC

INVOICE

114 N. 4th Street

PO Box 9668

Yakima, WA 98909

Date: 11/09/12

Account #: 110536

Company Name: YAKIMA COUNTY SURFACE WATER MGT DIV

Contact: LISA FREUND

Address: 128 NORTH 2ND STREET ROOM 408

YAKIMA, WA 98901

Telephone: (509) 574-2343 Fax:

Account Rep: Simon Sizer- Legals

Phone #: (509) 577-7740

Email: ssizer@yakimaherald.com

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Yakima County

Notice of Public

Meeting

Lower Yakima Valley

Groundwater Advisory

Committee

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(258532) November 9, 2012

Legal Advertising The Yakima Herald-Republic:
Yakima County Notice of Public Meeti

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Run Dates: 11/09/12 to 11/09/12

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DEC 10 2012

YAKIMA COUNTY
PUBLIC WORKS ACCOUNTINGFunding Control FC3463-100-1Authorized By Terry KerchDate Authorized 12/17/12

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:

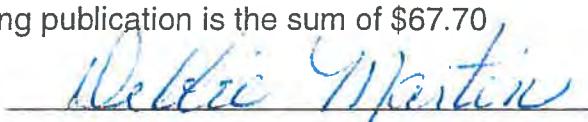
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it was published in regular issues (and not in supplement form) of said newspaper once each day and for a period of 1 times, the first insertion being on 11/09/2012 and the last insertion being on 11/09/2012

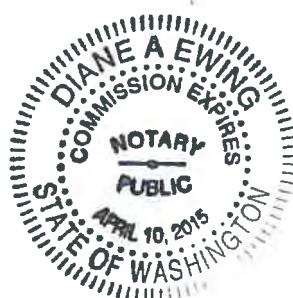
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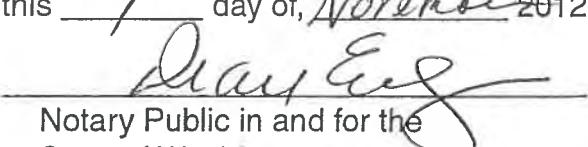
and the such newspaper was regularly distributed to its subscribers during all of the said period. That the full amount of the fee charged for the foregoing publication is the sum of \$67.70



Accounting Clerk



Sworn to before me this 9 day of November 2012



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

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

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County is holding a public
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Yakima Valley Groundwa-
ter Advisory Committee
on Thursday, November
15, 2012 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
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about the meeting,
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Public Services Admin-
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(258532) November 9,
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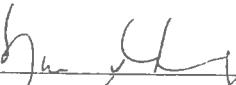
That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publications hereinafter referred to, published in the English language continually as a daily newspaper in the city of Sunnyside, YAKIMA County, Washington, and it is now and during all 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
FC3463-100-1 Mtg Nov 15
published in regular issues (and not in supplemental forms) of said newspaper once each week for a period of 1 consecutive issue(s) commencing 11/09/12 and ending on 11/09/12, 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 11/09/12


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, November 15, 2012 at 5:00 PM at the Denny Blaine Board Room, 810 E. Custer Ave. in Sunnyside WA pursuant to Chapter 73-100-080 WAC Ground Water Management Areas and Programs.

For Additional Information
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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 8th Day of November, 2012

PUBLISH: DAILY SUN NEWS

November 9, 2012

Meeting Time and Location**Thursday, November 15, 2012, 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:

- Committee members recommit to work of the GWAC
- Develop working group work plans

Agenda

Time	Topic	Purpose	Lead
5:00 – 5:10 p.m.	Welcome & Meeting Overview	Introduction, meeting overview, confirm agenda	Penny Mabie, facilitator
5:10 – 5:23 p.m.	Committee Business	<ul style="list-style-type: none">• Approve Oct. 18 meeting summary• Committee membership & roles	Penny Mabie
5:30 – 6:30 p.m.	Working Group Planning Workshop	Develop work plans for: <ul style="list-style-type: none">• CAFO (Livestock, Dairy, TBD)• Irrigated Agriculture• Residential, Commercial, Industrial, Municipal• Education & Public Outreach	Penny Mabie
6:30 – 6:45 p.m.	Work Plan Report Out	Present working group work plans to GWAC and next steps	Penny Mabie
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 agenda• December meeting date	Penny Mabie
7:00 p.m.	Adjourn		

Committee Members

Stuart Turner, agronomist	Turner and Co.
Helen Reddout, Wendell Hannigan (alternate)	Community Association for Restoration of the Environment
Robert Morales	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, Don Young (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 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
Ramon Tobias, Margarita Tobias (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.

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

3
4 MEETING SUMMARY
5

6 Thursday, November 15, 2012
7

8 Denny Blaine Board Room
9 810 E. Custer, Sunnyside, WA 98944

10
11 I. Call to Order
12

13 A. **Roll Call:** The meeting was called to order at 5:05 pm by Penny Mabie,
14 Facilitator.

15
16 **Members present:** Vern Redifer, Yakima County (alternate); Charlie
17 McKinney, Dept. of Ecology; Andy Cervantes, Department of Health; Tom
18 Eaton, EPA; Jan Whitefoot, Concerned Citizens for Yakama Reservation,
19 Jim Dyjak (alternate); Robert Farrell, Port of Sunnyside; Helen Reddout,
20 Community Association for Restoration of the Environment; Wendell
21 Hannigan, alternate; Jim Trull, SVID; Jean Mendoza, Friends of Toppenish
22 Creek; Mark Nielson, Benton Conservation District, Heather Wendt
23 (alternate); Stuart Turner, Turner & Co.; Steve George, Yakima County
24 Farm Bureau, Don Young (alternate); Jason Sheehan, Yakima Dairy
25 Federation, Dan DeGroot, (alternate); Laurie Crowe, South Yakima
26 Conservation District; Elizabeth Sanchez, Yakama Nation, Tom Ring
27 (alternate); Lonna Frans, USGS, Matt Bachmann (alternate); Gordon Kelly,
28 Yakima County Health District; Bruce Perkins, Benton-Franklin Health
29 District; Dr. Kefy Desta, WSU IAREC and Dr. Troy Peters (alternate)

30
31 **Members seats not represented:** Benton County Commission; Lower Valley
32 Community Representative; Hispanic Community
33

34 **Members absent:** Rand Elliott, Yakima County Commissioner; Jim Beaver,
35 Benton County Commissioner; Jim Newhouse (alternate); John Van
36 Wingerden (alternate); Tom Tebb (alternate); Robert Morales, Lower
37 Valley Community Representative; Eric Anderson; Ginny Stern; Ron Cowin;
38 and Jaclyn Ford

39
40 **Members resigned:** Charlie McKinney announced that Ramon Tobias had
41 resigned from the GWAC, effective immediately. He will check with
42 Ramon to see if that resignation includes Margarita.

43
44 II. Committee Business:
45

46 The October 18, 2012 meeting summary was discussed but not approved.
47 Pending committee acceptance of Penny's re-wording of a paragraph
48 regarding the EPA Nitrate study and adding Kirk Cook in attendance for the
49 meeting, it will be approved.

50
51 The committee discussed a question about conflict of interest between Helen
52 Reddout's position with CARE and the GWAC, given that CARE is a party to an
53 intent-to-sue notification regarding some local dairies. Committee members
54 acknowledged that the committee does not have the authority to replace
55 Helen—that authority rests with Ecology. Some concerns expressed included the
56 ability for someone to work collaboratively when pursuing solutions outside the
57 group; working together for the common goal; CARE taking matters into its own
58 hands; the general public's health and well being; action against the local
59 dairies; honesty/distrust among members; use of data that is obtained and
60 members at the table not wanting to share information in fear of it being used
61 against them.

62
63 Helen stated that she does not feel there is a conflict of interest. The information
64 she shared was public information and was not taken from the GWAC. The
65 action she is pursuing away from the table is in support of the community's
66 health, which is a goal in alignment with the GWAC. She stated she will not
67 resign from the committee.

68 Charlie McKinney told the committee he had researched the issue of conflict of
69 interest, and there is no reference in the Washington Administrative Code or any
70 other relevant guidance about litigation being a conflict of interest. Charlie and
71 Vern both noted the committee had a big job ahead of it and encouraged all
72 to come to the table with a willingness to collaborate and be as open-minded
73 as possible. Charlie also noted that the right people were at the table and they
74 all needed to be involved to make this program successful and decisions
75 durable.

76
77 Penny discussed with the group the need for them to all be committed to the
78 purpose of this committee, and she reviewed purpose statements from the
79 Operating Guidelines. She asked each member at the table to state if they
80 could re-commit to the purpose of the committee and work together towards
81 the common goal of the GWMA. All members re-committed. Some concerns
82 were expressed, including a concern with degree of suspicion on the
83 committee, lack of honesty, concern with use/misuse of information going
84 forward, and diminishing willingness to participate if committee members
85 continue to pursue actions and activities outside the committee that could
86 impact the work the committee is doing. Tom Eaton stated that EPA is unable to
87 check its regulatory authority and responsibilities when participating on the
88 GWAC. Tom said that if EPA's presence on the committee is hindering the
89 GWAC's progress to develop a comprehensive groundwater protection plan,
90 then EPA will resign from the committee. Penny noted that the group was very
91

92 early in its formation and that these types of issues occur with many new groups
93 and are not unexpected.
94
95

96 **III. Work Plan**
97

98 **Framework and Work groups (subcommittees):**

99 Penny stated that in order to meet the Department of Ecology's December 31
100 grant deliverable deadline, the work groups need to concentrate on getting
101 their work plans organized and written. They need to provide work plan
102 information including activities, information needs, milestones, and any thoughts
103 on needed funding to submit to the County by early December. The County will
104 take all the input from the work groups and merge it into a GWAC work plan.
105 Four of the seven proposed work groups—CAFO (Concentrated Animal Feeding
106 Operation), Irrigated Agriculture, Residential, Commercial, Industrial and
107 Municipal, and Education and Public Outreach—broke out into separate
108 meeting groups for 40 minutes to discuss their goals, timelines, actions and
109 funding needs.
110

111 The Regulatory Framework , Data Collection and Funding work groups did not
112 meet as Vern felt the County could do a good job of outlining the plan for those
113 groups. Charlie McKinney noted that as he was Ecology's grant administrator for
114 the GWMA program, he was aware the committee was working hard on the
115 work plan and assured them that Ecology would be supportive of the work.
116

117 **Work Plan Framework:**

118 Penny reminded the group that the work plans do not have to be perfect;
119 rather, they should be a best guess as to the group's "general plan" and not
120 have emphasis on details. The group's work plans need to be submitted to the
121 County or to Penny as soon as possible. The committee asked the County to e-
122 mail the draft GWAC work plan to the committee with adequate time for review
123 prior to the GWAC's discussion and approval.
124

125 Several of the work groups made arrangements to continue to work on their
126 work plans in the coming two weeks so as to complete them.
127

128 **IV. Next Meeting:**

129 The committee discussed the next meeting's topics. The two major topics for the
130 meeting will be the draft GWAC work plan the County will be developing, and
131 the Education and Public Outreach Plan, which is also due to Ecology by the
132 end of December, 2012.
133

134 Give the two major topics on the agenda, committee members discussed
135 making the December meeting longer. The committee agreed to meet from
136 4:30 to 7:30 p.m. on December 12.
137

138 **V. Next Steps:**

139 • At the next meeting there will be a discussion of the dates, times and length
140 of the meetings in 2013.

141 • Replacements for Hispanic representation will be discussed.

142 • The next scheduled meeting is on Wednesday December 12, 2012 at 4:30
143 p.m. at the Denny Blaine Board Room

144 • The County will try to get the combined draft work plan out to the
145 committee for review no later than two days before the meeting; all
146 committee members are urged to carefully review the work plan before the
147 meeting.

148 • Penny will send the committee the reworked paragraph from the October
149 meeting summary concerning the EPA Nitrate Study discussion.

150

151 **VI. 2012 Meeting Calendar:**

152 • December 12, 2012

153

154 The meeting was adjourned at 6:50 pm.

155

156 Meeting summary approved by the Lower Yakima Valley Groundwater Management
157 Area Advisory Committee on 12-20-12.

Yakima County

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Publish: Publish: December 5, 2012

Bill: FC3463-100-1

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(267034) December 5, 2012

R E C E I V E D

FEB 7 2013

YAKIMA COUNTY
PUBLIC WORKS ACCOUNTINGFunding Control FC3463-1001

Authorized By _____

Date Authorized _____

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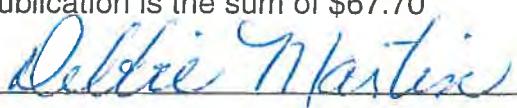
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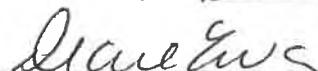
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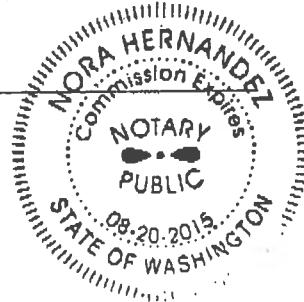
Mtg Dec. 12 FC3463-100-1

published in regular issues (and not in supplemental forms) of said newspaper once each week for a period of 1 consecutive issue(s) commencing 12/05/12 and ending on 12/05/12, 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 J. Graff

Subscribed and sworn to before me 12/05/12

N. 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 Wednesday, December 12, 2012 at 3:30 PM at the Denny Blaine Board Room, 810 E. Custer Ave. in Sunnyside WA pursuant to Chapter 173-180-080 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 4th day of December,

2012

PUBLISH: DAILY SUN NEWS

December 5, 2012

Meeting Time and Location

Wednesday, December 12, 2012, 4:30 – 7:30 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:

- Finalize content and timelines for work plans
- Review and approve Education and Public Outreach Plan
- Set 2013 committee meeting schedule and location

Agenda

Time	Topic	Purpose	Lead
4:30 – 4:45 p.m.	Welcome & Meeting Overview	Introduction, meeting overview, confirm agenda Chairperson overview	Penny Mabie, facilitator Rand Elliott, Chair
4:45 – 4:50 p.m.	Committee Business	• Approve Oct. 18 and Nov. 15 meeting summaries	Penny Mabie
4:50 – 6:15 p.m.	Working Group Planning Workshop	Finalize content and timeline for work plans for: <ul style="list-style-type: none">• CAFO (Livestock, Dairy, TBD)• Irrigated Agriculture• Residential, Commercial, Industrial, Municipal• Data	Penny Mabie
6:15 – 6:45 p.m.	Work Plan Report Out	Present work plans to GWAC <ul style="list-style-type: none">• Key additions• Key changes• Notable milestones	Penny Mabie
6:45 – 7:00 p.m.	Education and Public Outreach Plan	Review and approve December 31 deliverable	Jean Mendoza Lisa Freund
7:00 – 7:15 p.m.	2013 Committee Meetings	Determine <ul style="list-style-type: none">• Meetings schedule• Meetings location• Meetings length	Penny Mabie
7:15 – 7:25 p.m.	Public Comment	Opportunity for members of the public to make comments	

		to the committee.	
7:25 – 7:30 p.m.	Next Steps	<ul style="list-style-type: none"> • Review action items • Review next steps and topics for next agenda • January meeting date 	Penny Mabie
7:30 p.m.	Adjourn		

