



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
VERNM. REDIFER, P.E., Director

July 2, 2013

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

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

Dear Charlie:

Enclosed please find one (1) copy of Yakima County's second-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 2.2 as required under the agreement.

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

If you have any questions, please let me know.

Thank you.

Lisa H. Freund, Administrative Manager
Yakima County Public Services

enclosure

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

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

**IAA No. C 1200235 – 2nd Quarter 2013 Report
Lower Yakima Valley GWMA
July 1, 2013**

**TASK 1 - ADMINISTRATIVE FUNCTIONS
DELIVERABLES**

1.1 Meeting Records

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

Attachment (A) includes the GWAC meeting records of April 18, May 16, and June 20, 2013 (draft); the Data Collection, Characterization, and Monitoring Working Group meeting summaries of April 12, May 2 and June 6, 2013; the Livestock/CAFO meetings of April 4 and May 23, 2013; the Irrigated Ag Working Group meeting summary of April 11, 2013; and the Education and Public Outreach (EPO) Working Group meeting summaries of April 4, May 1 and June 5, 2013. *Note: The Data Collection meeting record of February 11, 2013 that was not submitted with the 1st quarter report is attached.*

**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.

On April 10, 2013, Benton County filed a letter to withdraw from the Lower Yakima Valley Groundwater Advisory Committee arguing that its agricultural practices are different mainly because they don't have many dairies. The Department of Ecology formally accepted the Benton County Commission's request to withdraw from the GWMA in a letter dated June 7, 2013. With Benton County's departure, its three member seats in the GWAC (County Commission, Benton-Franklin Health District and Benton Conservation District) are now open. Also, with the withdrawal of Benton County from the GWAC, the chair position of the Irrigated Agriculture Working Group is vacant. Benton County's request and the Department of Ecology's response are included as Attachment (B).

During the second quarter, the Data Collection, Characterization, and Monitoring Working Group and Livestock/CAFO Working Group proposed two Scopes of Work to the GWAC. The GWAC's focus during the second quarter was to finalize and enter into an agreement related to these Scopes of Work. In addition, the GWAC entered into agreements with the Yakima Health District and Heritage University to conduct three public surveys.

Working Group Protocols

The GWAC had several discussions about how to populate the working groups, how to schedule and communicate workgroup meetings, and how to define group protocols. The GWAC agreed to the basic purpose and protocols of the groups, but had not yet fully populated all groups by the end of the second quarter. To that end, Yakima County announced at the June 20 meeting that GWAC members would receive a call in the next few weeks asking them to identify two working groups they will participate in on a regular basis.

The GWAC agreed to an online public calendar to post working group meetings in addition to the regular monthly GWAC meetings. That calendar is on the GWMA website at: <http://www.yakimacounty.us/gwma/calendar.php>

Working Group Activities:

Livestock/CAFO (Charlie McKinney, Chair)

The Working Group met on April 4 and May 23, 2013. During the April 18, 2013 GWAC meeting, the Group proposed the Nitrate Regulatory Framework and Best Management Practices Scope of Work to the GWAC. A special meeting was held on May 23. Dr. Robert Stevens was the guest speaker. The group plans on coordinating work with the Irrigated Ag Work Group, Residential, Commercial and Industrial Work Group, and Data Collection, Characterization and Monitoring Work Group to find nitrate sources. Additionally, the group will work with HDR Inc. and hold monthly meetings to make sure progress is being made in developing the work plan.

Irrigated Ag (Mark Nielson, Interim Chair)

The Working Group met on April 11, 2013. They discussed ground rules and protocol for their meetings and came to a consensus on a rigid structure. Their proposal is for a core group from the work group to represent the stakeholders and implement activities. The work group proposed to the GWAC that it start with quality assurance plans (QAP) for both Irrigation Water Management and Deep Soil Sampling.

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

The Working Group met on April 12, May 2 and June 6, 2013. During the April 18, 2013 GWAC meeting, the Group proposed the Initial *Characterization Assessment Scope of Work* to the GWAC. The group has created an initial data base in the County. Database collection has come from several sources including: USEPA, USGS, WDOH, and WSDA. The group will meet with HDR and subcontractor Pacific Groundwater during the month of July or August to ensure that their work meets Ecology's quality assurance requirements.

The group has discussed how the data collected from the EPA Consent Order will be incorporated in Yakima County's nitrate database. The information needs to be included in the database and is something that the consultant will do as part of accomplishing Scope of Work #2 – Initial Characterization Assessment and Data Management Plan. The group is also looking forward to assistance from the Residential, Commercial and Industrial Work Group.

Education and Public Outreach (Lisa Freund, Chair)

The group completed the final edits to the High Risk Well Assessment Survey, the Public Questionnaire and the Healthcare Provider Questionnaire as well as the related cover letters and handouts. The Yakima Health District was approached and agreed to conduct the High Risk

Well Assessment survey and administer the healthcare provider surveys. Heritage University and Yakima Valley Community College (YVCC) were invited to submit proposals to conduct the Public Questionnaire Survey. YVCC declined; Heritage University submitted a proposal and an agreement was reached and executed with Yakima County for \$5300. The three surveys and related attachments are in the contracts' scopes of work and are included as Attachment (C).

An outreach matrix was prepared in anticipation of providing outreach to community groups and organizations. To that end, GWAC members were asked to provide a list of community groups and/or organizations they participate in and a contact name for each group (e.g., Rotary, church groups, volunteer boards). The EPO asked the GWAC members make initial contact with their respective groups on its behalf.

GWMA Website

A Working Group page was added to provide information on each group, its chair, and its work products. The GWMA calendar was updated to provide a "go-to" location that lists both upcoming working group meetings and monthly GWAC meetings. The website may be viewed at: <http://www.yakimacounty.us/gwma/>

Residential, Commercial and Municipal (Robert Farrell, Chair)

GWAC member Robert Farrell, Sunnyside Port District, agreed to chair the working group. The group did not meet in the second quarter.

Regulatory Reform

Did not meet in the second quarter.

Funding

Did not meet in the second quarter.

Contracts and Interlocal Agreements:

Yakima County entered into agreements with HDR (\$266,402), the Yakima Health District (\$50,000), and Heritage University (\$5300). Yakima County's contract with EnviroIssues for facilitation services (\$34,846) was extended to December 31, 2013.

EPA-Dairy Agreement

The EPA has signed an agreement with four dairies in the LYV GWMA. Pursuant to the agreement, wells will be tested within the boundaries of the 'Dairy Cluster' and one mile down-gradient of dairies. In the agreement, there are early source-control actions to reduce nitrate loading to the aquifer. Testing will be done by a consultant hired by the dairies. New monitoring wells will provide soil boring information.

There will be quarterly groundwater monitoring data and some pressure transducer data from some of the wells being monitored. Also, there will be manure samples taken twice a year. Pre-planting and post-harvesting samples will be taken as well and data will be collected for seepage rates on some lagoons. The data will be available in monthly, annual and other technical reports prepared by the dairy consultants. The reports will be posted online at <http://yosemite.epa.gov/r10/water.nsf/gwpu/lyakimagw> and on the GWAC website. There is still some information from the agreement that will not be released due to confidentiality.

Contract with HDR Inc. for Two Scopes of Work

During the April 18, 2013 GWAC meeting, the Data Collection, Characterization, and Monitoring Working Group proposed the Initial Characterization Assessment Scope of Work to the GWAC. Also, at the same meeting, the Livestock/CAFO Working Group proposed the Nitrate Regulatory Framework and Best Management Practices Scope of Work to the GWAC. Yakima County submitted requests for proposals to consulting firms and four consultants were interviewed on June 4, 2013. Four GWAC members (Kirk Cook, Marie Jennings, Helen Reddout and Steve George) participated in the interview. HDR, Inc. was selected as a consultant for both Scopes of Work and Pacific Groundwater Group is HDR's sub-consultant. HDR's \$266,402 proposal was received on June 15 and it states that it will be completed by April 2014. Also, HDR, Inc. was asked for a proposal to conduct deep soil monitoring. This proposal includes conducting analysis on 20 locations with 8-10 feet depth.