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
Justin Waddington	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 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
	Hispanic Community Representative

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- Treat one another with civility
- Respect each other's perspectives
- Listen actively
- Participate actively
- Honor time frames
- Silence electronic devices during meetings
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LOWER YAKIMA VALLEY GROUNDWATER MANAGEMENT AREA ADVISORY COMMITTEE (GWAC)

MEETING SUMMARY

Thursday, December 12, 2012

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

I. Call to Order

A. Roll Call: The meeting was called to order at 4:40 pm by Penny Mabie, Facilitator.

Members present: Rand Elliott, Yakima County Commissioner; Charlie McKinney, Dept. of Ecology, Tom Tebb (alternate); Kirk Cook, Dept. of AG; Andy Cervantes, Department of Health; Jan Whitefoot, Concerned Citizens for Yakama Reservation, Jim Dyjak (alternate); Robert Farrell, Port of Sunnyside, John Van Wingerden (alternate); Helen Reddout, Community Association for Restoration of the Environment; Jean Mendoza, Friends of Toppenish Creek; Stuart Turner; Turner & Co.; Steve George, Yakima County Farm Bureau; Jason Sheehan, Yakima Dairy Federation; Dan DeGroot, (alternate); Jim Newhouse South Yakima Conservation District (alternate); Tom Ring, Yakama Nation (alternate); Lonna Frans, USGS; Gordon Kelly, Yakima County Health District; Dr. Troy Peters, WSU IAREC (alternate); Ron Cowin SVID (alternate)

Members absent: Jim Beaver, Benton County Commissioner; Bruce Perkins, Elizabeth Sanchey, Jim Trull, and Mark Nielson; alternates Eric Anderson, Ginny Stern, Jaclyn Ford, Matt Bachmann, Justin Waddington, Wendell Hannigan, Heather Wendt, and Vern Redifer.

Members' seats not represented: Benton County Commission, Benton County Conservation District, EPA

Sub-Committee Participation:

- **Data:** Andy Cervantes, Lonna Frans, Steve Swope, Kirk Cook, and Ali Sedighi, Yakima County
- **Irrigated AG:** Tom Tebb, Stuart Turner, Ron Cowin, Rachel Little, Michael Shuttleworth, Chelsea Durfey, Dr. Troy Peters, Jean Mendoza, and Terry Keenhan, Yakima County
- **CAFO/Livestock:** Charlie McKinney, Helen Reddout, Steve George, Jim Newhouse, Jason Sheehan, Patricia Newhouse, and Lisa Freund, Yakima County

45

46

47

48

- **Residential Commercial Industrial Municipal and Domestic (RCIMD):** Tom Ring, Jan Whitefoot, Jim Dyjak, Gordon Kelly, John Van Wingerden, Robert Farrell, Dan DeGroot, and Don Gatchalian, Yakima County

49

50

Committee Business:

51 The October 18, 2012 and the November 15, 2012 meeting summaries were
52 approved.

53 Facilitator Penny Mabie discussed the importance of the sub-committees
54 finalizing their work plans at the meeting because both the work plan and the
55 outreach plan are due to Ecology by the end of the year.

56

57 The committee had a discussion regarding the GWAC budget and distribution of
58 funds. A member expressed concern about the budget not being included in
59 the work plan discussion and sought a commitment that the committee would
60 be able to weigh in on budgetary decisions regarding the Groundwater
61 Management Area Program. Ecology, Yakima County and other representatives
62 commented that the GWAC would have full discussions about how to allocate
63 budget across different aspects of the GWMA program. Further discussion was
64 put on hold due to time constraints and the County's deadline to submit the
65 outreach plan to Ecology.

66

67 Penny explained that tonight's work plan handouts contained both the
68 proposed content and timeline for each working group's work plan. Ali Sedighi,
69 Yakima County staff combined the data into individual spreadsheets for each
70 group's consideration. The sub-committees were asked to use these
71 spreadsheets as a guide during tonight's subcommittee discussions.

72

73 Penny noted that the Education & Outreach sub-committee completed its
74 Outreach Program prior to the GWAC meeting and therefore would not meet;
75 nor would the Funding or Regulatory Framework subcommittees. The four
76 remaining sub-committees (Data, CAFO/Livestock, Irrigated AG and RCIMD)
77 would meet separately for 75 minutes to reach agreement on work plan content
78 and timelines.

79

80 The full committee was then adjourned to allow the subcommittees to complete
81 their assignments.

82

83

III. Work Plan

84

Subcommittee Reports:

85

88 At 6:15 PM the full committee reconvened for individual work plan presentations.
89 The spokesperson for each sub-committee summarized their discussion focusing
90 on "key additions" "key changes" and "notable milestones."
91

92 The committee discussed the work plans, and indicated they would be willing to
93 consider the plan for approval at the January meeting, provided they had
94 opportunity to provide input to the County, and adequate time to review the
95 final version prior to January 17.
96

97 **Education & Outreach Draft Plan:**
98

99 The GWAC committee discussed the EPO's draft plan, one of the December 31
100 deliverables. Committee members were asked to submit any additional
101 agencies or groups they felt should be involved in the outreach to Lisa Freund,
102 Yakima County staff, for inclusion in the plan as soon as possible.
103

104 The GWAC committee approved the Education and Outreach Plan by
105 consensus.
106

107 **IV. Next Meeting:**
108

109 Thursday, January 17, 2013
110

111 **V. Next Steps:**
112

113 Changes to the sub-committees work plans need to be submitted to Penny or the
114 County as soon as possible.
115

116 The sub-committees need to meet at least two week before the GWAC
117 committee meetings each month.
118

119 A discussion needs to take place regarding committee member biographies and if
120 they should be made public via the web site.
121

122 Replacement for Hispanic representation will be discussed.
123

124 The County will incorporate the suggested work plan changes and return the
125 updated plans to the committee for its review at least one week (preferably two
126 weeks) prior to the next GWAC meeting.
127

128 **VI. 2013 Meeting Calendar:**
129

130 The committee discussed the meeting schedule, duration and location for 2013.
131 The decision was made to continue to meet on the third Thursday of each month
132 for two hours (5:00 pm-7:00 pm) at the Denny Board Room, 810 E. Custer,
133 Sunnyside, WA 98944.
134

135 The meeting was adjourned at 7:20 pm.
136

134

135 Meeting summary approved by the Lower Yakima Valley Groundwater Management
136 Area Advisory Committee on January 17, 2013.

137

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

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Yakima, WA 98909

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Contact: LISA FREUND

Address: 128 NORTH 2ND STREET ROOM 408
YAKIMA, WA 98901

Telephone: (509) 574-2343 Fax:

Account Rep: Simon Sizer- Legals

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Yakima County

Notice of Public

Meeting

Lower Yakima Valley

Groundwater Advisory

Committee

NOTICE IS HEREBY
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Ave. in Sunnyside WA
pursuant to Chapter 173-
100-080 WAC Ground
Water Management
Areas and Programs.

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

(277415) January 10,
2013

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R E C E I V E D

FEB 7 2013

YAKIMA COUNTY
PUBLIC WORKS ACCOUNTINGFunding Control FC 3463-100-1-4410Authorized By JBeckDate Authorized 2-12-13

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



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

NOTICE IS HEREBY
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County is holding a pub-
lic meeting of the Lower
Yakima Valley Groundwa-
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the Lower Yakima Valley
Groundwater Manage-
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webpage at: <http://www.yakimacounty.us/gwma/>

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about the meeting,
please contact Lisa
Freund, Yakima County
Public Services Admin-
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574-2300.
Dated this 9th day of
January 2013.

(277415) January 10,
2013

Daily Sun News

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January 11, 2013

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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. 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.

Subscribed and sworn to before me 01/11/13

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
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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
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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

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- Silence electronic devices during meetings
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1 LOWER YAKIMA VALLEY GROUNDWATER MANAGEMENT AREA ADVISORY
2 COMMITTEE (GWAC)

3
4 MEETING SUMMARY

5
6 Thursday, January 17, 2013

7
8 Denny Blaine Board Room
9 810 E. Custer, Sunnyside, WA 98944

10
11 I. Call to Order

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

14
15 **Members present:** Rand Elliott, Yakima County Commissioner, Vern
16 Redifer (alternate); Tom Tebb (alternate for Dept. of Ecology); Andy
17 Cervantes, Department of Health; Tom Eaton, EPA; Jim Dyjak (alternate
18 for Concerned Citizens for Yakima Reservation); Robert Farrell, Port of
19 Sunnyside, John Van Wingerden (alternate); Ron Cowin (alternate for
20 SVID); Jean Mendoza, Friends of Toppenish Creek; Mark Nielson, Benton
21 Conservation District; Stuart Turner, Turner & Co.; Steve George, Yakima
22 Farm Bureau; Jason Sheehan, Yakima Dairy Federation, Dan DeGroot,
23 (alternate); Laurie Crowe, South Yakima Conservation District; Gordon
24 Kelly, Yakima County Health District; Elizabeth Sanchez, Yakama Nation,
25 Tom Ring (alternate); Dr. Kefyalew Desta, WSU Irrigated Agriculture
26 Research and Extension Center.

26
27
28 Larry Fendell sat in as an alternate for Community Association for
29 Restoration of the Environment.

30
31 **Member seats not represented:** Benton County Commission; Lower Valley
32 Community Representative; U.S. Geological Survey; Washington
33 Department of Agriculture; Hispanic Community Representative and
34 Benton-Franklin Health District.

35
36 **Members absent:** Charlie McKinney, Dept. of Ecology, James Beaver,
37 Benton County Commissioner; Jan Whitefoot, Concerned Citizens for
38 Yakima Reservation, Helen Reddout, Community Association for
39 Restoration of the Environment; Jim Trull, SVID; Lonna Frans, U.S.
40 Geological Survey; Bruce Perkins, Benton-Franklin Health District; Kirk Cook,
41 Washington Department of Agriculture; and alternates: Wendell
42 Hannigan; Eric Anderson; Justin Waddington; Jim Newhouse; Heather
43 Wendt; Dr. Troy Peters, Matt Bachmann; Jacklyn Ford; and Ginny Stern

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

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

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

133 134 **IV. Committee Work Plan**

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

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

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

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

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

161 Suggestions in the statement included

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

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

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

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

201
202 Jean advised she would like to have a mission statement included in the
203 narrative; that suggestion was met with agreement from the committee.

204
205 Tom Eaton noted that he was under the assumption that the whole group had
206 agreed to the goal of reducing nitrates contamination in groundwater to below
207 state drinking water standards.

208
209 Members were reminded that this is an advisory committee. The main focus of
210 this committee is to find the main sources of nitrates. Everyone agrees that we
211 need to provide clean water to the people affected. See WAC 173-100-120, at
212 the end of the day this advisory committee will have an effect on the program
213 with its decisions.

214
215 Members that opposed the work plan were asked if the additions discussed were
216 made to the work plan, (e.g. mission statement, short term objective: provide
217 clean drinking water) would the members agree to the work plan. The opposing
218 members expressed optimism, but noted they need to see the changes in writing
219 before agreeing. Additionally, one member would like to see the budget before
220 agreeing. Penny and the County will make changes to the work plan and will
221 send it out to all members for a decision at the next meeting.

222
223 Specific changes agreed to include:

- 224 • Fix III Budget - BMP language (correct "implementation" to read
225 "identification")
- 226 • Agree to early addressing of nitrate problems
- 227 • 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 Some members of the committee would like to see safe drinking water added to
243 the task descriptions of the budget.

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

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

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

259 Vern asked the committee to forward their budget ideas, with an estimated
260 spending plan, to him next week and he will work on putting something together
261 by the next special budget meeting.

262 **VI. Public Comment:**

263 No comments.

264 **VII. Next Steps:**

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

267 **VIII. 2013 Meeting Calendar:**

- 268 • 2 weeks/(January 28 – February 5th) date to be determined

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

287
288 Meeting calendar will be reassessed at the end of the year.
289

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



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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 31 January 2013

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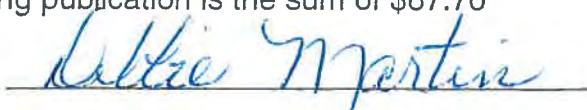
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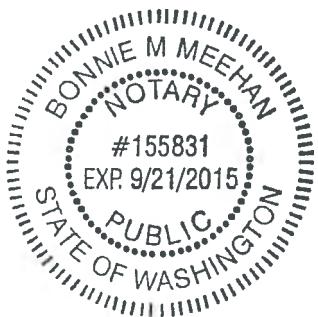
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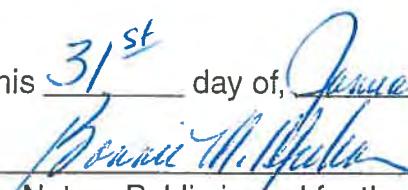
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residing at Yakima

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

**NOTICE IS HEREBY
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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.

**For Additional
Information**

To learn more about the
Lower Yakima Valley
Groundwater Manage-
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the Lower Yakima Valley
Groundwater Manage-
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webpage at: <http://www.yakimacounty.us/gwma/>

For more information
about the meeting,
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574-2300.
Dated this 31 January
2013

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Daily Sun News

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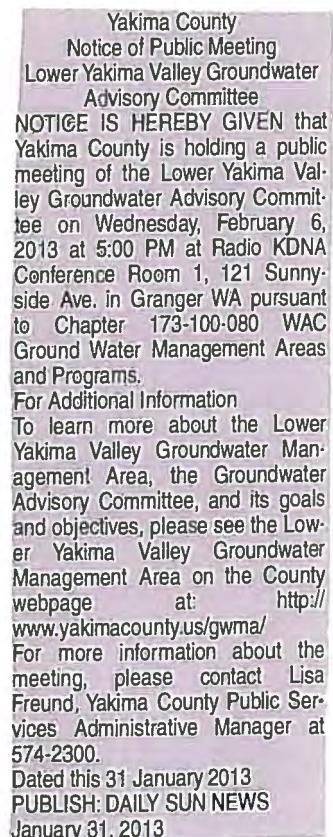
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Tim Graff
Notary Public in and for
the State of Washington
030110-00000



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 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
	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.

LOWER YAKIMA VALLEY GROUNDWATER MANAGEMENT AREA ADVISORY COMMITTEE (GWAC)

MEETING SUMMARY

Wednesday February 6, 2013

Radio KDNA

121 Sunnyside Ave, Granger, WA 98932

I. Call to Order

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

Members present: Rand Elliott, Yakima County Commissioner, Vern Redifer (alternate); Charlie McKinney, Department of Ecology; Andy Cervantes, Department of Health; Jim Dyjak (alternate for Concerned Citizens for Yakima Reservation); Robert Farrell, Port of Sunnyside, John Van Wingerden (alternate); Jean Mendoza, Friends of Toppenish Creek, Wendell Hannigan (alternate), Community Association for the Restoration of the Environment; Mark Nielson, Benton Conservation District, Heather Wendt (alternate); Stuart Turner, Turner & Co., Chelsea Durfey (alternate); Steve George, Yakima Farm Bureau; Jason Sheehan, Yakima Dairy Federation; Gordon Kelly, Yakima County Health District; Dr. Troy Peters (alternate), WSU Irrigated Agriculture Research and Extension Center; Rick Dawson, Benton-Franklin Health District; Jim Trull, SVID; Matt Ely (alternate), U.S. Geological Survey; Kirk Cook, Washington Department of Agriculture;

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

Members absent: Jan Whitefoot, Concerned Citizens for Yakima Reservation, Laurie Crowe, South Yakima Conservation District; Helen Reddout, Community Association for Restoration of the Environment; Tom Eaton, EPA; Dr. Kefyalew Desta, WSU Irrigated Agriculture Research and Extension Center; Lonna Frans, U.S. Geological Survey; Lino Guerra, Hispanic Community Representative; Elizabeth Sanchez, Yakama Nation; and alternates: Eric Anderson; Justin Waddington; Jim Newhouse; Tom Tebb; Matt Bachmann; Jacklyn Ford; Ginny Stern; Ron Cowan; Dan DeGroot, Tom Ring and Rick Perez

II. Committee Business:

January 17, 2013 meeting summary was approved by consensus.

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

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

56 Moment of silence.
57
58

59 **III. Committee Work Plan**

60 Vern made changes to the work plan as previously discussed at the January 17th
61 meeting. He also made grammatical corrections as well. Two paragraphs were
62 added in relation to "Immediate Public Health Needs" item IV of the work plan.
63 GWAC will work with State, Federal and Local governments to seek funding.
64

65 Penny asked the committee members if this version of the work plan could be
66 submitted to The Department of Ecology. No objection from the committee.
67 Consensus reached amongst the committee members. The work plan will be
68 submitted to The Department of Ecology.
69

70 Side note: Steve George stated he would like a change "farming community,"
71 on Page 1 of the work plan under Goals and Objectives, to "agricultural
72 community". Additionally, under GWMA Goals, change the language
73 "Washington State drinking water standards" to "Federal drinking water
74 standards". Penny advised that the committee previously agreed on the goals
75 and objectives, as such we will leave language as it is, but moving forward we
76 can discuss applying the changes.
77

78 Work plan approved by consensus.
79

80 **IV. Budget Priorities**

81 Members were reminded that the advisory committee must spend \$300,000 by
82 the end of June. The County has already spent \$98,000. We need to spend
83 another \$200,000.
84

85 Vern took the information he received from committee members, and made a
86 few changes to the budget provided at the previous meeting. The committee
87 needs to make some short term decisions on the budget, but be consistent with
88 long term goals.
89

90 Mark reminded the committee that the State Auditor frowns upon money not
91 spent within the same year. Charlie McKinney with the Department of Ecology

92 advised that some funding sources can cross bi-annually; however, this grant is
93 not one of them. He did, however, contact the State Auditor and they will
94 provide the committee with a six month leeway.
95

96 Members discussed each item on the draft budget, as to whether or not the item
97 was needed and/or how much money should be dedicated in the short term to
98 that item.
99

100 First item, does the committee want to continue having someone facilitate the
101 meetings? Penny is currently contracted through May 31st. Members decided
102 that having Penny facilitate the meetings is beneficial while the work plan is still
103 coming together. The members need someone to keep them on task who does
104 not have a stake in this process. Vern suggested that we extend Penny's
105 contract through 2013 and re-evaluate at the end of the year. Members agreed
106 by consensus. Vern will work with EnviroIssues to extend Penny's contract
107 through 2013. This revises the budget money spent to \$118,000.
108

109 Deep soil sampling was discussed amongst the members. An estimated short
110 term amount of \$40,000 was suggested. One member felt this was greatly
111 underestimated. The irrigated agriculture work group worked with Kevin Kindsey,
112 of GSI to work up a detailed preliminary budget. \$40,000 for deep soil sampling
113 was just a starting point. The irrigated agriculture work group provided the
114 preliminary budget to the County in response to requests for information from our
115 last meeting. Several members of the committee voiced their concern that they
116 were not provided with a copy the preliminary budget. The work group advised
117 there was no intent to hide the information. Kevin Kindsey explained to the
118 committee that the preliminary budget he provided is just a starting point and
119 was only put together in a day. He advised that clearly more thought and
120 planning needs to be done to complete the budget.
121

122 Penny advised the committee that the preliminary budget created by Kevin
123 Kindsey is just rough numbers. That the work group was only responding to a
124 request for information previously requested in our last meeting. No decisions are
125 being made at this point. Penny agreed this is a process problem and in the
126 future all information needs to be passed along to the committee.
127

128 Vern advised he didn't realize that the committee would have such a reaction
129 to the numbers. In our last meeting we stated that we needed to hurry up with
130 the budget and get things started. He is only asking the committee to accept
131 the numbers in the budget for facilitation and Yakima County.
132

133 Further discussion on deep soil sampling noted that no other agency has done
134 this before. The committee discussed that this service would need to be hired
135 out. The deep soil sampling findings will not be enforceable. The intent of deep
136 soil sampling would be purely for educational purposes.
137

138 The intent of "nutrient loading" is so the committee can find out the breakdown
139 of the source of nitrates; whether it is synthetic, livestock, septic systems, etc. Dr.
140 Troy Peters advised that WSU has good models to review. One member of the
141 committee would like to have "air pollution" included in the nutrient loading
142 category. Charlie McKinney noted that Ecology already has a program in place
143 that is studying airborne nitrates.

144
145 Andy Cervantes with Washington Department of Health discussed education
146 and outreach. The work group discussed the need for surveys as a way of
147 finding the hotspots for nitrates. They found that Gordon Kelly with Yakima
148 County Health District could provide surveys at a rate of \$80.00 per home. Dr.
149 Troy Peters stated that the committee should also educate the farmers and that
150 this is something WSU can provide with workshops. Penny reminded the
151 members that we are not implementing the plan at this time; we are just coming
152 up with developing the plan. Some members would like to see water sampling
153 as well as surveys. Andy agreed and explained that the intent of the surveys is to
154 find the hotspots and then proceed with sampling. One member stated that
155 before knocking on doors we must educate the public; otherwise, some
156 members of the Hispanic community will not respond.

157
158 Health assessment category was added from discussions in our last meeting. No
159 money has been allocated to health assessment at this time. Jean Mendoza
160 reminded the committee that this is something we must do or ask the health
161 district to, as we need to know how nitrates are affecting the community.

162
163 Vern added the category "Lagoon Assessment" after discussions with the
164 Department of Ecology. There are perceptions that lagoons either leak a lot or
165 not at all. There is no definitive answer.

166
167 The committee discussed the intent of Best Management Practices (BMP)
168 identification. Although we are a long way from implementation, the committee
169 does need to identify the current BMP's and whether or not they work. Several
170 members felt this is not a short term need.

171
172 The committee found that "Irrigation Water Management" is a short term need
173 and needs to be implemented. This can provide incentives for growers.

174
175 The committee continued with further discussion of "health assessment" and air
176 pollution monitoring. Some members would like to see proof before considering.
177 Dr. Troy Peters stated they could provide education to the committee; however,
178 not sure it would be worth spending the time. Rand Elliott asked Jean Mendoza
179 "If we could do a health assessment, what effect will it have on nitrates in
180 groundwater?" Jean stated that she believed that no one on this committee
181 believes nitrates are a health risk. Several members challenged this statement.
182 No one on this committee has stated they do not believe nitrates aren't a health
183 risk and, in fact, because they do believe nitrates are a health risk is why this

184 committee was formed. However, it is not the committee's goal. One member
185 advised that we need to determine who is at risk first before providing a health
186 assessment. Some public education upfront is needed.
187

188 Penny moved the committee's focus back to the short-term budget. She
189 reminded them that the budget is only for guidance and not a blank check. We
190 need to agree on a starting point for each category.
191

192 The committee agreed to the starting figures for the short-term budget shown
193 below. In the short-term no money is being allocated to "Lagoon Assessment",
194 as Stuart Turner will provide the committee with studies. Additionally, no money is
195 being allocated in the short-term for health assessment.
196

197 \$11,000 is being allocated to deep soil sampling for the short-term; however, this
198 amount may increase during 2013. The committee agreed to bump up the
199 \$40,000 figure previously discussed to \$60,000 for monitoring both the plan and
200 plan implementation. \$5,000 was allocated to nutrient loading as a place holder
201 for the short-term.
202

203 Education and Outreach, with the sub-categories of surveying and test samples
204 was allocated \$50,000. This money will be split between education and
205 outreach and the sub-categories.
206

207 The committee agreed to allocate \$15,000 for early work on Best Management
208 Practices (BMPs). Irrigation water management was allocated \$11,000 for initial
209 planning.
210
211

212 Short Term Budget:

• Facilitation	\$ 118,000
• Yakima County	\$ 56,000 ???
• Deep Soil Sampling	\$ 11,000
• Monitoring Plan	
• Monitoring Plan Implementation	\$ 60,000
• Nutrient Loading	\$ 5,000
• Irrigation Water Management	\$ 11,000
• Lagoon Assessment	None
• Education and Outreach	\$ 25,000
o Surveying and Test samples	\$ 25,000
• Health Assessment	None
• BMP Identification and Field Research	\$ 15,000
• Irrigation Water Management	\$ 11,000
Total:	\$337,000

228 The work plan will be turned into Department of Ecology as is. The short-term
229 budget passed tonight by consensus will not be included in the work plan.
230

230
231 **V. Public Comment:**
232 No public comment
233

234 **VI. Next Steps:**
235 • Forward GSI report to all committee members.
236 • Work groups will have reports ready to report to members at the next
237 scheduled meeting. Additionally, each work group should select a leader.
238 (Reminder: Vern suggested that Yakima County can provide a staff
239 member to be available for all work group meetings.)
240 • Committee members need to advise what education they need to make
241 decisions.
242 • Stuart Turner will provide the committee with studies on lagoon assessment.
243

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

247 Vern advised committee that the California GWMA is posted on the website
248 library for anyone who would like to read it. It is a good source of information
249 to educate the committee on what we are doing here and where we are
250 headed.
251

252 **VII. 2013 Meeting Calendar:**

- 253 • February 21
- 254 • March 21
- 255 • April 18
- 256 • May 16
- 257 • June 20
- 258 • July 18
- 259 • August 15
- 260 • September 19
- 261 • October 17
- 262 • November 21
- 263 • December 19

264 Meeting calendar will be reassessed at the end of the year.
265

266 The meeting was adjourned at 7:06 pm.
267

Attachment B
GWAC Work Plan

I. Introduction

The following work plan will help guide the Lower Yakima Valley Groundwater Advisory Committee's (GWAC) development of the Lower Yakima Valley GWMA Program over the next several years. It outlines the general steps the GWAC will take to develop the GWMA Program, establishes anticipated time frames for conducting the work, and identifies a range of costs for creating the GWMA Program.

Yakima County, as the GWMA lead agency, is responsible for preparing the work plan, schedule and budget for the development of the program that shows the responsibilities and roles of each of the advisory committee members as agreed upon by the committee (WAC 173-100-080 Lead Agency Responsibilities). The GWAC is responsible for overseeing the development of a program; it is also responsible for reviewing the work plan, schedule and budget. (WAC 173-100-080-Groundwater Advisory Committee)

In accordance with its statutory responsibilities and with the oversight of the GWAC, Yakima County created this work plan for the GWAC's approval. It is based on the best available information as of this writing; as such, it is anticipated that the plan will undergo revisions by the GWAC as it moves forward in its work.

In addition, while the work plan reflects the goals established in Yakima County's *Request for Identification Lower Yakima Valley Groundwater Management Area* (June 2011), the committee will be developing specific goals and objectives for the GWMA to be included in the Groundwater Management Program. The goals and objectives from the "Request" are as follows:

GOALS AND OBJECTIVES

The GWMA will be a multi-agency, citizen-based, coordinated effort to reduce groundwater nitrate contamination in the lower Yakima Valley. It will receive input from people affected or interested in the problems and solutions and will coordinate their energies toward action. It will work to achieve credibility with the general public and the farming community.

GWMA GOAL

The primary long-term goal of the GWMA is to reduce concentrations of nitrate in groundwater to below Washington State drinking water standards.

PROPOSED OBJECTIVES

Objectives have been divided into six categories: Data and Monitoring, Problem Identification, Measures to Reduce Groundwater Contamination, Education, Drinking Water Systems, and General objectives.

Input from the GWAC and citizen input will be used to refine and prioritize objectives. In general, refinement of objectives in each category will begin with an updated assessment of the current status of work.

DATA AND MONITORING

- Collect and incorporate existing nitrate and nitrogen data into a shared data management system or data sharing site to improve understanding of the sources and extent of contamination.
- Establish a monitoring program to identify sources of nitrate contamination and their relative importance.
- Establish and conduct long-term groundwater quality monitoring program and evaluate progress.

PROBLEM IDENTIFICATION

- Characterize the nature and extent of nitrate concentrations in Lower Yakima Valley groundwater.
- Identify and rank the sources of elevated nitrate in groundwater, with site-specific characteristics developed for "hot spots" as appropriate.
- Identify and describe activities contributing to groundwater contamination based on scientific data and evaluation. Scientific and other data will be shared among the partners to facilitate development of effective programs and strategies.

MEASURES TO REDUCE GROUNDWATER CONTAMINATION

- Develop effective and coordinated best management practices (BMPs) to address specific nitrate sources.
- Develop strategies for implementing best management practices such as technical assistance, education, ordinances and coordination with other regulatory and nonregulatory programs.
- Support enforcement of new and existing laws and ordinances.