Agreement with the Yakima Health District

An agreement with the Yakima Health District for \$50,000 will result in contact with at least 250 and up to 320 homes in the management area. The agreement calls for the district to collect demographic information and inspect drinking water wells to determine their method of construction, depth and nitrate levels. The district also will contact health care providers with information about nitrates and a survey to determine if the providers have observed symptoms of methemoglobinemia in their maternal or infant patients.

Agreement with the Heritage University

Students from Heritage University near Toppenish will survey up to 160 homes to gauge awareness of the nitrate issue and the potential health impacts. The agreement is for \$5,300.

GWMA Facilitator's Contract

The committee's facilitator's contract was extended through the end of 2013 in the amount of \$34,846.

The contracts and scopes of services are included as Attachment (C).

Lower Yakima Valley GWAC Meetings Attendance

GWAC Meetings						
PRIMARY (ALTERNATE)	18-Apr-2013	16-May-2013	20-Jun-2013			
Elliott, Rand	attended	attended	attended			
(Redifer, Vern)	attended	attended	attended			
Sanchez, Elizabeth	absent	absent	attended			
(Ring, Tom)	attended	attended	absent			
George, Steve	attended	attended	absent			
(Waddington, Justin)	absent	absent	absent			
Sheehan, Jason	absent	attended	attended			
(DeGroot, Dan)	attended	attended	attended			
Turner, Stuart	attended	absent	attended			
(Durfey Chelsea)	absent	absent	absent			
Reddout, Helen	attended	attended	attended			
(Hannigan, Wendell)	absent	absent	absent			
- ALT/Alt Rep: Fendell, Larry	absent	absent	attended			
Mendoza, Jean	absent	attended	absent			
(Anderson, Eric)	absent	absent	absent			
Whitefoot, Jan	absent	absent	absent			
(Dyjak, Jim)	attended	attended	attended			
Crowe, Laurie	attended	attended	attended			
(Newhouse, jim)	absent	absent	absent			
Farrell, Robert	attended	attended	attended			
(Van Wingerden, John)	attended	attended	attended			
Cook, Kirk	attended	attended	attended			
(Prest, Ginny)			attended			
Cervantes, Andy	attended	attended	attended			
(Stern, Ginny)	absent	absent	absent			
McKinney, Charlie	attended	attended	attended			
(Tebb, Tom)	absent	attended	absent			
Eaton, Tom	absent	attended	attended			
(Jennings, Marie)	attended	absent	attended			
Kelly, Gordon	attended	attended	absent			
Desta, Dr. Kefy	attended	absent	attended			

GWAC Meetings

GWAC Meetings

Attachment A

GWAC Meeting Records of April 18, May 16 and June 20, 2013

Livestock/CAFO Working Group – April 4 and May 23, 2013

Irrigated AG Working Group – April 11, 2013

**Data Collection Working Group – February 11, April 12, May 2 and
June 6, 2013**

EPO Meetings – April 4, May 1 and June 5, 2013

Yakima County

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

NOTICE IS HEREBY GIVEN that Yakima County is holding a public meeting of the Lower Yakima Valley Groundwater Advisory Committee on **Thursday, April 18, 2013 at 5:00 PM at Radio KDNA Conference Rooms 1 & 2, 121 Sunnyside Ave. in Granger WA** pursuant to Chapter 173-100-080 WAC Ground Water Management Areas and Programs.

For Additional Information

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

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

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

Dated this 10th day of April 2013

Publish: Thursday, April 11, 2013

Bill: FC3463-100-1

YAKIMA HERALD REPUBLIC

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Address:	128 NORTH 2ND STREET ROOM 408 YAKIMA, WA 98901
Telephone:	(509) 574-2343

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Ad Proof

Yakima County

Notice of Public
Meeting
Lower Yakima Valley
Groundwater Advisory
Committee

NOTICE IS HEREBY
GIVEN that Yakima
County is holding a pub-
lic meeting of the Lower
Yakima Valley Ground-
water Advisory Commit-
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18, 2013 at 5:00 PM at
Radio KDNA Confer-
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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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water Advisory Commit-
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objectives, please see
the Lower Yakima Valley
Groundwater Manage-
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webpage at: <http://www.yakimacounty.us/gwma/>

For more information
about the meeting,
please contact Lisa
Freund, Yakima County
Public Services Admin-
istrative Manager at
574-2300.
Dated this 10th day of
April 2013

(309582) April 11, 2013

Daily Sun News

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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 afforesaid place of publication of said newspaper, and that the said Daily Sun News was on the 4th Day of April, 1969 approved as a legal newspaper by the Superior Court of said Yakima County.

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

Yakima County Public Services

Mtg. Apr.18 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 04/11/13 and ending on 04/11/13, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of \$ 31.50. amount has been paid in full, at the rate of \$7.00 per column inch per insertion.

Tim Graff

Subscribed and sworn to before me 04/12/13

h. H. H.

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, April 18, 2013 at 5:00 PM at Radio KDNA Conference Rooms 1 & 2, 121 Sunnyside Ave. in Granger WA pursuant to Chapter 173-100-080 WAC Ground Water Management Areas and Programs.
For Additional Information
To learn more about the Lower Yakima Valley Groundwater Management Area, the Groundwater Advisory Committee, and its goals and objectives, please see the Lower Yakima Valley Groundwater Management Area on the County webpage at: <http://www.yakimacounty.us/gwma/>
For more information about the meeting, please contact Lisa Freund, Yakima County Public Services Administrative Manager at 574-2300.
Dated this 10th day of April 2013
PUBLISH: DAILY SUN NEWS
April 11, 2013

Meeting Time and Location

Thursday, April 18, 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.*

Purpose of the Meeting:

- Learn about the GWMA budget
- Discuss protocols for Working Group membership
- Review, make recommendations, and approve GWMA outreach materials
- Hear from working groups on their work

Agenda

Time	Topic	Purpose	Lead
5:00 – 5:10 p.m.	Welcome & Meeting Overview	Introduction, meeting overview, confirm agenda	Penny Mable, facilitator
5:10 – 5:15 p.m.	Committee Business	<ul style="list-style-type: none"> • Approve Feb. 6 meeting summary • Approve Mar. 21 meeting summary 	Penny Mable
5:15 – 5:25 p.m.	GWMA Budget Update	<ul style="list-style-type: none"> • Learn about the GWMA budget and spending plan 	Vern Redlfer, Yakima County Commission
5:25 – 5:50 p.m.	Working Group Protocols	<ul style="list-style-type: none"> • Discuss working group membership and meeting protocols 	Penny Mable
5:50 – 6:15 p.m.	GWMA Outreach Materials	<ul style="list-style-type: none"> • Review and approve GWMA outreach materials 	Penny Mable Andy Cervantes, EPO Working Group lead
6:15 – 6:45 p.m.	Working Group Reports	<ul style="list-style-type: none"> • Hear from working groups • Provide feedback; plan for discussions in May 	Penny Mable Working group leads
6:45 – 6:55 p.m.	Public Comment	Opportunity for members of the public to make comments to the committee.	
6:55 – 7:00 p.m.	Next Steps	<ul style="list-style-type: none"> • Review action items, next steps and next meeting topics 	Penny Mable
7:00 p.m.	Adjourn		

Next Meeting: May 16, 2013

Committee Members

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

Committee Ground Rules:

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

2013 Meeting Dates:

March 21	July 18	November – tbd
April 18	August 15	(Thanksgiving
May 16	September 19	conflict)
June 20	October 17	December 19

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

3
4 MEETING SUMMARY

5
6 Thursday, April 18, 2013

7
8 Radio KDNA
9 121 Sunnyside Ave, Granger, WA 98932

10
11 I. Call to Order

12
13 Roll Call: The meeting was called to order at 5:02 pm by Penny Mabie,
14 Facilitator.
15

Member	Seat	Present	Absent
Stuart Turner	Agronomist, Turner and Co.	✓	
Chelsey Durfey	Agronomist, Turner and Co. (alternate)		✓
Mark Nielson	Benton Conservation District	✓	
Heather Wendt	Benton Conservation District (alternate)	✓	
VACANT	Benton County Board of Commissioners		
Rick Dawson	Benton Franklin Health District	✓	
Helen Reddout	Community Association for Restoration of the Environment	✓	
Wendell Hannigan	Community Association for Restoration of the Environment (alternate)		✓
Jan Whitefoot	Concerned Citizens of the Yakama Reservation		✓
Jim Dyjak	Concerned Citizens of the Yakama Reservation (alternate)	✓	
Jean Mendoza	Friends of Toppenish Creek		✓
Eric Anderson	Friends of Toppenish Creek (alternate)		✓
Lino Guerra	Hispanic Community Representative		✓
Rick Perez	Hispanic Community Representative (alternate)	✓	
VACANT	Lower Yakima Community Representative		
Robert Farrell	Port of Sunnyside	✓	
John Van Wingerden	Port of Sunnyside (alternate)	✓	
Jim Trull	Roza-Sunnyside Joint Board of Control		✓
Ron Cowin	Roza-Sunnyside Joint Board of Control (alternate)	✓	
Laurie Crowe	South Yakima Conservation District	✓	
Jim Newhouse	South Yakima Conservation District (alternate)		✓

Tom Eaton	U.S. EPA		✓
Marle Jennings	U.S. EPA (alternate)	✓	
Lonna Frans	USGS Washington Water Science Center		✓
Matt Bachmann	USGS Washington Water Science Center (alternate)	✓	
Kirk Cook	WA Department of Agriculture	✓	
Jaclyn Ford	WA Department of Agriculture (alternate)		✓
Charlie McKinney	WA Department of Ecology	✓	
Tom Tebb	WA Department of Ecology (alternate)		✓
Andy Cervantes	WA Department of Health	✓	
Glinny Stern	WA Department of Health (alternate)		✓
Dr. Kefy Desta	WSU Irrigated Agriculture Research and Extension Center	✓	
Dr. Troy Peters	WSU Irrigated Agriculture Research and Extension Center (alternate)		✓
Elizabeth Sanchey	Yakama Nation		✓
Tom Ring	Yakama Nation (alternate)	✓	
Rand Elliott	Yakima County Board of Commissioners	✓	
Vern Redifer	Yakima County Board of Commissioners (alternate)	✓	
Steve George	Yakima County Farm Bureau	✓	
Justin Waddington	Yakima County Farm Bureau (alternate)		✓
Gordon Kelly	Yakima County Health District	✓	
Jason Sheehan	Yakima Dairy Federation		✓
Dan DeGroot	Yakima Dairy Federation (alternate)	✓	

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

II. Committee Business:

Reminders:

- Please speak up so everyone can hear.
- Please place all cell phones on silent. If you must take a call, please step outside of the room so as to not disrupt the meeting.
- Before leaving please check the room to make sure you have all your belongings.
- Please keep all side conversations outside of the room so members and observers can hear conversations.

Introductions.

Moment of silence.

February 6, 2013 meeting summary approved by the committee.

March 21, 2013 meeting summary approved by the committee.

- Committee came to consensus that individual's names will no longer be cited in the meeting summaries; rather, summaries will reference committee members.

There is a membership seat available for Lower Valley Community Representative. Ecology is working on getting this seat filled.

A member shared that a 42 page document regarding studies on Lagoon Assessment will be forwarded to committee members. The study is incomplete as it took place after the construction of a basin. Ecology has studies available on their website. Negotiations to obtain two additional private studies are in the works.

III. GWMA Budget Update:

Vern Redifer briefed the committee on the budget. The short term budget was approved and is represented in the February 6th meeting summary. Time is running out to get the budget encumbered before June 30th. The County needs to have a final scope of work from the work groups to move forward with the releasing of funds. Interlocal agreements contracting individuals to complete the work need to be done by June.

After spending the initial short term budget there is still \$450,000 to work with. The Washington State House budget did not include any additional money; however, the Senate requested an additional \$1.6 million to the capital budget. The County is in the process of extending the committee's facilitator's contract through the end of this year.

Deadline: Must have work groups scopes within the next two weeks.

A separate budget request has been made to the legislature for money for residential water treatment.

IV. Working Group Protocols:

The committee discussed how to populate and schedule work group meetings. A draft document was sent out to committee members for their review on how the work groups should operate. Each work group should have a purpose (why they are needed and what is expected).

A couple members of the committee commented that the work groups should not be requiring educational background from the members. It was noted that

no one is requesting education background; however, technical expertise and experience is needed.

The purpose of the work group is to identify the problems and come up with remedies and/or solutions and present them to the GWAC for final decision. The committee discussed who needs to be part of the small work groups. It was discussed that each work group needs to have at least one GWAC member. Additionally, there should be technical experts, affected people and affected stakeholders. Several members stated that stakeholders are needed as part of the work group as they will implement the outcomes.

The Irrigated Agriculture work group has proposed in their scope of work that there be a core group made up of stakeholders to make decisions. The core group would be the gate keepers of what will be presented to the GWAC. The possibility of a core group was discussed amongst the committee with no clear agreement. Some members were opposed to having a core group, as they believe there needs to be a wider variety of decision makers. Other members believe that a core group is necessary to keep the work group effective and focused on issues. The work group would still be open for anyone to comment.

Outcome of the discussion:

- Purpose: To identify problems and come up with remedies and solutions. Present them to the GWAC for decision.
- Regular attendance is needed.
- The meetings are open to anyone.
- All remedies and/or solutions will be documented with an explanation for why they will work or won't work.

Discussion of a "core group" within the work group has been tabled for a later meeting.

There are still three work groups that have not selected a leader/chair:

- Residential, Commercial, Industrial
- Regulatory Framework
- Funding

V. GWMA Outreach Materials: (Orange documents)

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

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

There will be a change to the Risk Assessment survey question 11B. It will be edited to state "maintained".

EPO discussed with Yakima County Health District and Benton County Health District the cost of providing the Risk Assessment survey. Yakima County Health District has eight staff members that would be available to complete surveys and Benton County Health District has four. If the GWAC attempted to reach all the property owners from the County's pilot program the cost would be approximately \$55,000. The EPO would like to start out with the 271 properties that responded to the County's pilot program. The approximate cost would be \$32,000.

The informational public questionnaire will be handed out by public health officials or agencies. The EPO has discussed making them available at Cinco de Mayo celebrations, church groups, with health care providers, etc.

The questionnaire for Health Care Providers will go out electronically to a list of 600 health care professionals on a list provided by Yakima County Health District. Benton County Health District has a provider list as well.

EPO has a data model that shows where the hotspots for nitrate contamination are located and will work with the people in those areas.

The committee approved all three surveys by consensus.

VI. Working Group reports:

Livestock/CAFO: (Green documents)

The work group took the lead on discussing a process for identifying existing and alternate Best Management Practices (BMP) and regulatory requirements. The Livestock/CAFO group will reach out to other work groups and discuss the possibility of joint meetings. The group has invited Dr. Robert Stevens, a retired soil scientist from Washington State University's Prosser Irrigated Agriculture Research and Extension Center, to speak at their next meeting on May 2nd. Other work groups will be invited to attend.