EDUCATION

- Establish educational programs to promote the protection of groundwater quality and provide a forum for stakeholders to discuss nitrate reduction methods and improvement of groundwater quality. This will include culturally-appropriate education and outreach.
- Establish a clearinghouse for pertinent public health, environmental, and business information.

- Educate private well owners on water quality testing methods, frequencies, interpretation of results, and funding sources.

DRINKING WATER SYSTEMS

- Provide water quality and hydrogeologic data to assess needs and methods of expanding public water supplies, and provide a forum for initiation of these plans.
- Consider options to encourage appropriate expansion of public water supplies to areas that are currently dealing with contaminated private supplies.
- Assist residents whose supplies have been contaminated to access safe and reliable water supplies, using culturally-appropriate communications.

GENERAL

- Pollution prevention will be a guiding principle for all work done by the GWMA.
- Participation by the Yakama Nation will be requested and encouraged in a way that is consistent with their sovereignty.
- Participating agencies will maintain their regulatory authority using their own discretion as appropriate. They will also seek opportunities to coordinate actions and address regulatory gaps.
- The GWMA will seek sustainable funding sources to carry out its mission.

II. GWMA Work Plan Contents and Timelines

The GWAC has organized itself into seven Work Groups: Data Collection, Characterization, and Monitoring; Livestock and CAFO; Irrigated Agriculture; Residential, Commercial, Industrial, Municipal and Domestic; Regulatory Framework; Education and Outreach; and Funding. The work plan has been developed and organized with regards to the work each Work Group will be undertaking.

The GWMA Program will accumulate existing available data and information and generate additional data specific to Lower Yakima Valley groundwater quality and the future management of contributing sources. Information and data provided include identification of probable contaminant sources, studies on contributing local factors including soil profiles, nutrient and water application rates, surficial aquifer hydrology, local and locally applicable management practices established elsewhere, priorities for data collection to fill information gaps, and funding requirements and potentials. The GWMA will identify additional data networks and provide for implementation of short term and long term Best Management Practices (BMPs) to improve groundwater quality that can be prioritized dependent on continuing data collection. Also, the GWMA Program will recommend general activities and specific tasks to be conducted by involved agencies and GWAC Working Groups.

One of the first steps to be undertaken by the GWAC is to identify or determine the extent of the problem. This step will require collecting the available data to identify the information gaps on a priority basis. The GWMA will identify potential sources of nitrate pollution from potential legacy sources where possible and from irrigated agriculture, livestock including large-scale commercial livestock operation, e.g., confined animal feeding operations (CAFO) and point and non-point sources of nitrate groundwater contamination from other sources including residential, commercial, industrial, municipal and domestic runoff.

The GWMA work plan content and the various activities are as follows:

Work Plan Content

1.0 Data Collection, Characterization, Monitoring

1.1 Compile and Manage Data

- a. Research and compile existing data
- b. Analyze existing data
- c. Create a shared data management system
- d. Create a GIS application
- e. Identify data needs (Gaps) working with other GWAC Work Groups
- f. Report to GWAC for input/feedback
- g. Incorporate GWAC comments and finalize report

1.2 Update Existing Hydrogeologic Characterization Report (February 2010)

- a. Delineation of groundwater area (A delineation of the groundwater area, subarea or depth zone boundaries and the rationale for those boundaries)
- b. Jurisdictional boundaries (A map showing the jurisdictional boundaries of all state, local, tribal, and federal governments within the groundwater management area)
- c. Land and water use authorities and responsibilities (Land and water use management authorities, policies, goals and responsibilities of state, local, tribal, and federal governments that may affect the area's groundwater quality and quantity)
- d. Description of the area (A general description of the locale, including a brief description of the topography, geology, climate, population, land use, water use and water resources)
- e. Hydrogeology (A description of the area's hydrogeology, including the delineation of aquifers, aquitards, hydrogeologic cross-sections, porosity and horizontal and vertical permeability estimates, direction and quantity of groundwater flow, water-table contour and potentiometric maps by aquifer, locations of wells, perennial streams and springs, the

locations of aquifer recharge and discharge areas, and the distribution and quantity of natural and man-induced aquifer recharge and discharge)

- f. Historical and existing groundwater quality
- g. Historical and current groundwater use and purpose (Estimates of the historical and current rates of groundwater use and purposes of such use within the area)
- h. References and Documentation (References including sources of data, methods and accuracy of measurements, quality control used in data collection and measurement programs, and documentation for and construction details of any computer models used)
- i. Develop an estimate of the existing and future aquifer uses (Projections of groundwater supply needs and rates of withdrawal based upon alternative population and land use projections)
- j. Develop a summary of water quality standards set by DOE (Ecology) and EPA
- k. Develop a report of annual variations in hydrogeologic factors (variations in aquifer recharge and other significant hydrogeologic factors)
- l. Submit to GWAC for comments
- m. Incorporate GWAC comments and submit to GWAC

1.3 Develop Implementation Work Plan - Develop a detailed work plan for implementing each aspect of the groundwater data collection and analysis programs

- a. Identify monitoring locations
- b. Select monitoring parameters and laboratory analytical methods
- c. Determine sampling frequency and number
- d. Document field procedures
- e. Identify QA/QC procedures
- f. Develop statistical monitoring procedure
- g. Develop and submit funding request for additional research to GWAC
- h. Apply for research funding before the application deadline (normally October)
- i. Develop the final quarterly status report for GWAC
- j. Present the final quarterly status report to GWAC for discussion and feedback
- k. Incorporate GWAC comments. Re-evaluate recommendations
- l. Finalize list of recommendations and submit the final quarterly status report to Ecology

1.4 Implementation - Begin collection of water quality data

- a. Identify the parties responsible for initiating the strategy
- b. Develop a schedule for implementing the strategy
- c. Develop a cost estimate for implementing the strategy
- d. Secure access to sampling locations

- e. Collect Samples

1.5 Monitoring - Develop a long-term monitoring system for evaluating the effectiveness of each strategy

1.6 Review - Develop a process for the periodic review and revision of the groundwater management program

1.7 Develop the GWMA Program Report (combine with other workgroups)

1.8 Submit Final Report (combine with other workgroups)

2.1 Livestock & CAFO - Yards, corrals, lagoons, and manure field application

2.1.1 Problem definition - Define the extent of the groundwater problems caused or potentially caused by each activity supported by as much documentation as possible including:

- a. Identify and categorize specific sources
- b. Define and quantify source contribution to groundwater problem
- c. Examine groundwater quality trends by cause
- d. Evaluate and predict likelihood of future problems and conflicts if no action is taken
- e. Identify areas where insufficient data exists to define the nature and extent of existing or potential groundwater nitrate contamination
- f. Develop a plan to obtain the data necessary to define the nature and extent of existing or potential groundwater nitrate contamination sources
- g. Identify areas where the sources of other forms of groundwater contamination, primarily bacteria, overlap with or are related to nitrate sources.
- h. Submit to GWAC for comments and feedback
- i. Incorporate GWAC comments and finalize draft

2.1.2 Water Quality Goals - To reduce the level of nitrates in groundwater to safe drinking water standards. This work group will contribute to the overall GWMA goal by greatly reducing or eliminating nitrate contamination that may be occurring as a result of current practices. This should result in a downward trend over time, especially at shallow depths, even though nitrate contamination persists from past practices.

- a. Develop quantifiable groundwater quality goals for each activity
- b. Develop a schedule for achieving the groundwater quality goals for each activity
- c. Provide WQ Goals to GWAC for discussion, feedback and consensus
- d. Incorporate GWAC comments and finalize WQ Goals

2.1.3 Identify and evaluate existing management strategies and programs (DNM Act, NPDES CAFO Permit, BMPs, etc.) for each specific source in terms of:

- a. Feasibility
- b. Effectiveness
- c. Cost
- d. Time
- e. Implementation Challenges
- f. Current level of implementation
- g. Monitoring
- h. Enforcement
- i. Consistency with Water Management Programs and Local Comprehensive Plans
- j. Effectiveness at also preventing related forms of contamination such as bacteria.
- k. Recommend changes for each strategy / program including, where possible, model ordinances, recommended governmental policy statements, interagency agreements, proposed legislative changes, and proposed amendments to local comprehensive plans, coordinated water system plans, basin management programs, and others as appropriate.
- l. Submit to GWAC for discussion, feedback and consensus
- m. Incorporate GWAC comments and finalize WQ Goals

2.1.4 Once sources of groundwater nitrate contamination are clearly defined identify and evaluate alternative management strategies / programs for each specific source in terms of:

- a. Feasibility

- b. Effectiveness
- c. Cost
- d. Time
- e. Implementation Challenges
- f. Monitoring
- g. Enforcement
- h. Consistency with Water Management Programs and Local Comprehensive Plans
- i. Effectiveness at also preventing related forms of contamination such as bacteria.
- j. A description of each strategy / program including, where possible, model ordinances, recommended governmental policy statements, interagency agreements, proposed legislative changes, and proposed amendments to local comprehensive plans, coordinated water system plans, basin management programs, and others as appropriate.
- k. Provide and discuss strategies and rationale of recommendations to GWAC
- l. Incorporate GWAC comments and submit to GWAC (combine with other workgroups)

2.1.5 Recommendations - Choose recommended management strategies from existing and alternative management strategies for implementation

- a. Provide the rationale for choosing recommended management strategies for implementation
- b. Provide the rationale for not choosing those management strategies not chosen for implementation
- c. Develop and submit funding request for additional research to GWAC
- d. Apply for research funding before the application deadline (normally October)
- e. Develop the final quarterly status report for GWAC
- f. Present the final quarterly status report to GWAC for discussion and feedback
- g. Incorporate GWAC comments. Re-evaluate recommendations
- h. Finalize list of recommendations and submit the final quarterly status report to Ecology

2.1.6 Implementation - Develop a detailed work plan for implementing each aspect of the groundwater management strategies / programs based on the Recommendations section.

- a. Identify the parties responsible for initiating the strategy.

- b. Develop a schedule for implementing the strategy
- c. Develop a cost estimate for implementing each strategy.
- d. Identify priority rankings
- e. Complete Implementation Plan and submit to GWAC and public for input/feedback
- f. Incorporate GWAC and finalize Implementation Plan

2.1.7 Monitoring - Develop a long-term monitoring system for evaluating the effectiveness of each strategy.

2.1.8 Review - Develop a process for the periodic review and revision of the groundwater management program

2.1.9 Develop the GWMA Program Report (combine with other workgroups)

2.1.10 Prepare Final Report (combine with other workgroups)

2.2 Irrigated Agriculture

2.2.1 Problem definition - Identify and categorize specific practices irrigated agricultural can implement to reduce nitrate loading to groundwater.

- a. Define and quantify source contributions (all sources) to groundwater problem (Note: This would entail developing a study area scale nitrogen budget estimate for all nitrogen sources)
- b. Identify and obtain existing water quality data sources.
- c. Identify areas where insufficient data exists to define the nature and extent of existing or potential groundwater problems
- d. Examine groundwater quality trends
- e. Submit to GWAC for comments
- f. Incorporate GWAC comments and finalize report

2.2.2 Water Quality Goals - Establish groundwater quality goals for each activity

- a. Develop quantifiable groundwater quality goals for each activity
- b. Develop a schedule for achieving the groundwater quality goals for each activity
- c. Submit to GWAC for comments
- d. Incorporate GWAC comments and finalize report

2.2.3 Identify and evaluate existing management strategies and programs (BMPs, , etc.) for each specific source in terms of:

- a. Feasibility
- b. Effectiveness
- c. Cost
- d. Time
- e. Implementation Challenges
- f. Current level of implementation
- g. Monitoring
- h. Education (Change Enforcement?)
- i. Consistency with Water Management Programs and Local Comprehensive Plans
- j. Recommend changes for each strategy / program
- k. Submit to GWAC for comments
- l. Incorporate GWAC comments and finalize report

2.2.4 Identify and evaluate alternative management strategies / programs for each specific source in terms of:

- a. Feasibility
- b. Effectiveness
- c. Cost
- d. Time
- e. Implementation Challenges
- f. Current level of implementation
- g. Monitoring
- h. Education (change Enforcement?)
- i. Consistency with Water Management Programs and Local Comprehensive Plans
- j. Recommend changes for each strategy / program
- k. Submit to GWAC for comments

1. Incorporate GWAC comments and finalize report

2.2.5 Recommendations - Choose recommended management strategies from existing and alternative management strategies for implementation

- a. Provide the rationale for choosing recommended management strategies for implementation
- b. Provide the rationale for not choosing those management strategies not chosen for implementation
- c. Develop and submit funding request for additional research to GWAC
- d. Apply for research funding before the application deadline (normally October)
- e. Develop the final quarterly status report for GWAC
- f. Present the final quarterly status report to GWAC for discussion and feedback
- g. Incorporate GWAC comments. Re-evaluate recommendations
- h. Finalize list of recommendations and submit the final quarterly status report to Ecology

2.2.6 Implementation - Develop a detailed work plan for implementing each aspect of the groundwater management strategies / programs based on the Recommendations section.