The work group has a standing meeting on the 1st Thursday of every month at 5:00 p.m. The meetings will be coordinated to allow for phone conferencing.

The work group has provided the GWAC with a draft scope of work for their review and comment. GWAC members should comment no later than Wednesday, 24, 2013.

Data Collection: (Purple documents)

The work group briefly discussed Benton County's request to Ecology to withdraw from the Lower Yakima Groundwater Management Area. The group is still awaiting the database from the State Department of Health. Other sources of data were discussed.

The work group will meet every month two weeks before the GWAC meetings. The data collection group provided the GWAC with their scope of work for the committee to review and approve. The GWAC members should comment no later than Wednesday, 24, 2013.

There is \$60,000 that the Data Collection group believes it will use before June 30th.

Irrigated Agriculture: (Blue documents)

The work group discussed ground rules and protocol for their meeting and came to a consensus on a rigid structure. Their proposal is for a core group from the work group to represent the stakeholders and implement activities. The work group is proposing to the GWAC that it start with quality assurance plans (QAP) for both Irrigation Water Management and Deep Soil Sampling.

The work group also discussed and commented on Livestock/CAFO's scope of work and provided those comments to Yakima County. The group will work on getting a scope and figure for the County to put together an interlocal agreement.

VII. Side note:

The County is in need of volunteers from the GWAC to be part of the interview process of potential firms the GWAC will be contracting with. Four GWAC members agreed to be part of the interviewing process: Helen Reddout, Marie Jennings, Kirk Cook and Steve George.

VIII. Public Comment:

Sam Mazhari, PhD, Chemistry instructor for Yakima Valley Community College - Advised the committee that his chemistry students are looking for a project to volunteer their time on this summer. They are interested in volunteering their time on the nitrate project. He provided his contact information and it will be distributed to the GWAC.

IX. Next Steps:

- Review scopes of work and comment by Wednesday, April 24th

- Updates to the Working Group addition to the Operating Guidelines will be made.
- Irrigated Agriculture work group will have budget for QAPs for the County.
- Next agenda the discussion will be on the one year overview of guidelines, request for a complaint process, evaluation of the GWAC and a work plan check-in.

X. 2013 Meeting Calendar:

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

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

The meeting was adjourned at 7:30 pm.

Meeting summary approved by the Lower Yakima Valley Groundwater Advisory Committee on May 16, 2013.

Yakima County

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

NOTICE IS HEREBY GIVEN that Yakima County is holding a public meeting of the Lower Yakima Valley Groundwater Advisory Committee on **Thursday, May 16, 2013 at 5:00 PM at Radio KDNA Conference Rooms 1 & 2, 121 Sunnyside Ave. in Granger WA** pursuant to Chapter 173-100-080 WAC Ground Water Management Areas and Programs.

For Additional Information

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

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

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

Dated this **Wednesday, May 8, 2013**

Publish: Thursday, May 9, 2013

Bill: **FC3463-100-1**

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Yakima County

Notice of Public
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Lower Yakima Valley
Groundwater Advisory
Committee

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574-2300.
Dated this Wednesday,
May 8, 2013

(319699) May 9, 2013

YAKIMA HERALD-REPUBLIC

INVOICE

114 N. 4th Street

PO Box 9668

Yakima, WA 98909

Date: 05/09/13

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

Your Ad:

Yakima County

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Groundwater Advisory
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Public Services Admin-
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574-2300.

Dated this Wednesday,
May 8, 2013

(319699) May 9, 2013

YAKIMA HERALD REPUBLIC

Affidavit of Publication

STATE OF WASHINGTON,)
)
COUNTY OF YAKIMA)

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

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

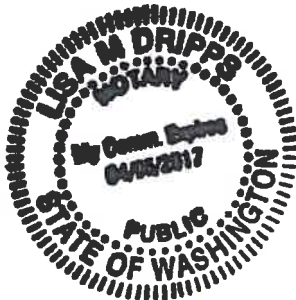
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Yakima Herald-Republic 05/09/13
YakimaHerald.com 05/09/13

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 9th day of, May 2013

Lisa M. Driggs

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

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May 10, 2013

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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 -

Yakima County Public Services

Mtg. May 16 FC3463-100-1

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Timothy J. Graff

Subscribed and sworn to before me 05/10/13

Nora Hernandez
Notary Public in and for
the State of Washington
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Yakima County
Notice of Public Meeting
Lower Yakima Valley Groundwater
Advisory Committee
NOTICE IS HEREBY GIVEN that
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Freund, Yakima County Public Ser-
vices Administrative Manager at
574-2300.
Dated this Wednesday, May 8,
2013
PUBLISHED: DAILY SUN NEWS
May 9, 2013



Groundwater Management Area (GWMA):

The purpose of the GWMA is to reduce nitrate contamination concentrations in groundwater below state drinking water standards

Meeting Time and Location

Thursday, May 16, 2013, 5:00 – 7:00 p.m.

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

Purpose of the Meeting:

- Review Operating Guidelines and determine any needed changes for committee operations
- Review, make recommendations, and approve GWMA outreach materials
- Hear from EPA on data to be generated from agreements with dairies
- Hear from working groups on their work

Agenda

Time	Topic	Purpose	Lead
5:00 – 5:10 p.m.	Welcome & Meeting Overview	Introduction, meeting overview, confirm agenda	Penny Mable, facilitator
5:10 – 5:15 p.m.	Committee Business	<ul style="list-style-type: none"> • Approve Apr. 18 meeting summary 	Penny Mable
5:15 – 5:30 p.m.	Benton County Request	<ul style="list-style-type: none"> • Discuss Benton County's request to be removed from sitting on the GWAC 	Penny Mable Charlie McKinney, Ecology
5:30 – 5:45 p.m.	Review GWAC Operating Guidelines	<ul style="list-style-type: none"> • Discuss any updates or revisions for the GWAC Operating Guidelines 	Penny Mable
5:45 – 6:00 p.m.	Complaint Process	<ul style="list-style-type: none"> • Discuss member request for developing a complaint process for committee processes 	Penny Mable
6:00 – 6:20 p.m.	EPA Dairy Agreement Data	<ul style="list-style-type: none"> • Learn and ask questions about what data EPA is gathering for their agreement with dairies and implications for GWMA access to data 	Tom Eaton, EPA
6:20 – 6:45 p.m.	Working Group Reports	<ul style="list-style-type: none"> • Hear from working groups • Provide feedback; plan for discussions in June 	Penny Mable Working group leads



Groundwater Management Area (GWMA):

The purpose of the GWMA is to reduce nitrate contamination concentrations in groundwater below state drinking water standards

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, next steps and next meeting topics 	Penny Mable
7:00 p.m.	Adjourn		

Next Meeting: June 20, 2013

Committee Members

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



Groundwater Management Area (GWMA):

The purpose of the GWMA is to reduce nitrate contamination concentrations in groundwater below state drinking water standards

(alternate)	
Charlie McKinney, Tom Tebb (alternate)	Washington Department of Ecology
Lino Guerra, Rick Perez (alternate)	Hispanic Community Representative

Committee Ground Rules:

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

2013 Meeting Dates:

March 21	July 18	November – tbd
April 18	August 15	(Thanksgiving
May 16	September 19	conflict)
June 20	October 17	December 19



Groundwater Management Area (GWMA):

The purpose of the GWMA is to reduce nitrate contamination concentrations in groundwater below state drinking water standards

LOWER YAKIMA VALLEY GROUNDWATER MANAGEMENT AREA ADVISORY COMMITTEE (GWAC)

MEETING SUMMARY

Thursday, May 16, 2013

Radio KDNA

121 Sunnyside Ave, Granger, WA 98932

I. Call to Order

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

Member	Seat	Present	Absent
Stuart Turner	Agronomist, Turner and Co.		✓
Chelsey Durfey	Agronomist, Turner and Co. (alternate)		✓
Mark Nielson	Benton Conservation District	✓	
Heather Wendt	Benton Conservation District (alternate)	✓	
VACANT	Benton County Board of Commissioners		
Rick Dawson	Benton Franklin Health District		✓
Helen Reddout	Community Association for Restoration of the Environment	✓	
Wendell Hannigan	Community Association for Restoration of the Environment (alternate)		✓
Jan Whitefoot	Concerned Citizens of the Yakama Reservation		✓
Jim Dyjak	Concerned Citizens of the Yakama Reservation (alternate)	✓	
Jean Mendoza	Friends of Toppenish Creek	✓	
Eric Anderson	Friends of Toppenish Creek (alternate)		✓
Lino Guerra	Hispanic Community Representative		✓
Rick Perez	Hispanic Community Representative (alternate)		✓
VACANT	Lower Yakima Community Representative		
Robert Farrell	Port of Sunnyside	✓	
John Van Wingerden	Port of Sunnyside (alternate)	✓	
Jim Trull	Roza-Sunnyside Joint Board of Control		✓
Ron Cowin	Roza-Sunnyside Joint Board of Control	✓	

[Type text]

Groundwater Management Area (GWMA):

The purpose of the GWMA is to reduce nitrate contamination concentrations in groundwater below state drinking water standards

	(alternate)		
Laurie Crowe	South Yakima Conservation District	✓	
Jlm Newhouse	South Yakima Conservation District (alternate)		✓
Tom Eaton	U.S. EPA	✓	
Marle Jennings	U.S. EPA (alternate)		✓
Lonna Frans	USGS Washington Water Science Center		✓
Matt Bachmann	USGS Washington Water Science Center (alternate)	✓	
Kirk Cook	WA Department of Agriculture	✓	
Jaclyn Ford	WA Department of Agriculture (alternate)		✓
Charlle McKinney	WA Department of Ecology	✓	
Tom Tebb	WA Department of Ecology (alternate)	✓	
Andy Cervantes	WA Department of Health	✓	
Ginny Stern	WA Department of Health (alternate)		✓
Dr. Kefy Desta	WSU Irrigated Agriculture Research and Extension Center		✓
Dr. Troy Peters	WSU Irrigated Agriculture Research and Extension Center (alternate)		✓
Elizabeth Sanchey	Yakama Nation		✓
Tom Ring	Yakama Nation (alternate)	✓	
Rand Elliott	Yakima County Board of Commissioners	✓	
Vern Redifer	Yakima County Board of Commissioners (alternate)	✓	
Steve George	Yakima County Farm Bureau	✓	
Justin Waddington	Yakima County Farm Bureau (alternate)		✓
Gordon Kelly	Yakima County Health District	✓	
Jason Sheehan	Yakima Dairy Federation	✓	
Dan DeGroot	Yakima Dairy Federation (alternate)	✓	

Members' seats not represented: Lower Valley Community Representative

II. Committee Business:

Reminders:

- Please speak up so everyone can hear.
- Please place all cell phones on silent. If you must take a call, please step outside of the room so as to not disrupt the meeting.
- Before leaving please check the room to make sure you have all your belongings.
- Please keep all side conversations outside of the room so members and observers can hear conversations.

34
35 Introductions.

36
37 Moment of silence.

38
39 April 18, 2013 meeting summary has been approved by the committee with no
40 changes. Reminder: The committee agreed that in future meeting summaries
41 names of who said what will be omitted.

42
43 John Fannin's *Sunnyside Daily Sun* May 20 article, "An Open Letter to Senator
44 Honeyford," was on display for the committee to view.

45
46
47 **III. Benton County Request:**

48 Tom Tebb, Washington Department of Ecology, advised that Benton County filed
49 a letter to withdraw from the Lower Yakima Valley Groundwater Advisory
50 Committee. The issue is being taken seriously. Commissioner Elliott and the
51 Director of EPA have been requested to comment on Benton County's request
52 to withdraw. The Benton County Commission seat has not been represented
53 since the GWAC's inception. A decision will be made within the next ten days;
54 however, this advisory committee cannot force anyone to remain a member.

55
56 Members discussed that Benton County is an important part of this process, as
57 Benton County is a main part of the aquifer. Members stated that if Benton
58 County is allowed to withdraw and start its own GWMA it would be difficult for
59 agency members on this committee as they would surely be asked to work on
60 the Benton County GWMA. It would be difficult to make time to work on two
61 separate committees. Ecology will make a note of this in their discussions with
62 Benton County.

63
64 The Benton County Planning Manager spoke up from the public audience and
65 advised that Benton County is requesting to withdraw as they want to look at the
66 issues on a County-wide basis. They want to have more members of Benton
67 County involved. There are no residents of Benton County on this committee.
68 Additionally, Benton County is different in that they do not have any dairies, so
69 their sources of nitrate are different.

70
71 **IV. Review of GWAC Operating Guidelines:**

72 The committee reviewed the Operating Guidelines by each section. Under
73 membership, a question was asked about expanding community representation.
74 Department of Ecology noted they are struggling with determining who should fill
75 the vacant Lower Valley Community Representative seat. This led to a discussion
76 about the quorum requirement (currently 17 of 23 seats) and challenges with
77 achieving quorums. It was noted that a quorum was only met with late arrivals to
78 the committee meeting. The committee discussed getting RSVPs to make sure
79 members are going to attend the meeting. It was also discussed whether or not

there is a tracking system of who is showing up for the meetings. Attendance is tracked through the meeting summary every month. The issue of membership and quorum was flagged to be revisited after the committee chair and Ecology representatives have a discussion about these issues.

Ground rules were reviewed again with the committee and confirmed to remain the same:

- 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.

Alternates were reminded if they want to make a comment they should notify their primary member they would like to address the committee and replace their primary member at the table. This is instead of a committee member or alternate making comments to the committee during the public comment period.

In general, the committee agreed the Operating Guidelines are working well. The meeting location will be updated to reflect committee meetings are now in Granger, and the membership and quorum issue will be revisited at a later date.

V. Complaint Process:

A member of the committee has requested that there be a formal complaint process in place for the advisory committee. There needs to be a way to show that individual members in the committee are being treated fairly and document if that does not appear to be so. This will help with ensuring, in the future when the committee processes might be scrutinized, that no undocumented complaints are aired that could undermine the validity of the committee process. The committee agreed on a process that requires any formal complaints to be made in writing and submitted to the facilitator for placement in a permanent complaint file. The complaints will be provided to Yakima County for placement in a digital file on the GWAC website for all committee members to be able to access.

VI. EPA Dairy Agreement Data:

Tom Eaton, US EPA, provided a presentation entitled "Data collected pursuant to EPA-Dairy Agreement". Pursuant to the agreement data will be collected in three ways:

- Residential Well Sampling

- Monitoring well establishment and sampling
- Sampling associated with source control

Wells will be tested within the boundaries of the 'Dairy Cluster' and one mile down-gradient of dairies. There are 178 private wells. Those residences will be sent a post card along with test strips. Any test strip coming back showing 5 parts per million or more nitrates will be consulted.

In the agreement, there are early source-control actions to reduce nitrate loading to the aquifer:

- Soil sampling of application fields and manure testing
- Testing lagoons
- Irrigation water management
- Assessment of area up gradient of a monitoring well with 190 ppm nitrate.