- a. Identify the parties responsible for initiating the strategy.
- b. Develop a schedule for implementing the strategy
- c. Develop a cost estimate for implementing each strategy.
- d. Identify priority rankings
- e. Complete Implementation Plan and submit to GWAC and public for input/feedback
- f. Incorporate GWAC and finalize Implementation Plan

2.2.7 Monitoring - Develop a long-term monitoring system for evaluating the effectiveness of each strategy.

2.2.8 Review - Develop a process for the periodic review and revision of the groundwater management program

2.2.9 Develop the GWMA Program Report (combine with other workgroups)

2.2.10 Prepare Final Report (combine with other workgroups)

2.3 Residential, Commercial, Industrial, Municipal and Domestic

2.3.1 Problem definition - Define the extent of the groundwater problems caused or potentially caused by residential, commercial, industrial, municipal and domestic developments supported by as much documentation as possible including:

- a. Identify and categorize specific and potential sources of pollutants. Define residential, commercial, industrial, municipal and domestic pollutant sources
- b. Determine and quantify source contribution to groundwater problem (include surface water sources). Examples include TMDL, UIC, industrial discharges, stormwater pollutants, biosolids, lagoons, pipe franchises, waste allocation, septic system, stormwater and wastewater outfalls, residential fertilizer, etc.
- c. Determine and quantify source contribution to groundwater from surface water
- d. Examine groundwater quality trends (include surface water pollutants) by cause
- e. Evaluate and predict likelihood of future problems and conflicts if no action is taken
- f. Identify areas where insufficient data (Data Gap) exists to define the nature and extent of existing or potential groundwater problems, e.g., improperly abandoned wells, poor well construction, failing septic system
- g. Prepare report and submit to GWAC for input/comments
- h. Incorporate GWAC comments and finalize report

2.3.2 Water Quality Goals - List or establish groundwater quality goals for each activity

- a. Develop quantifiable groundwater quality goals for each activity.
- b. Develop a schedule for achieving the groundwater quality goals for each activity
- c. Prepare report and submit to GWAC for input/comments
- d. Incorporate GWAC comments and finalize report

2.3.3 Identify and evaluate existing management strategies and programs for each specific source in terms of:

- a. Feasibility
- b. Effectiveness
- c. Cost
- d. Time
- e. Implementation Challenges
- f. Current level of implementation

- g. Monitoring
- h. Enforcement
- i. Consistency with Water Management Programs and Local Comprehensive Plans
- j. Recommend changes for each strategy / program
- k. Submit to GWAC for comments/input
- l. Incorporate GWAC comments and finalize report

2.3.4 Identify and evaluate alternative management strategies / programs for each specific source in terms of:

- a. Feasibility
- b. Effectiveness
- c. Cost
- d. Time
- e. Implementation Challenges
- f. Monitoring
- g. Enforcement
- h. Consistency with Water Management Programs and Local Comprehensive Plans
- i. A description of each strategy / program including, where possible, model ordinances, recommended governmental policy statements, interagency agreements, proposed legislative changes, and proposed amendments to local comprehensive plans, coordinated water system plans, basin management programs, and others as appropriate;
- j. Recommend changes for each strategy / program
- k. Submit to GWAC for comments/input
- l. Incorporate GWAC comments and finalize report

2.3.5 Recommendations - Choose recommended management strategies from existing and alternative management strategies for implementation

- a. Provide the rationale for choosing recommended management strategies for implementation
- b. Provide the rationale for not choosing those management strategies not chosen for implementation

- c. Develop and submit funding request for additional research to GWAC
- d. Apply for research funding before the application deadline (normally October)
- e. Develop the final quarterly status report for GWAC
- f. Present the final quarterly status report to GWAC for discussion and feedback
- g. Incorporate GWAC comments. Re-evaluate recommendations
- h. Finalize list of recommendations and submit the final quarterly status report to Ecology

2.3.6 Implementation - Develop a detailed work plan for implementing each aspect of the groundwater management strategies / programs based on the Recommendations section.

- a. Identify the parties responsible for initiating the strategy.
- b. Develop a schedule for implementing the strategy
- c. Communicate with responsible parties on strategy
- d. Develop a cost estimate for implementing each strategy.
- e. Identify priority rankings
- f. Complete Implementation Plan and submit to GWAC and public for input/feedback
- g. Incorporate GWAC and finalize Implementation Plan

2.3.7 Monitoring - Develop a long-term monitoring system for evaluating the effectiveness of each strategy.

2.3.8 Review - Develop a process for the periodic review and revision of the groundwater management program

2.3.9 Develop the GWMA Program Report (combine with other workgroups)

2.3.10 Prepare Final Report (combine with other workgroups)

3.0 Regulatory Framework

3.1 Problem Definition - Define Existing Regulatory Framework Within the GWMA Boundary - Identify existing laws, policies, goals, and responsibilities of state, local, tribal, and federal governments for each source or activity that may affect the area's groundwater quality.

3.2 Evaluate Existing Regulatory Framework - Research and understand all regulatory authority (who, what, when, why, how, etc.), who has the authority to monitor WQ, who is responsible for WQ enforcement (local, state, federal, tribe, districts)

- a. Feasibility

- b. Effectiveness
- c. Cost
- d. Time
- e. Implementation Challenges
- f. Current level of implementation
- g. Monitoring
- h. Enforcement
- i. Gap Determination and Analysis
- j. Overlaps
- k. Prepare preliminary report and submit to GWAC for input/comment
- l. Incorporate GWAC comments and finalize report

3.3 Work Group Support -Respond to Work Group needs and questions related to regulatory framework (Need to be able to answer questions brought up by any interest, e.g., who is responsible for nutrient management plan, inspection and enforcement water quality violations

- a. Provide information
- b. Answer questions
- c. Assist in identifying and evaluating alternative regulatory and/or non-regulatory strategies / programs
- d. Assist in evaluating and choosing for recommendation alternative regulatory and/or non-regulatory strategies / programs
- e. Assist in developing a description of each alternative strategy / program including, where possible, model ordinances, recommended governmental policy statements, interagency agreements, proposed legislative changes, and proposed amendments to local comprehensive plans, coordinated water system plans, basin management programs, and others as appropriate
- f. Prepare bilingual EPO materials, e.g., fact sheets, frequently asked questions, etc.
- g. Develop and implement Education and Public Outreach Plan

3.4 Submit the final quarterly status report to Ecology

3.5 Implementation - Develop a detailed work plan for implementing recommended alternative regulatory and/or non-regulatory strategies

- a. Identify the parties responsible for initiating the strategy.
- b. Develop a schedule for implementing the strategy
- c. Develop a cost estimate for implementing each strategy
- d. Develop a monitoring system for evaluating the effectiveness of each strategy

3.6 Monitoring - Develop a long-term monitoring system for evaluating the effectiveness of each strategy.

3.7 Review - Develop a process for the periodic review and revision of the groundwater management program

3.8 Develop the GWMA Program Report (combine with other workgroups)

3.9 Submit Final Report (combine with other workgroups)

4.0 Education and Outreach

4.1 Develop Goal Statement

- a. Communicate on-going GWAC/GWMA activities
- b. Communicate health effects of groundwater pollution
- c. Invite participation in the GWAC and GWMA activities
- d. Promote open process

4.2 Identify target audiences (Completed in 2012)

- a. Internal
- b. Policymakers and Legislative Staff
- c. Tribal
- d. General Public
- e. Underserved Population
- f. Special Interests

4.3 Identify information needs for each target audience considering: (Completed in 2012)

- a. Information needs and the reasons for that need
- b. Audience Demographics
- c. Communication Strengths and Constraints

d. Appropriate information delivery methodology

4.4 Compile and evaluate previous and existing education and outreach strategies (Completed in 2012)

- a. Review and evaluate effectiveness of previous education and outreach efforts
- b. Identify areas where previous strategies failed to reach targeted audiences, or did not produce desired outcomes
- c. Identify areas where existing audience-appropriate education and outreach materials and delivery are insufficient (materials and delivery gaps).

4.5 Create information delivery strategy(ies) tailored to targeted audiences

- a. Create audience-appropriate education and outreach materials and delivery methods to fill data gaps
- b. Select audience-appropriate education and outreach materials

4.6 Implementation - Develop a detailed work plan for implementing each aspect of the EPO strategy

- a. Identify the parties responsible for initiating the strategy.
- b. Develop a schedule for implementing the strategy (Completed in 2012)
- c. Develop a cost estimate for implementing each strategy.
- d. Determine how success (effectiveness) will be measured (Completed in 2012)
- e. Develop a monitoring system for evaluating the effectiveness of each strategy
- f. Develop a system for obtaining and incorporating GWAC updates, messages and materials into the strategy.
- g. Evaluate, update or change strategy(ies) based on their effectiveness

4.7 Develop & Implement a Web-based information system

- a. Identify communication needs best met using the web
- b. Identify target audiences who have web access
- c. Develop a web strategy that complements and reinforces the Public Outreach and Education Strategy; target audiences with web access
- d. Develop a time and cost estimate for implementation
- e. Update the current website to reflect the proposed strategy

- f. Monitor effectiveness of web strategy
- g. Evaluate, update and/or change strategy based on its effectiveness

4.8 Submit the final quarterly status report to Ecology

4.9 Develop the GWMA Program Report (combine with other workgroups)

4.10 Submit Final Report (combine with other workgroups)

5.0 Funding

5.1 Problem Definition - Determine funding short-term and long-term needs

- a. Data Collection, Characterization, Monitoring (DCCM)
- b. Livestock & CAFO - Yards, corrals, lagoons, manure field application
- c. Irrigated Agriculture
- d. Pollutants from Residential, Commercial, Industrial, Municipal and Domestic
- e. Regulatory Framework
- f. Education and Outreach
- g. Prepare and submit funding needs to GWAC
- h. Incorporate GWAC comments and prepare final report

5.2 Funding Strategy - Determine and develop short-term and long-term funding Strategy

- a. Data Collection, Characterization, Monitoring (DCCM)
- b. Livestock & CAFO - Yards, corrals, lagoons, manure field application
- c. Irrigated Agriculture
- d. Pollutants from Residential, Commercial, Industrial, Municipal and Domestic
- e. Regulatory Framework
- f. Education and Outreach
- g. Prepare and submit funding needs to GWAC
- h. Incorporate GWAC comments and prepare final report

5.3 Implementation - Seek and apply for all funding opportunities local, state, federal including private-public venture

- a. Seek and obtain private, local, state, federal and tribal financial assistance

b. Prepare and submit preliminary funding strategy status report to GWAC

c. Incorporate GWAC comments, finalize final grant report and submit to Ecology

5.4 Monitoring - Develop a long-term monitoring system for evaluating the effectiveness of each strategy and where to spend effort, time and funding

5.5 Review - Develop a plan and process for the periodic review of funding needs and where to obtain funding

5.6 Develop GWMA Program Report (combine with other workgroups)

5.7 Submit Final GWMA Program Report (combine with other workgroups)

An estimated schedule is presented in Appendix A1 and is expected to change as more information is gathered by the GWAC.

Strategies used by the GWAC may include, but not be limited to, the following:

- Compile recently established nitrate mitigation studies and BMPs from other similar studies including GWMA
- Compile existing soil profile samples developed for nitrate uptake purposes and augment along with current research to determine nitrate level loading
- Perform deep soil samples to determine nitrate levels and extent of deep nitrate migration
- Provide in season sampling of plant tissue of soils to evaluate timing and application efficiency (the amount applied to the amount used by the crop)
- Identify geographic areas vulnerable to nitrate leaching (Leaching Vulnerability Index)
- Identify geographic areas of higher concern
- Identify sources of elevated nitrate levels
- Identify impacted aquifer or aquifer zones
- Provide GWMA baseline conditions and long term monitoring of same
- Estimate nutrient loading budget across the GWMA boundaries
- Identify information gaps and data acquisition needs

The GWMA Program will also recommend projects such as:

- A short term goal to provide clean drinking water to those with nitrate contamination and identify additional early adoption strategies

- Develop nutrient management guidelines (i.e., reduce the amount of nitrogen fertilizer through optimal timing, placement, and rate of fertilizer application) applicable to Lower Valley hydrology and soil conditions
- Develop irrigation water management guidelines specific to the land use (e.g., livestock, irrigated agriculture, domestic use)
- Develop bulk manure and fertilizer handling and storage guidelines
- Develop wellhead protection plans
- Facilitate implementation of nitrate management strategies specific to the farm local conditions
- Provide best management strategies for voluntary implementation

The GWMA Program will identify methods for evaluating the effectiveness of each strategy and methods for evaluating progress in implementing the projects. Quantitative measures are required to evaluate the baseline and progress and success of the action plan (downward nitrate trend for different sectors). Some of the potential specific goals used to guide implementation of nitrate management strategies are as follows:

1. Trends in nitrate levels and extent of deep nitrate migration
2. Trends in the adoption/implementation of BMPs
3. Trends in the level of public awareness of the causes and health implications of high nitrate levels in groundwater

III. Budget

In addition to the technical support from GWAC and external experts, funding is required to assist in the continued research, documentation, and identification of appropriate BMPs in the GWMA as well as data collection for projects such as deep soil sampling to evaluate changes in the amount and movement of nitrate during the GWMA Program development.

Description	Low	Medium	High
Task 1. Plan Development and Administration	\$300,000	\$400,000	\$500,000
Task 2. Monitoring and Characterization	\$150,000	\$575,000	\$1,000,000
Task 3. Education and Public Outreach	\$100,000	\$250,000	\$400,000
Task 4. BMP Redevelopment and Field Research	\$200,000	\$350,000	\$500,000
TOTAL	\$750,000	\$1,575,000	\$2,400,000

Budget Assumptions:

1. Low estimate is based on minimum effort and collection of existing data. This estimate was used to prepare the GWMA designation application. The GWAC may determine that additional data collection, field studies, monitoring and research are needed to define the extent of nitrate

contamination. The committee recognizes that additional funding will be needed (and sought) to accomplish the tasks identified in the budget, above the LOW level.

2. Medium estimate is the average of Low and High estimates
3. High estimate assumes significant data collection including drilling monitor wells, additional research and consultant costs.

IV. Immediate Public Health Needs

Approximately 75,000 persons reside within the Lower Yakima Basin area. Of that amount, it is estimated that about 25,000 residents (34% of the population) obtain their drinking water from private wells. Water quality testing conducted by various entities during the last twenty years shows that up to twenty percent of the private drinking water wells may exceed drinking water standards for nitrate. Accordingly, a conservative calculation indicates that upwards of 1,800 private wells within the area may exceed nitrate drinking water standards.

The GWAC recognizes and supports the primary long-term goal of the GWMA to reduce concentrations of nitrate in groundwater to below Washington State drinking water standards in order to protect the health and safety of the residents of the Lower Yakima Basin. The GWAC believes, based on similar efforts within the State of Washington and the Nation, that fulfillment of this goal will undoubtedly take many years to achieve. The GWAC is very concerned about the public health effects nitrates may have on the existing residents during this period of time. Accordingly, the GWAC will work with Federal, State, and Local governments to immediately seek funding and implement programs to provide clean drinking water to the residents of the Lower Yakima Basin.