Testing will be done by a consultant hired by the dairies.

The agreement includes the monitoring of wells:

- 16 wells in addition to EPA's 7 wells, equaling a total of 23 wells
- 3 year review
- 8 years of quarterly monitoring
- Additional source control and monitoring may be required

In summary, there will be well samples from 178 homes. New monitoring wells will provide soil boring information. There will be quarterly groundwater monitoring data. There will be some pressure transducer data from some of the wells being monitored. There will be manure samples taken twice a year. Pre-planting and post-harvesting samples will be taken as well. Data will be collected for seepage rates on some lagoons.

The data will be available in monthly, annual and other technical reports prepared by the dairy consultants. The reports will be posted online at <http://yosemite.epa.gov/r10/water.nsf/gwpu/lyakimagw> and on the GWAC website.

There is still some information from the agreement that will not be released due to confidentiality.

Through the education and outreach work group an additional 250 homes will be tested outside of the EPA/Dairy Agreement.

VII. Working Group reports:

Education and Outreach: (Orange documents)

The education and outreach work group is working on finalizing an interlocal agreement with the Yakima Health District to perform work for the High Risk Well User Survey. A minimum of 250 wells will be surveyed. The \$50,000 budget will include administering the surveys, collecting well samples and obtaining certified lab testing.

A matrix is being created to support dissemination of the public information questionnaire. The matrix will identify potential groups, who could make contact with them and when. The education and outreach working group has been in contact with Yakima Valley Community College and Heritage University inviting student assistance with administering the public questionnaire. Heritage University has expressed interest in submitting a proposal for the project.

Surveys will be translated into Spanish.

The education and outreach work group will need the committee's assistance in putting together the complete matrix of community groups and professional organizations that could assist with providing outreach. Penny will send a message out to committee members requesting them to list community groups they belong to or believe would be good venues to pursue outreach. The EPO is also requesting that the GWAC members make the initial contact with the organizations.

Data Collection: (Purple documents)

Yakima County has submitted requests for proposals to consulting firms to provide an initial characterization assessment. Interviews will be held the last week of May. A gap analysis is being discussed to see if it will fit the group's needs. Data collection provided comments to the education and outreach group on the Water Well Risk Assessment Survey, as the information will be helpful to the group.

Irrigated Agriculture:

Has not met and the working group chair indicated the group will not meet until its working structure is approved. Additionally, the group is at a standstill until Quality Assurance Plans are developed for deep soil testing. This led to a discussion of working group operations. It was noted that the committee has agreed to purpose, membership and meeting operations for working groups. Still unresolved is the issue of whether to have "core members" and how those would be defined. This issue will be placed on the June agenda. During the discussion, the interim chair of the working group noted his willingness to resign.

Other groups:

Chairs are still needed for Residential, Commercial, Industrial and Municipal; Regulatory Framework; and Funding working groups.

VIII. Side note:

Dr. Robert Stevens, a retired soil scientist from Washington State University's Prosser Irrigated Agriculture Research and Extension Center, will be presenting at the next CAFO/Livestock meeting on Thursday, May 23, 2013 from 5:00 p.m. to 7:00 p.m. here at KDNA in Granger. Dr. Stevens will discuss the findings from his long experience with groundwater nitrate contamination. Other work groups are welcome to attend. There will be a phone connection.

GWAC website now has a meeting calendar:

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

IX. Public Comment:

No comments.

X. Next Steps:

- Penny will meet with Rand Elliott, Charlie McKinney and Vern Redlfer to discuss committee representation and the Irrigated Agriculture working group.

XI. 2013 Meeting Calendar:

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

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

The meeting was adjourned at 6:50 pm.

Meeting summary approved by the LYV Groundwater Advisory Committee on June 20, 2013.

Yakima County

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

NOTICE IS HEREBY GIVEN that Yakima County is holding a public meeting of the Lower Yakima Valley Groundwater Advisory Committee on **Thursday, June 20, 2013 at 5:00 PM at Radio KDNA Conference Rooms 1 & 2, 121 Sunnyside Ave. in Granger WA** pursuant to Chapter 173-100-080 WAC Ground Water Management Areas and Programs.

For Additional Information

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

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

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

Dated this **Wednesday, June 12, 2013**

Publish: Thursday, June 13, 2013

Bill: **FC3463-100-1**

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Yakima County

Notice of Public
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Lower Yakima Valley
Groundwater Advisory
Committee

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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 Wednesday,
June 12, 2013

(332658) June 13, 2013

YAKIMA HERALD REPUBLIC

INVOICE

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PO Box 9668

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

Phone #: (509) 577-7740

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YAKIMA COUNTY
PUBLIC WORKS ACCOUNTING

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 06/13/2013 and the last insertion being on 06/13/2013

Yakima Herald-Republic 06/13/13
YakimaHerald.com 06/13/13

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 13th day of June 2013

Lisa M. Driggs

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

Yakima County

Notice of Public
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Dated this Wednesday,
June 12, 2013

(332658) June 13, 2013

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COUNTY OF YAKIMA SS

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DAILY SUN NEWS, a daily newspaper.

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

That the annexed is a true copy of a LEGAL
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Yakima County Public Services

FC3463 100-1 Mtg June 20

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Tim Graff

Subscribed and sworn to before me 06/13/13

N. Hernandez
Notary Public in and for
the State of Washington

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Yakima County
Notice of Public Meeting
Lower Yakima Valley Groundwater
Advisory Committee
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For more information about the
meeting, please contact Lisa
Freund, Yakima County Public Ser-
vices Administrative Manager at
574-2300.
Dated this Wednesday, June 12,
2013
PUBLISH: DAILY SUN NEWS
June 13, 2013



Groundwater Management Area (GWMA):

The purpose of the GWMA is to reduce nitrate contamination concentrations in groundwater below state drinking water standards

Meeting Time and Location

Thursday, June 20, 2013, 5:00 – 7:00 p.m.

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

Purpose of the Meeting:

- Discuss milestones for developing the GWMA program
- Discuss protocols for Working Group operations
- Review and approve agreements with HDR and Heritage University, and hear from working groups on their work

Agenda

Time	Topic	Purpose	Lead
5:00 – 5:10 p.m.	Welcome & Meeting Overview	Introduction, meeting overview, confirm agenda	Angie Thomson, facilitator
5:10 – 5:15 p.m.	Committee Business	<ul style="list-style-type: none"> • Approve May 16 meeting summary • Membership updates 	Angie Thomson
5:15 – 5:25 p.m.	Update on Benton County	<ul style="list-style-type: none"> • Hear about the status of Benton County's request to be removed from the GWAC • Impacts to Workgroups 	Charlie McKinney, Ecology Charlie McKinney
5:25 – 5:40 p.m.	GWMA Program Milestones	<ul style="list-style-type: none"> • Discuss roles and schedule for developing the GWMA Program 	Angie Thomson
5:40 – 5:50 p.m.	Consultant Selection Update	<ul style="list-style-type: none"> • Learn about the progress on developing Scope of Work 	Don Gatchalian, Yakima County
5:50 – 6:20 p.m.	Working Group Report	<ul style="list-style-type: none"> • Hear from working groups • Provide feedback; plan for future discussions 	Angie Thomson Working group leads
6:20 – 6:45 p.m.	Working Group Operations	<ul style="list-style-type: none"> • Review working group operating guidelines 	Angie Thomson
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"> • July meeting • Review action items, next steps, and next meeting topics 	Angie Thomson



Groundwater Management Area (GWMA):

The purpose of the GWMA is to reduce nitrate contamination concentrations in groundwater below state drinking water standards

7:00 p.m.

Adjourn

Next Meeting: July 18, 2013

Committee Members

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



Groundwater Management Area (GWMA):

The purpose of the GWMA is to reduce nitrate contamination concentrations in groundwater below state drinking water standards

Committee Ground Rules:

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

2013 Meeting Dates:

March 21

April 18

May 16

June 20

July 18

August 15

September 19

October 17

November – tbd

(Thanksgiving
conflict)

December 19

LOWER YAKIMA VALLEY GROUNDWATER MANAGEMENT AREA ADVISORY COMMITTEE (GWAC)

MEETING SUMMARY

Thursday, June 20, 2013

Radio KDNA

121 Sunnyside Ave, Granger, WA 98932

I. Call to Order

Roll Call: The meeting was called to order at 5:00 pm by Angie Thomson, Facilitator.

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

Matt Bachmann	USGS Washington Water Science Center (alternate)	✓	
Kirk Cook	WA Department of Agriculture	✓	
Glinny Prest	WA Department of Agriculture (alternate)	✓	
Charlie McKlinney	WA Department of Ecology	✓	
Tom Tebb	WA Department of Ecology (alternate)		✓
Andy Cervantes	WA Department of Health	✓	
Glinny Stern	WA Department of Health (alternate)		✓
Dr. Kefy Desta	WSU Irrigated Agriculture Research and Extension Center	✓	
Dr. Troy Peters	WSU Irrigated Agriculture Research and Extension Center (alternate)		✓
Elizabeth Sanchey	Yakama Nation	✓	
Tom Ring	Yakama Nation (alternate)		✓
Rand Elliott	Yakima County Board of Commissioners	✓	
Vern Redifer	Yakima County Board of Commissioners (alternate)	✓	
Steve George	Yakima County Farm Bureau		✓
Justin Waddington	Yakima County Farm Bureau (alternate)		✓
Gordon Kelly	Yakima County Health District	✓	
Jason Sheehan	Yakima Dairy Federation	✓	
Dan DeGroot	Yakima Dairy Federation (alternate)	✓	

Member seats not represented: Lower Valley Community Representative, Hispanic Community Representative, Yakima County Farm Bureau

II. Committee Business:

Introductions.

Moment of silence.

The May 16, 2013 meeting summary was approved by the committee with no changes.

III. Membership Updates:

The Department of Ecology formally accepted the Benton County Commission's request to withdraw from the GWMA in a letter dated June 7, 2013. Ecology's reaction to the withdrawal is that they are disappointed; however, they respect the decision. Benton County proposed to go under their own GWMA umbrella.

There are certain requirements of the WAC to set up a GWMA, and within the next month Ecology will hold a public hearing to take public comments on the boundary change.

With Benton County's departure, its three member seats (County Commission, Benton-Franklin Health District and Benton Conservation District) are now open. That brings the total to four member positions available. It will also create an impact on the working groups. The Irrigated Agriculture Working Group no longer has a chairman. A member noted that the departure of the conservation district is a "huge loss."

It was stated that it would be a good idea to keep the membership levels the same in order to maintain the same number for a quorum. If we are losing three members we need to add three members. It's a good opportunity to beef up the membership where it's needed. There are two lower Valley Community positions to be filled; an additional Irrigated Ag representative is also important. Ecology hopes to fill these positions by next month's meeting and they have good candidates in line.

An alternate rep for the Washington Department of Agriculture, Ginny Prest, has been appointed to replace Jaclyn Ford. She is the Acting Program Manager for Dairy Nutrient Management for the Department of Agriculture and is the alternative for Kirk Cook.

Members stated that we need to pick our representatives carefully. We need to keep a balanced, engaged membership. The Irrigated Ag working group requires a strong leader, as well as someone who is neutral and without a personal agenda.

IV. GWMA Program Milestones:

The committee reviewed the GWMA Program Milestones document. The elements of the GWMA provide a timeline to illustrate how the pieces work and come together. This is a just a framework. Does this work for everyone's deadlines? It was stated that some things need to be clarified. For example, what does "Levels of Nitrates" mean? Members stated that this framework is helpful and the pieces need to be identified and have flexible deadlines.

Members also stated that it needs to be refined, all work groups need to be on the same deadline and we need to revisit the milestones regularly to keep it updated. The goals and objectives are vague. It is unclear what needs to be done now and it was suggested that each working group meet outside of the Committee and work on their goals and objectives.

V. Consultant Selection:

Four consultants were interviewed on June 4 by the Consultant Selection Committee. HDR, Inc. was selected as a consultant for the project. Scope 1 looks at Nitrate Regulatory Framework, Best Management Practices and determines gap analysis. Scope 2 builds on nitrate data that Yakima County has and will develop QA/QC Plan, create a nitrate database, build a data monitoring plan and complete a gap analysis. HDR's proposal was received June 15. The work will be completed by April 2014. Scopes 1 & 2 include development, monitoring plan and research. The budget for scopes 1 and 2 is \$215,109.

HDR, Inc. was asked for a proposal to conduct Optional Task 10 which includes deep soil monitoring. Their cost estimate was \$51,293. They would be doing 20 locations of analysis and digging 8-10 feet, sampling at one foot increments until the total depth is reached. Should we do deep soil testing? Members stated that soil sampling may be unavoidable. If we don't sample the soil we are guessing at the nitrate levels below the root zone of 4 feet. We need to do 20 cropping systems with 6-10 samples per cropping system.

A discussion ensued about the efficacy of surface versus deeper soil sampling. Deep soil sampling would uncover, for example, whether irrigated agriculture is contributing to the nitrate issue. Without testing the soil we cannot explain what we are doing or if we are making any progress. We need to get baseline data to answer those questions and that will be accomplished with deep soil sampling.

It was stated that going below 4 feet may be wasting time and money, because focusing on the top few feet is more important—it is where the water table is and we can understand how to control the nitrate before it goes too deep. Another member said that by sampling the top 4 feet we can determine how deep nitrate levels are and whether over irrigating is the cause; however, we need to know how much is leaching into the ground because once nitrate is below root level it can contaminate the groundwater.

Another member stated that deep soil testing is used to educate farmers to convince them to change practices; however, questions about the results of the Columbia River GWMA give no indication that the practice is useful. It was suggested to get a baseline and sample over time, and another member noted that this sampling could be a great diagnostic tool. Another member worried that the sampling is expensive and may not address all issues.

There are concerns of who does the monitoring for the Agriculture Industry when it comes to fertilization. Right now the Department Of Agriculture only requires dairies to keep records. It was stated that HDR, Inc. will develop the

regulatory framework. The soil test will give baseline data to show the profile from top to bottom and give valuable scientific information.

Another member wants to make sure that we are not singling out certain groups and should have diverse sampling locations. For example, we should test more than just agriculture; we should test golf courses and private residences. The depth of sampling will focus on the root zone, which will vary depending on the crop and the soil. One member stated that we need to figure out what the purpose of testing the soil is. Are we getting a baseline or prioritizing selected crops systems that leach nitrates? That will determine how much testing we need to do and the costs. Concerns were stated about funding due to Benton County withdrawing from GWMA. Yakima County staff have evaluated the budget and the feasibility. HDR's GWMA contract for \$266,402 (to include Task 10) will go to Board of Yakima County Commissioners' agenda next week.

The group concluded that deep soil sampling would be conducted, using diverse sampling locations and focusing on the root zone, but getting some deeper samples as appropriate. The deep soil testing will be used as a diagnostic tool, not to develop a baseline.