Appendix A1
(Work Plan and Timeline)

1.0 Data Collection, Characterization, Monitoring (DCCM)				2013 - Q1				2013 - Q2				2013 - Q3				2013 - Q4				2014 - Q1				2014 - Q2				2014 - Q3				2014 - Q4				
Work Plan Content & Milestone				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.1 Compile and Manage Data																																				
a. Research and compile existing data																																				
b. Analyze existing data																																				
c. Create a shared data management system																																				
d. Create a GIS application																																				
e. Identify data needs (Gaps) working with other GWAC Work Groups																																				
f. Report to GWAC for input/feedback																																				
g. Incorporate GWAC comments and finalize report																																				
1.2 Update Existing Hydrogeological Characterization Report (February 2010)																																				
a. Delineation of groundwater area (A delineation of the groundwater area, subarea or depth zone boundaries and the rationale for those boundaries)																																				
b. Jurisdictional boundaries (A map showing the jurisdictional boundaries of all state, local, tribal, and federal governments within the groundwater management area)																																				
c. Land and water use authorities and responsibilities (Land and water use management authorities, policies, goals and responsibilities of state, local, tribal, and federal governments that may affect the area's groundwater quality and quantity)																																				
d. Description of the area (A general description of the locale, including a brief description of the topography, geology, climate, population, land use, water use and water resources)																																				
e. Hydrogeology (A description of the area's hydrogeology, including the delineation of aquifers, aquitards, hydrogeologic cross-sections, porosity and horizontal and vertical permeability estimates, direction and quantity of groundwater flow, water-table contour and potentiometric maps by aquifer, locations of wells, perennial streams and springs, the locations of aquifer recharge and discharge areas, and the distribution and quantity of natural and man-induced aquifer recharge and discharge)																																				
f. Historical and existing groundwater quality																																				
g. Historical and current groundwater use and purpose (Estimates of the historical and current rates of groundwater use and purposes of such use within the area)																																				
h. References and documentation (References including sources of data, methods and accuracy of measurements, quality control used in data collection and measurement programs, and documentation for and construction details of any computer models used)																																				
i. Develop an estimate of the existing and future aquifer uses (Projections of groundwater supply needs and rates of withdrawal based upon alternative population and land use projections)																																				
j. Develop a summary of water quality standards set by DOE (Ecology) and EPA																																				
k. Develop a report of annual variations in hydrogeologic factors (variations in aquifer recharge and other significant hydrogeologic factors)																																				
l. Submit to GWAC for comments																																				
m. Incorporate GWAC comments and submit to GWAC																																				
1.3 Develop Implementation Work Plan - Develop a detailed work plan for implementing each aspect of the groundwater data collection and analysis programs																																				
a. Identify monitoring locations																																				
b. Select monitoring parameters and laboratory analytical methods																																				
c. Determine sampling frequency and number																																				
d. Document field procedures																																				
e. Identify QA/QC procedures																																				
f. Develop statistical monitoring procedure																																				
g. Develop and submit funding request for additional research to GWAC																																				

1.0 Data Collection, Characterization, Monitoring (DCCM)		2013 - Q1			2013 - Q2			2013 - Q3			2013 - Q4			2014 - Q1			2014 - Q2			2014 - Q3			2014 - Q4			
Work Plan Content & Milestone		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
h. Apply for research funding before the application deadline (normally October)																										
i. Develop the final quarterly status report for GWAC																										
j. Present the final quarterly status report to GWAC for discussion and feedback																										
k. Incorporate GWAC comments. Re-evaluate recommendations																										
l. Finalize list of recommendations and submit the final quarterly status report to Ecology																										
1.4 Implementation - Begin collection of water quality data																										
a. Identify the parties responsible for initiating the strategy																										
b. Develop a schedule for implementing the strategy																										
c. Develop a cost estimate for implementing the strategy																										
d. Secure access to sampling locations																										
e. Collect Samples																										
1.5 Monitoring - Develop a long-term monitoring system for evaluating the effectiveness of each strategy.																										
1.6 Review - Develop a process for the periodic review and revision of the groundwater management program																										
1.7 Develop the GWMA Program Report (combine with other workgroups)																										
1.8 Submit Final Report (combine with other workgroups)																										

2.1 Livestock & CAFO - Yards, corrals, lagoons, and manure field application		2013 - Q1	2013 - Q2	2013 - Q3	2013 - Q4	2014 - Q1	2014 - Q2	2014 - Q3	2014 - Q4																
Work Plan Content & Milestone		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2.1.1 Problem definition - Define the extent of the groundwater problems caused or potentially caused by each activity supported by as much documentation as possible including:																									
a. Identify and categorize specific sources																									
b. Define and quantify source contribution to groundwater problem																									
c. Examine groundwater quality trends by cause																									
d. Evaluate and predict likelihood of future problems and conflicts if no action is taken																									
e. Identify areas where insufficient data exists to define the nature and extent of existing or potential groundwater nitrate contamination																									
f. Develop a plan to obtain the data necessary to define the nature and extent of existing or potential groundwater nitrate contamination sources																									
g. Identify areas where the sources of other forms of groundwater contamination, primarily bacteria, overlap with or are related to nitrate sources.																									
i. Submit to GWAC for comments and feedback																									
j. Incorporate GWAC comments and finalize draft																									
2.1.2 Water Quality Goals - To reduce the level of nitrates in groundwater to safe drinking water standards. This work group will contribute to the overall GWMA goal by greatly reducing or eliminating nitrate contamination that may be occurring as a result of current practices. This should result in a downward trend over time, especially at shallow depths, even though nitrate contamination persists from past practices.																									
a. Develop quantifiable groundwater quality goals for each activity																									
b. Develop a schedule for achieving the groundwater quality goals for each activity																									
c. Provide WQ Goals to GWAC for discussion, feedback and consensus																									
d. Incorporate GWAC comments and finalize WQ Goals																									
2.1.3 Identify and evaluate existing management strategies and programs (DNM Act, NPDES CAFO Permit, BMPs, etc.) for each specific source in terms of:																									
a. Feasibility																									
b. Effectiveness																									
c. Cost																									
d. Time																									
e. Implementation Challenges																									
f. Current level of implementation																									
g. Monitoring																									
h. Enforcement																									
i. Consistency with Water Management Programs and Local Comprehensive Plans																									
j. Effectiveness at also preventing related forms of contamination such as bacteria.																									
k. Recommend changes for each strategy / program including, where possible, model ordinances, recommended governmental policy statements, interagency agreements, proposed legislative changes, and proposed amendments to local comprehensive plans, coordinated water system plans, basin management programs, and others as appropriate.																									
l. Submit to GWAC for discussion, feedback and consensus																									
m. Incorporate GWAC comments and finalize WQ Goals																									
2.1.4 Once sources of groundwater nitrate contamination are clearly defined identify and evaluate alternative management strategies / programs for each specific source in terms of:																									
a. Feasibility																									
b. Effectiveness																									
c. Cost																									
d. Time																									
e. Implementation Challenges																									
f. Monitoring																									

2.1 Livestock & CAFO - Yards, corrals, lagoons, and manure field application		2013 - Q1	2013 - Q2				2013 - Q3				2013 - Q4				2014 - Q1				2014 - Q2				2014 - Q3			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
g. Enforcement																										
h. Consistency with Water Management Programs and Local Comprehensive Plans																										
i. Effectiveness at also preventing related forms of contamination such as bacteria.																										
j. A description of each strategy / program including, where possible, model ordinances, recommended governmental policy statements, interagency agreements, proposed legislative changes, and proposed amendments to local comprehensive plans, coordinated water system plans, basin management programs, and others as appropriate.																										
k. Provide and discuss strategies and rationale of recommendations to GWAC																										
l. Incorporate GWAC comments and submit to GWAC (combine with other workgroups)																										
2.1.5 Recommendations - Choose recommended management strategies from existing and alternative management strategies for implementation																										
a. Provide the rationale for choosing recommended management strategies for implementation																										
b. Provide the rationale for not choosing those management strategies not chosen for implementation																										
c. Develop and submit funding request for additional research to GWAC																										
d. Apply for research funding before the application deadline (normally October)																										
e. Develop the final quarterly status report for GWAC																										
f. Present the final quarterly status report to GWAC for discussion and feedback																										
g. Incorporate GWAC comments. Re-evaluate recommendations																										
h. Finalize list of recommendations and submit the final quarterly status report to Ecology																										
2.1.6 Implementation - Develop a detailed work plan for implementing each aspect of the groundwater management strategies / programs based on the Recommendations section.																										
a. Identify the parties responsible for initiating the strategy.																										
b. Develop a schedule for implementing the strategy																										
c. Develop a cost estimate for implementing each strategy.																										
d. Identify priority rankings																										
e. Complete Implementation Plan and submit to GWAC and public for input/feedback																										
f. Incorporate GWAC and finalize Implementation Plan																										
2.1.7 Monitoring - Develop a long-term monitoring system for evaluating the effectiveness of each strategy.																										
2.1.8 Review - Develop a process for the periodic review and revision of the groundwater management program																										
2.1.9 Develop the GWMa Program Report (combine with other workgroups)																										
2.1.10 Prepare Final Report (combine with other workgroups)																										

2.2 Irrigated Agriculture		2013 - Q1			2013 - Q2			2013 - Q3			2013 - Q4			2014 - Q1			2014 - Q2			2014 - Q3			2014 - Q4		
Work Plan Content & Milestone		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2.2.1 Problem definition - Identify and categorize specific practices irrigated agricultural can implement to reduce nitrate loading to groundwater.																									
a. Define and quantify source contributions (all sources) to groundwater problem (Note: This would entail developing a study area scale nitrogen budget estimate for all nitrogen sources)																									
b. Identify and obtain existing water quality data sources.																									
c. Identify areas where insufficient data exists to define the nature and extent of existing or potential groundwater problems																									
d. Examine groundwater quality trends																									
e. Submit to GWAC for comments																									
f. Incorporate GWAC comments and finalize report																									
2.2.2 Water Quality Goals - Establish groundwater quality goals for each activity																									
a. Develop quantifiable groundwater quality goals for each activity																									
b. Develop a schedule for achieving the groundwater quality goals for each activity																									
c. Submit to GWAC for comments																									
d. Incorporate GWAC comments and finalize report																									
2.2.3 Identify and evaluate existing management strategies and programs (BMPs, , etc.) for each specific source in terms of:																									
a. Feasibility																									
b. Effectiveness																									
c. Cost																									
d. Time																									
e. Implementation Challenges																									
f. Current level of implementation																									
g. Monitoring																									
h. Education (Change Enforcement?)																									
i. Consistency with Water Management Programs and Local Comprehensive Plans																									
j. Recommend changes for each strategy / program																									
k. Submit to GWAC for comments																									
l. Incorporate GWAC comments and finalize report																									
2.2.4 Identify and evaluate alternative management strategies / programs for each specific source in terms of:																									
a. Feasibility																									
b. Effectiveness																									
c. Cost																									
d. Time																									
e. Implementation Challenges																									
f. Current level of implementation																									
g. Monitoring																									
h. Education (change Enforcement?)																									
i. Consistency with Water Management Programs and Local Comprehensive Plans																									
j. Recommend changes for each strategy / program																									
k. Submit to GWAC for comments																									
l. Incorporate GWAC comments and finalize report																									
2.2.5 Recommendations - Choose recommended management strategies from existing and alternative management strategies for implementation																									

2.2 Irrigated Agriculture		2013 - Q1			2013 - Q2			2013 - Q3			2013 - Q4			2014 - Q1			2014 - Q2			2014 - Q3			2014 - Q4		
Work Plan Content & Milestone		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
a. Provide the rationale for choosing recommended management strategies for implementation																									
b. Provide the rationale for not choosing those management strategies not chosen for implementation																									
c. Develop and submit funding request for additional research to GWAC																									
d. Apply for research funding before the application deadline (normally October)																									
e. Develop the final quarterly status report for GWAC																									
f. Present the final quarterly status report to GWAC for discussion and feedback																									
g. Incorporate GWAC comments. Re-evaluate recommendations																									
h. Finalize list of recommendations and submit the final quarterly status report to Ecology																									
2.2.6 Implementation - Develop a detailed work plan for implementing each aspect of the groundwater management strategies / programs based on the Recommendations section.																									
a. Identify the parties responsible for initiating the strategy.																									
b. Develop a schedule for implementing the strategy																									
c. Develop a cost estimate for implementing each strategy.																									
d. Identify priority rankings																									
e. Complete Implementation Plan and submit to GWAC and public for input/feedback																									
f. Incorporate GWAC and finalize Implementation Plan																									
2.2.7 Monitoring - Develop a long-term monitoring system for evaluating the effectiveness of each strategy.																									
2.2.8 Review - Develop a process for the periodic review and revision of the groundwater management program																									
2.2.9 Develop the GWMA Program Report (combine with other workgroups)																									
2.2.10 Prepare Final Report (combine with other workgroups)																									

2.3 Pollutants from Residential, Commercial, Industrial, Municipal and Domestic		2013 - Q1	2013 - Q2			2013 - Q3			2013 - Q4			2014 - Q1			2014 - Q2			2014 - Q3			2014 - Q4					
		Work Plan Content & Milestone	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2.3.1 Problem definition	- Define the extent of the groundwater problems caused or potentially caused by residential, commercial, industrial, municipal and domestic developments supported by as much documentation as possible including:																									
a.	Identify and categorize specific and potential sources of pollutants. Define residential, commercial, industrial, municipal and domestic pollutant sources																									
b.	Determine and quantify source contribution to groundwater problem (include surface water sources). Examples include TMDL, UIC, industrial discharges, stormwater pollutants, biosolids, lagoons, pipe franchises, waste allocation, septic system, stormwater and wastewater outfalls, residential fertilizer, etc.																									
c.	Determine and quantify source contribution to groundwater from surface water																									
d.	Examine groundwater quality trends (include surface water pollutants) by cause																									
e.	Evaluate and predict likelihood of future problems and conflicts if no action is taken																									
f.	Identify areas where insufficient data (Data Gap) exists to define the nature and extent of existing or potential groundwater problems, e.g., improperly abandoned wells, poor well construction, failing septic system																									
g.	Prepare report and submit to GWAC for input/comments																									
h.	Incorporate GWAC comments and finalize report																									
2.3.2 Water Quality Goals	- List or establish groundwater quality goals for each activity																									
a.	Develop quantifiable groundwater quality goals for each activity																									
b.	Develop a schedule for achieving the groundwater quality goals for each activity																									
c.	Prepare report and submit to GWAC for input/comments																									
d.	Incorporate GWAC comments and finalize report																									
2.3.3 Identify and evaluate existing management strategies and programs for each specific source in terms of:																										
a.	Feasibility																									
b.	Effectiveness																									
c.	Cost																									
d.	Time																									
e.	Implementation Challenges																									
f.	Current level of implementation																									
g.	Monitoring																									
h.	Enforcement																									
i.	Consistency with Water Management Programs and Local Comprehensive Plans																									
j.	Recommend changes for each strategy / program																									
k.	Submit to GWAC for comments/input																									
l.	Incorporate GWAC comments and finalize report																									
2.3.4 Identify and evaluate alternative management strategies / programs for each specific source in terms of:																										
a.	Feasibility																									
b.	Effectiveness																									
c.	Cost																									
d.	Time																									
e.	Implementation Challenges																									
f.	Monitoring																									
g.	Enforcement																									

2.3 Pollutants from Residential, Commercial, Industrial, Municipal and Domestic		2013 - Q1		2013 - Q2		2013 - Q3		2013 - Q4		2014 - Q1		2014 - Q2		2014 - Q3		2014 - Q4												
		Work Plan Content & Milestone		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	h. Consistency with Water Management Programs and Local Comprehensive Plans																											
	i. A description of each strategy / program including, where possible, model ordinances, recommended governmental policy statements, interagency agreements, proposed legislative changes, and proposed amendments to local comprehensive plans, coordinated water system plans, basin management programs, and others as appropriate;																											
	j. Recommend changes for each strategy / program																											
	k. Submit to GWAC for comments/input																											
	l. Incorporate GWAC comments and finalize report																											
	2.3.5 Recommendations - Choose recommended management strategies from existing and alternative management strategies for implementation																											
	a. Provide the rationale for choosing recommended management strategies for implementation																											
	b. Provide the rationale for not choosing those management strategies not chosen for implementation																											
	c. Develop and submit funding request for additional research to GWAC																											
	d. Apply for research funding before the application deadline (normally October)																											
	e. Develop the final quarterly status report for GWAC																											
	f. Present the final quarterly status report to GWAC for discussion and feedback																											
	g. Incorporate GWAC comments. Re-evaluate recommendations																											
	h. Finalize list of recommendations and submit the final quarterly status report to Ecology																											
	2.3.6 Implementation - Develop a detailed work plan for implementing each aspect of the groundwater management strategies / programs based on the Recommendations section.																											
	a. Identify the parties responsible for initiating the strategy.																											
	b. Develop a schedule for implementing the strategy																											
	c. Communicate with responsible parties on strategy																											
	d. Develop a cost estimate for implementing each strategy.																											
	e. Identify priority rankings																											
	f. Complete Implementation Plan and submit to GWAC and public for input/feedback																											
	g. Incorporate GWAC and finalize Implementation Plan																											
	2.3.7 Monitoring - Develop a long-term monitoring system for evaluating the effectiveness of each strategy.																											
	2.3.8 Review - Develop a process for the periodic review and revision of the groundwater management program																											
	2.3.9 Develop the GWMA Program Report (combine with other workgroups)																											
	2.3.10 Prepare Final Report (combine with other workgroups)																											

3.0 Regulatory Framework		2013 - Q1	2013 - Q2	2013 - Q3	2013 - Q4	2014 - Q1	2014 - Q2	2014 - Q3	2014 - Q4																
Work Plan Content & Milestone		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
3.1 Problem Definition - Define Existing Regulatory Framework Within the GWMA Boundary - Identify existing laws, policies, goals, and responsibilities of state, local, tribal, and federal governments for each source or activity that may affect the area's groundwater quality.																									
3.2 Evaluate Existing Regulatory Framework - Research and understand all regulatory authority (who, what, when, why, how, etc.), who has the authority to monitor WQ, who is responsible for WQ enforcement (local, state, federal, tribe, districts)																									
a. Feasibility																									
b. Effectiveness																									
c. Cost																									
d. Time																									
e. Implementation Challenges																									
f. Current level of implementation																									
g. Monitoring																									
h. Enforcement																									
i. Gap Determination and Analysis																									
j. Overlaps																									
k. Prepare preliminary report and submit to GWAC for input/comment																									
l. Incorporate GWAC comments and finalize report																									
3.3 Work Group Support - Respond to Work Group needs and questions related to regulatory framework (Need to be able to answer questions brought up by any interest, e.g., who is responsible for nutrient management plan, inspection and enforcement water quality violations																									
a. Provide information																									
b. Answer questions																									
c. Assist in identifying and evaluating alternative regulatory and/or non-regulatory strategies / programs																									
d. Assist in evaluating and choosing for recommendation alternative regulatory and/or non-regulatory strategies / programs																									
e. Assist in developing a description of each alternative strategy / program including, where possible, model ordinances, recommended governmental policy statements, interagency agreements, proposed legislative changes, and proposed amendments to local comprehensive plans, coordinated water system plans, basin management programs, and others as appropriate																									
f. Prepare bilingual EPO materials, e.g., Fact Sheets, Frequently Asked Questions, etc.																									
g. Develop and implement Education and Public Outreach Plan																									
3.4 Submit the final quarterly status report to Ecology																									
3.5 Implementation - Develop a detailed work plan for implementing recommended alternative regulatory and/or non-regulatory strategies																									
a. Identify the parties responsible for initiating the strategy.																									
b. Develop a schedule for implementing the strategy																									
c. Develop a cost estimate for implementing each strategy.																									
d. Develop a monitoring system for evaluating the effectiveness of each strategy.																									
3.6 Monitoring - Develop a long-term monitoring system for evaluating the effectiveness of each strategy.																									

3.0 Regulatory Framework		2013 - Q1	2013 - Q2	2013 - Q3	2013 - Q4	2014 - Q1	2014 - Q2	2014 - Q3	2014 - Q4																
Work Plan Content & Milestone		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
3.7 Review - Develop a process for the periodic review and revision of the groundwater management program																									
3.8 Develop the GWMA Program Report (combine with other workgroups)																									
3.9 Submit Final Report (combine with other workgroups)																									

4.0 Education and Outreach		2013 - Q1	2013 - Q2		2013 - Q3		2013 - Q4		2014 - Q1		2014 - Q2		2014 - Q3		2014 - Q4										
Work Plan Content & Milestone		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
4.1 Develop Goal Statement																									
a. Communicate on-going GWAC/GWMA activities																									
b. Communicate health effects of groundwater pollution																									
c. Invite participation in the GWAC and GWMA activities																									
d. Promote open process																									
4.2 Identify target audiences (Completed 2012)																									
a. Internal																									
b. Policymakers and Legislative Staff																									
c. Tribal																									
d. General Public																									
e. Underserved Population																									
f. Special Interests																									
4.3 Identify information needs for each target audience considering: (Completed in 2012)																									
a. Information needs and the reasons for that need																									
b. Audience Demographics																									
c. Communication Strengths and Constraints																									
d. Appropriate information delivery methodology																									
4.4 Compile and evaluate previous and existing education and outreach strategies (Completed in 2012)																									
a. Review and evaluate effectiveness of previous education and outreach efforts																									
b. Identify areas where previous strategies failed to reach targeted audiences, or did not produce desired outcomes																									
c. Identify areas where existing audience-appropriate education and outreach materials and delivery are insufficient (materials and delivery gaps).																									
4.5 Create information delivery strategy(ies) tailored to targeted audiences																									
a. Create audience-appropriate education and outreach materials and delivery methods to fill data gaps																									
b. Select audience-appropriate education and outreach materials																									
4.6 Implementation - Develop a detailed work plan for implementing each aspect of the EPO strategy																									
a. Identify the parties responsible for initiating the strategy.																									
b. Develop a schedule for implementing the strategy (Completed in 2012)																									
c. Develop a cost estimate for implementing each strategy.																									
d. Determine how success (effectiveness) will be measured (Completed in 2012)																									
e. Develop a monitoring system for evaluating the effectiveness of each strategy																									
f. Develop a system for obtaining and incorporating GWAC updates, messages and materials into the strategy.																									
g. Evaluate, update or change strategy(ies) based on their effectiveness																									
4.7 Develop & Implement a Web-based information system																									
a. Identify communication needs best met using the web																									
b. Identify target audiences who have web access																									

4.0 Education and Outreach		2013 - Q1	2013 - Q2	2013 - Q3	2013 - Q4	2014 - Q1	2014 - Q2	2014 - Q3	2014 - Q4																
Work Plan Content & Milestone		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
c. Develop a web strategy that complements and reinforces the Public Outreach and Education Strategy; target audiences with web access																									
d. Develop a time and cost estimate for implementation																									
e. Update the current website to reflect the proposed strategy.																									
f. Monitor effectiveness of web strategy																									
g. Evaluate, update and/or change strategy based on its effectiveness																									
4.8 Submit the final quarterly status report to Ecology																									
4.9 Develop the GWMA Program Report (combine with other workgroups)																									
4.10 Submit Final Report (combine with other workgroups)																									

5.0 Funding		Work Plan Content & Milestone						2013 - Q1			2013 - Q2			2013 - Q3			2013 - Q4			2014 - Q1			2014 - Q2			2014 - Q3			2014 - Q4		
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec						
5.1 Problem Definition - Determine funding short-term and long-term needs																															
a. Data Collection, Characterization, Monitoring (DCCM)																															
b. Livestock & CAFO - Yards, corrals, lagoons, manure field application																															
c. Irrigated Agriculture																															
d. Pollutants from Residential, Commercial, Industrial, Municipal and Domestic																															
e. Regulatory Framework																															
f. Education and Outreach																															
g. Prepare and submit funding needs to GWAC																															
h. Incorporate GWAC comments and prepare final report																															
5.2 Funding Strategy - Determine and develop short-term and long-term funding Strategy																															
a. Data Collection, Characterization, Monitoring (DCCM)																															
b. Livestock & CAFO - Yards, corrals, lagoons, manure field application																															
c. Irrigated Agriculture																															
d. Pollutants from Residential, Commercial, Industrial, Municipal and Domestic																															
e. Regulatory Framework																															
f. Education and Outreach																															
g. Prepare and submit funding needs to GWAC																															
h. Incorporate GWAC comments and prepare final report																															
5.3 Implementation - Seek and apply for all funding opportunities local, state, federal including private-public venture																															
a. Seek and obtain private, local, state, federal and tribal financial assistance																															
b. Prepare and submit preliminary funding strategy status report to GWAC																															
c. Incorporate GWAC comments, finalize final grant report and submit to Ecology																															
5.4 Monitoring - Develop a long-term monitoring system for evaluating the effectiveness of each strategy and where to spend effort, time and funding																															
5.5 Review - Develop a plan and process for the periodic review of funding needs and where to obtain funding																															
5.6 Develop GWMA Program Report (combine with other workgroups)																															
5.7 Submit Final GWMA Program Report (combine with other workgroups)																															

Appendix A2

Public Information & Outreach Two-Year Budget Options (Jan 2013 - Dec 2014)

LOW Budget Plan - \$100,000

- Conduct 4 public meetings with Spanish-language interpretation
- Develop and distribute English/Spanish informational materials to GWAC members and community groups
- Participate in periodic news shows on Public Spanish-language radio (KDNA)
- Distribute PSAs to commercial media (radio & TV)
- Maintain stakeholder & community contact list
- Maintain the GWMA website
- Conduct media relations including 4 news releases
- Conduct outreach at a minimum of 4 community events
- Solicit program feedback through the web, public meetings, and at community events

MID-Budget Plan - \$250,000

- Includes all features of the **LOW** plan and includes:
- Comprehensive distribution of English/Spanish materials to employers, businesses and others in the GWMA
- Send one direct-mail GWMA informational mailing to all households on private wells in the GWMA who are on a USPS mail route.
- Provide one door-to-door delivery of GWMA informational materials to households on private wells in the GWMA who are not on a USPS mail route.
- Provide periodic targeted Spanish-language outreach on commercial radio and television
- Solicit additional program feedback through comparison focus groups: two English & two Spanish-language focus group. (4 total)

HIGH-Budget Plan - \$400,000

- Includes all features of the **LOW & MID** plans and also:
- Hiring one bilingual FTE to manage the education & outreach effort
- Providing ongoing targeted Spanish-language outreach on commercial radio and television
- Soliciting additional program feedback through two or more English & Spanish-language focus groups (4 minimum); surveys, etc

Attachment C

Education and Outreach Plan

Introduction

The following outreach plan will help guide the Lower Yakima Valley Groundwater Advisory Committee (GWAC) carry out its public involvement efforts during the development of the GWMA program. The two-year outreach plan will educate audiences about the risk of nitrates in groundwater, invite participation in the GWAC's work, and solicit feedback in the GWMA development. It will also set the stage for future outreach efforts following implementation of the GWMA program.

The plan was developed by the GWAC's Education and Outreach (EPO) subcommittee, which was comprised of GWAC members, GWAC agency affiliates and citizen volunteers. The list is included as Appendix (A).

The subcommittee worked over several months to develop the strategy; key to this effort was ensuring that the plan will allow flexibility over the two years that the GWMA program itself is developed. That separate and concurrent effort will likely offer new data, program feedback and other variables that will require a dynamic and flexible outreach plan.

Following the subcommittee's creation of the draft plan, it was reviewed and approved by the GWAC committee on December 12, 2012.

GWAC and EPO Goals and Objectives

The Outreach Plan will support the GWAC's goal, *The purpose of the GWMA is to reduce nitrate contamination concentrations in groundwater below state drinking water standards.*

In addition, the EPO developed its own goal statement: *The GWMA Education and Public Outreach Plan will inform and educate the public about nitrate groundwater contamination and its health and environmental impacts, promote GWMA activities, and encourage engagement in the process by the community and key stakeholders.*

Overarching Objectives

The overarching objectives developed to carry out the plan goals include:

1. Educating at-risk audiences about the risks of elevated nitrate to human health and how to protect themselves from that risk;
2. Informing audiences about the GWAC planning process; and
3. Inviting participation in the development of the GWMA program

Target Audiences

The EPO plan will target four larger audiences, each with its own diverse audience subsets:

1. Internal audiences
 - a. Agency Leadership
 - b. Policymakers & Legislative Staff
 - c. Yakama Nation Leadership
2. General Public
 - a. Private well users and at risk-populations in the GWMA
 - b. Other residents within the GWMA
 - c. Media
3. Underserved/English as a Second Language Residents
 - a. Private well users and at-risk populations in the GWMA
 - b. Other residents within the GWMA
 - c. Spanish-Language Media
4. Special Interests
 - a. Large employers in the GWMA
 - b. Environmental & Ag Industry Associations
 - c. Social Justice Organizations

The detailed list of the target audiences is included as Appendix (B).

Strategy

The plan will address the specific needs of the diverse target audiences by responding to 1) the information and/or educational needs of each audience; 2) providing bilingual (English and Spanish) information and 3) using audience-specific outreach tools to convey key messages. This will be accomplished through a coordinated outreach campaign using a variety of English/Spanish outreach tools: a project website, interagency networking and coordination, print materials and mailings, local media, public events and festivals.

Underserved/English As a Second Language (ESL) Audiences

The EPO will directly reach out to the underserved and ESL audiences, especially those at high risk from nitrate contamination using targeted media and outreach work. Key "messengers" include Spanish language media, large employers, women's groups, the faith community, University of Washington Pacific Northwest Agricultural Safety and Health Center (PNASH), El Proyecto Bienestar, and others in the GWMA program area. They will be provided English/Spanish outreach materials and will be invited to spread the word about the program.

The EPO will seek outreach opportunities such as Cinco de Mayo festivals, Hispanic Awareness Month activities, Tribal Housing Summits, and local health care community events.

Yakama Nation and Spanish-language radio and TV will be invited to participate in outreach through public radio talk shows, PSA's and commercial ad spots.

Role of the GWAC Members in the EPO

GWAC members will also play a central role in education and outreach efforts. Members are expected to provide regular GWAC updates to their constituencies, identify and help coordinate outreach opportunities within their own organizations, and convey feedback to the EPO. They will also be invited to participate in, and to help solicit volunteers for, outreach efforts.

As the oversight body of the EPO, the GWAC will also provide ongoing guidance to the EPO through recommendations, feedback and course corrections during the development of the GWMA program.

Outreach Tools

The following is a highlight of recommended outreach tools; a comprehensive list is included as Appendix (B).

GWMA Website

The GWMA website will serve as the central clearinghouse for the GWAC and the GWMA development. It will invite audience participation in the process, offer access to educational and self-help materials, provide information exchange between the GWAC and the public, and solicit feedback on the outreach strategy and the GWMA development.

Outreach materials (correspondence, fact sheets, flyers) will direct audiences to the website, and provide an additional means for audiences to access resources and to receive updates. The website may be viewed at www.yakimacounty.us/gwma.

Bilingual educational and outreach materials

Outreach materials (flyers, posters, mailings, survey instruments) will be made available in both English and Spanish. Based on feedback from previous outreach efforts, materials will convey the plan's key messages in a simple, easy to read format.

Evaluation Measures

A consistent survey instrument will be developed and used with each audience contact (through the website, at events, etc.). The purpose will be to solicit feedback on outreach efforts and their effectiveness, and to evaluate participants' current understanding of the issues, their awareness of the GWAC and their degree of involvement with the GWMA development.

A detailed list of evaluation measures is included as Appendix (B).

Key Milestones: 2013-2014

The key milestones for the outreach plan reflect an ongoing cycle of preparation and outreach, followed by review and evaluation and a subsequent report back to the GWAC. This dynamic approach allows the strategy to remain relevant over time and under changing conditions. It also ensures that the GWAC has sufficient information to provide meaningful input, or to make course corrections or suggestions as it develops the GWMA program.

The EPO Milestones are included as Appendix (C).

Appendix A

Appendix A

GWAC Public Involvement & Outreach Plan Contributors

Andres Cervantes, GWAC Member

Tom Tebb, GWAC Member

Jean Mendoza, GWAC Member

Wendell Hannigan, GWAC alternate

Rachel Little, Benton Conservation District

Gretchen Stewart, U.S. Environmental Protection Agency

Nieves Negrete, Citizen Volunteer

Patricia Newhouse, Citizen Volunteer

Elizabeth Torres, Radio KDNA

Appendix B

(B1) Internal Audiences* Agency Leadership	OBJECTIVES	OUTREACH TOOLS	EVALUATION MEASURES
Yakima County & Benton County Health Districts Benton County Planning, Permitting, Surface Water Conservation Districts Department of Agriculture Department of Health Department of Ecology EPA Public Water Systems Cities & Towns Yakima Valley Conference of Governments	<p>Communicate with agencies about the GWAC planning process; inform and educate stakeholders regarding nitrate contamination and its effects.</p> <p>Coordinate outreach efforts with other agencies to maximize effectiveness and distribution.</p> <p>Frequency: semi-annually or as dictated by agency opportunities.</p> <p>Use agencies' existing outreach (newsletters, website; Facebook, tweets, etc.) to announce GWACs work and to provide updates.</p> <p>Use e-mail distribution list for general updates.</p> <p>Offer presentations and/or displays at professional conferences, annual meetings, etc.</p>	<p>GWAC Agency representatives are expected to report regularly back to their respective leadership, using face-to-face meetings, fact sheets, talking points, or informal presentations on a "need to know" basis.</p> <p>Use internal agency venues (brown bag lunches, Ed meetings, etc.) to announce program and provide periodic updates.</p> <p>Frequency: semi-annually or as dictated by agency opportunities.</p> <p>Use agencies' existing outreach (newsletters, website; Facebook, tweets, etc.) to announce GWACs work and to provide updates.</p> <p>Use e-mail distribution list for general updates.</p> <p>Offer presentations and/or displays at professional conferences, annual meetings, etc.</p>	<p>Number of new participating agencies</p> <p>Number of face-to-face meetings</p> <p>Number of fact sheets developed</p> <p>Number of talking points/presentations developed</p> <p>Number of outreach recommendations received & implemented</p> <p>Amount/character of audience feedback</p> <p>Number of e-mail contacts received</p> <p>Number of updates sent via e-mail list</p> <p>Number and character of comments, questions, suggestions and praise.</p> <p>Number of agency/organization requests to be involved in GWMA</p> <p>Structured interviews with key stakeholders to measure understanding of issues, degree of involvement with GWMA</p> <p>Frequency: semiannually or as dictated by agency and conference opportunities</p>

(B2) Internal Audiences- Policymakers & Legislative Staff			
	OBJECTIVES	OUTREACH TOOLS	EVALUATION MEASURES
County Commissions (Benton & Yakima) Governor's Office 13, 14, 15 & 16 Legislative District Leadership State Agency Heads (AG, Ecology, Health) Fourth Congressional District (Doc Hastings)	<p>Keep policymakers apprised of GWAC efforts and its relevance to public health</p> <p>Obtain political support for GWMA at multiple leadership levels and across affiliations</p> <p>Cultivate policymaker support as a vehicle to obtain additional funding</p> <p>Develop and maintain a reputation as an effective, science-based collaborative effort to protect human health</p>	<p>Send introduction letters to policymakers announcing the GWAC, the GWMA program and to invite participation in the effort.</p> <p>Frequency: once; followed by periodic "red letter" updates, e-mails, etc.</p> <p>Brief leadership and/or legislative staff using face-to-face meetings supplemented with support materials (fact sheets, links to website, etc.)</p> <p>Frequency: once; followed by periodic updates</p>	<p>Number of mailings</p> <p>Number of e-mails</p> <p>Number of inquiries, or follow-up contacts initiated by policymaker or legislative staff</p> <p>Structured interviews with key stakeholders to measure understanding of issues, degree of involvement with GWMA</p> <p>Amount/quality of direct support (funding, legislative action) received</p>
(B3) Internal Audiences- Tribal Leadership			
Yakama Nation General Council Yakima Nation Tribal Council	<p>Keep tribal leadership apprised of the GWAC's efforts</p> <p>Seek to develop a collaborative outreach program between the Lower Valley GWMA and the Yakama Nation's efforts.</p>	<p>Provide similar policymaker outreach tools (introduction letter/fact sheet, offer to make presentations to leaderships, etc.) to Nation's GWAC representative.</p> <p>Frequency: as guided by Nation's GWAC representative.</p> <p>Provide materials and presence of the Tribal Housing Summit, Treaties, and other community events.</p> <p>Frequency: semiannually, or as invited to participate.</p> <p>Offer to provide presentations and/or materials to schools. Frequency: as invited to participate.</p>	<p>Similar to policymaker outreach - focus on counting and documenting outreach efforts.</p> <p>Number/type of invitations from tribal leadership to engage in collaborative outreach.</p>

(B4) Target Audience- General Public	OBJECTIVES	OUTREACH TOOLS	EVALUATION MEASURES
Residents served by private wells in the GWMA. Benton and Yakima County Residents (general public) Media Healthcare Providers School Districts Higher Education	Provide information to private well users on nitrate self-help and groundwater quality protection measures. Educate public audiences about groundwater, risks of elevated nitrate to human health and the GWAC and GWMA program. Invite participation in the development of the GWMA program. Develop and maintain a reputation as an effective, science-based, non-regulatory effort to protect human health	Involve area media in events and GWAC updates using news releases, fact sheets and invitations to events. Host community water testing and education events in various target neighborhoods most likely to have high nitrate in drinking water. Frequency: 2-4 times annually. Direct mailings. Bilingual door-to-door campaign in the GWMA. Create and maintain a "groundwater message hotline" for resource and referral purposes. Create posters, fliers and table tents for distribution throughout the community and at key community events.	Amount and character of media coverage Number of community events Number of participants at events Number of drinking water samples processed Number of resident requests for assistance or follow-up Number of households contacted Number of residents requesting additional information Structured interviews with key stakeholders to measure understanding of issues, protection measures taken, degree of awareness of GWAC and/or GWMA.

(B5) Target Audience- Underserved/English As Second Language	OBJECTIVES	OUTREACH TOOLS	EVALUATION MEASURES
<p>Residents served by private wells in the GWMA.</p> <p>Benton and Yakima County Residents (general public)</p> <p>Spanish-language Media</p> <p>Healthcare & Social Service Providers</p> <p>School Districts</p> <p>Higher Education</p>	<p>Reach out to non-English speakers to educate and involve them in the GWAC planning efforts.</p> <p>Provide education on the health risks of nitrates and self-help measure's to non-English speakers through targeted media, large employers and healthcare and social service providers.</p> <p>Invite participation in the development of the GWMA program.</p> <p>Develop and maintain a reputation as an effective, science-based, non-regulatory effort to protect human health</p>	<p>Involve Spanish-area media in events and outreach using paid ads, PSAs, and radio talk shows.</p> <p>Coordinate with healthcare and social service providers, churches, U of W and Projecto Bienestar to provide education and to evaluate communication measures.</p> <p>Offer targeted educational outreach and community water testing at Cinco de Mayo, Hispanic awareness month festivals etc. in neighborhoods most likely to have high nitrate in drinking water. Frequency: 2-4 times annually.</p> <p>Direct mailings.</p> <p>Bilingual door-to-door campaign in the GWMA.</p> <p>Create and maintain a "groundwater message hotline" for resource and referral purposes.</p> <p>Create posters, fliers and table tents for distribution at large employers in the GWMA and throughout the community.</p>	<p>Amount and character of media coverage</p> <p>Number of community events</p> <p>Number of participants at events</p> <p>Number of drinking water samples processed</p> <p>Number of resident requests for assistance or follow-up</p> <p>Number of households contacted</p> <p>Number of residents requesting additional information</p> <p>Structured interviews with key stakeholders to measure understanding of issues, protection measures taken, degree of awareness of GWAC and/or or GWMA.</p>

(B6) Target Audience-Special Interests	OBJECTIVES	OUTREACH TOOLS	EVALUATION MEASURES
Agricultural Groups (Dairy Federation, Farm Bureau, Fertilizer Groups, Hop Growers, Mint Growers, Irrigated Ag Producers) Centers for Disease Control (CDC) Center for Environmental Law & Policy Faith-based Groups Farm Workers Clinic Large Employers Environmental & Social Justice Organizations Women's Groups Yakama Nation	Inform targeted special interest groups of the GWAC planning process and programs. Educate targeted special interest groups about relevant measures to protect groundwater from nitrate levels that exceed drinking water standards. Provide education to targeted special interest groups on the health risks of nitrates and self-help measures. Develop and maintain a reputation as an effective, science-based, non-regulatory effort to protect human health	Distribute outreach materials (posters, flyers) to special interest groups. Offer speaker presentations at regularly scheduled meetings. Develop and maintain social media sites, e-newsletters etc. targeting special interest audiences. Network with regional dairy women and other industry representatives.	Number of materials requested and/or distributed Number of presentations requested Number of participants at events Amount/character of audience feedback Number of e-social media contacts received Number of updates sent via e-mail list Number and character of comments, questions, and praise. Structured interviews with key stakeholders to measure understanding of issues, degree of awareness of the GWMA and its purpose

Appendix C

Education & Public Outreach (EPO) Key Milestones											
2013			Q1			Q2			Q3		
January	February	March	April	May	June	July	August	September	October	November	December
Q1 - Launch Public Outreach Portion of Website	Review website for content	Formally announce GWAC & GWMA program (program introduction packet to policy makers and healthcare providers, media release)	Review Q2 presentations, feedback, participation, comments, etc.	Review Q3 presentations, feedback, participation, comments, etc.	Review Q4 presentations, feedback, participation, comments, etc.	Review Q1 presentations	Target / solicit and prepare for Q4 presentations	Target / solicit and prepare for Q1- (2014) presentations	Review Q3 presentations, feedback, participation, comments, etc.	Target / solicit and prepare for Q4 presentations	Review Q4 presentations, feedback, participation, comments, etc.
Q1 - Launch Public Outreach Program	Request for presentations and FAQs	Identify Local Festivals within the GWMA; dates, deadlines, and booth options	Review feedback - stakeholders, public, etc.	Review feedback - stakeholders, public, etc.	Review feedback - stakeholders, public, etc.	Review feedback - stakeholders, public, etc.	Provide proposal for staff needs	Provide proposal for staff needs	Provide an initial report of Outreach Program with findings and proposed improvements	Provide an initial report of Outreach Program with findings and proposed improvements	Provide an initial report of Outreach Program with findings and proposed improvements
Q1 - Develop data, tracking, and reporting requirements	Target and prepare for Q2 events	Develop media contacts and marketing program for GWMA and Public Outreach	Target / solicit and prepare for Q3 presentations	Review feedback - stakeholders, public, etc.	Promote and encourage public participation	Review feedback - stakeholders, public, etc.	Analyze need and proposal for designated FTE	Review feedback - stakeholders, public, etc.	Review feedback - stakeholders, public, etc.	Review feedback - stakeholders, public, etc.	Review feedback - stakeholders, public, etc.
Q1 - Analyze need and proposal for designated FTE	Develop talking points and printed materials - simplified for easy translation.	Develop data, tracking, and reporting requirements	Review website for content	Renew - Media contacts and marketing program for GWMA and Public Outreach	Review website for content	Review Q2 presentations, feedback, participation, comments, etc.	Target / solicit and prepare for Q4 presentations	Review Q3 presentations, feedback, participation, comments, etc.	Review Q4 presentations, feedback, participation, comments, etc.	Review Q1 presentations	Review Q2 presentations, feedback, participation, comments, etc.
Q2 - Launch initial public meetings	Develop talking points and printed materials - simplified for easy translation.	Develop data, tracking, and reporting requirements	Target and prepare for Q2 events	Review data, tracking, and reporting requirements	Review initial report of Outreach Program with findings and proposed improvements	Target / solicit and prepare for Q3 presentations	Review feedback - stakeholders, public, etc.	Review feedback - stakeholders, public, etc.	Review feedback - stakeholders, public, etc.	Review feedback - stakeholders, public, etc.	Review feedback - stakeholders, public, etc.
Q4 - Final report of Outreach Program with findings and proposed improvements	Develop talking points and printed materials - simplified for easy translation.	Develop data, tracking, and reporting requirements	Review website for content	Review initial report of Outreach Program with findings and proposed improvements	Prepare final report of Outreach Program - findings and improvements	Promote and encourage public participation	Promote and encourage public participation	Promote and encourage public participation	Promote and encourage public participation	Complete final report of Outreach Program with findings and proposed improvements	Complete final report of Outreach Program with findings and proposed improvements