VI. Working Group Reports:

Livestock/CAFO Working Group: (Green documents)

A special meeting was held on May 23rd. Dr. Robert Stevens was a guest speaker at the meeting. More nitrogen is being imported into the soil via fertilizer and feed sources than expected and irrigation is an important driver in the nitrate contamination problem. The group plans on coordinating work with Irrigated Ag Work Group, Residential, Commercial and Industrial Work Group, and Data Collection, Characterization and Monitoring Work Group to find nitrate sources. Additionally, the group will work with the consultant that will be hired to determine regulatory BMP's and data monitoring plans as well as hold monthly meetings to make sure progress is being made in developing the work plan.

Data Collection, Characterization, Monitoring Working Group: (Purple document)

The work group was able to ask the Consultant some questions focusing on quality control issues. The work needs to meet Ecology's quality assurance standards. The group would like to meet with HDR and subcontractor Pacific Groundwater Group once the contract is in place, possibly to occur during the July or August meeting. The group is also looking forward to assistance from the Residential, Commercial and Industrial Work Group.

Education & Public Outreach Working Group (EPO): (Orange documents)

By June 25, all three surveys will be underway. The first, the High Risk Well Survey, will be conducted by the Yakima Health District. The Health District's surveyors will conduct well testing and obtain certified lab results. They will not be making "cold calls"; rather, the residents will be notified in advance.

The Yakima Health District will also conduct the second survey—the Health Care Professional Questionnaire. This survey will help us to see if providers are noticing anything in their patients that may be nitrate-related.

The final survey is the Public Informational Questionnaire. This survey will help us determine what the public knows about nitrates, the GWAC and the Groundwater Management Area. The survey will be conducted by Heritage University students. There are concerns of not being able to obtain an accurate picture: for example, a renter may not know where their well is versus someone who just built their home and has more information about their water source.

Due to Benton County withdrawing, all surveys will be conducted in Yakima County and the County has assessed how many surveys they can conduct within the budget.

A community outreach sign-up sheet was passed around. Members were asked to list community groups and associations they belong to that might be interested in receiving or distributing information about nitrates, the GWAC or the GWMA. Members were also asked to make the initial contact with each group on behalf of the EPO work group.

VII. Working Group Operations:

There was a proposed addition to the GWAC Operating Guidelines. The line reads, "Working groups will discuss technical work and issues needed to support development of the GWMA Program, including". It was suggested to add the language, "will discuss and carry out technical work". On bullet point #2 it currently reads, "Hear about potential problems and solutions from non-technical people." It was suggested to add technical in the language as well.

VIII. Public Comment:

It was suggested that the contractors conducting the outreach surveys should be well trained and passionate about the nitrate issue and getting the information back to us.

IX. **Next Steps:**

The GWAC's July meeting is canceled. However, the working groups are welcome to meet on their own. The KDNA room is available if groups would like to use the room. One member suggested having a presentation from HDR, Inc. and then breaking into working groups. Each group needs to figure out what they are meeting about.

There are several members who are in more than one working group. Several members have not signed up for any working group. By the third week of July you will get a call or an email requesting you to determine which group(s) you will be participating in. Please limit your choices to two. This will help attendance in each working group as it is difficult to be a part of multiple groups. You are still welcome to attend multiple meetings.

The Committee wants HDR, Inc. to be prepared to make a statement to the general group and then meet with each working group so when a proposal is made the group can understand and bring questions HDR, Inc.

Action Items:

We are moving forward with the Deep Soil Testing, the three surveys, and new members.

At the next meeting the working groups will report on objectives and goals.

X. **2013 Meeting Calendar:**

- ~~July 18 CANCELLED~~
- August 15
- September 19
- October 17
- November 21
- December 19

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

The meeting was adjourned at 6:35 p.m.

Meeting summary approved by the LYV Groundwater Advisory Committee on

Livestock/CAFO Working Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

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

Meetings/Calls Dates

Meeting: Thursday, April 4, 2013, 5:00 PM – 7:00 PM
Location: Radio KDNA, Granger, WA

Participants

Charlie McKinney (Chair) – Department of Ecology
Jason Sheehan – Dairy Federation
Heather Wendt – Benton Conservation District
Jim Dyjak - Concerned Citizens of the Yakama Nation
Steve George – Yakima County Farm Bureau
Kathleen Rogers – Citizen
Larry Fendell – Citizen
Doug Moore – Community Association for Restoration of the Environment
Ali Sedighi – Yakima County staff support
Don Gatchalian – Yakima County staff support

Key Discussion Points

- The process for identification of existing and alternate BMPs and regulatory requirements (voluntary and mandatory actions) was discussed. The group decided that this process, along with an effectiveness study, should be performed by a qualified consultant. Yakima County will prepare a draft Scope of Work and will send it to the Livestock/CAFO Workgroup members for approval. Based on this Scope of Work, the Workgroup's

funding request will be submitted to the GWAC during the April 18th meeting for consideration.

- The group will be in touch with Data Workgroup for gathering data, performing data gap analysis, and long-term monitoring plan
- Dr. Robert Stevens, retired soil scientist from Washington State University's Prosser Irrigated Agriculture Research and Extension Center, will be invited as the guest speaker to the next meeting (May 2, 2013) to discuss findings from his long experience with groundwater nitrate contamination and methods for investigating. Charlie McKinney will call him to check on his availability to speak at the next Livestock/CAFO Workgroup meeting on May 2nd. Invitation will be sent to the Irrigated Agriculture and RCIMD Workgroups for this meeting.
- Charlie McKinney will discuss the possibility of having periodic joint meetings with the Irrigated Agriculture and RCIMD Workgroups in the next GWAC meeting.
- Steve George talked about developing a protocol for Workgroup meetings. This will be discussed in the next GWAC meeting.
- It was suggested that the GWMA should create a method to answer public's questions and concerns (e.g. a customer service-type phone number) regarding GWMA Workgroup meetings. This will be discussed in the next GWAC meeting.

Resources Requested

- Invite Dr. Robert Stevens, retired soil scientist from Washington State University's Prosser Irrigated Agriculture Research and Extension Center, as the guest speaker to the next meeting (May 2, 2013) to discuss nitrate contamination.
- Invite Irrigated Agriculture and RCIMD Workgroups to have a joint meeting in May
- Coordinate data collection and gap analysis with Irrigated Agriculture and RCIMD Workgroups

Recommendations for GWAC

- Hold periodic joint meetings with the Irrigated Agriculture and RCIMD Workgroups
- Develop a protocol for Workgroup meetings. It can be less formal than the GWAC meeting protocol but need some procedure on how to address public participation
- Create a method to answer public's questions and concerns (e.g. a customer service-type phone number) regarding GWMA.

Deliverables/Products Status

- Yakima County will develop a Scope of Work for Nitrate Regulatory and BMPs and based on this Scope of Work, the Workgroup's funding request will be submitted to the GWAC in the April 18th meeting for consideration. The draft Scope of Work will be presented to the Irrigated Ag Workgroup for their input during their May 11th meeting.

Proposed Next Steps

- Go through the work plan and evaluate the progress of the Workgroup
- Discuss the possibility of joint meetings with the other Workgroups

Livestock/CAFO Working Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

Charlie McKinney, Chair (Department of Ecology), Kirk Cook (Department of Agriculture), Dr. Kefy Delta (WSU), Elizabeth Sanchey (Yakama Nation), Heather Wendt (Benton Conservation District), Helen Reddout (CARE), Jaclyn Ford (Department of Agriculture), Jason Sheehan (Dairy Federation), Jim Newhouse (South Yakima Conservation District), Laurie Crowe (South Yakima Conservation District), Patricia Newhouse (Citizen), Steve George (Yakima County Farm Bureau), Stuart Turner (Turner & Co., Inc.), Ali Sedighi (Yakima County Staff Support, non-member)

Meetings/Calls Dates

Meeting: Thursday, May 23, 2013

Participants

Dr. Bob Stevens, retired WSU soil scientist (Guest Speaker), Charlie McKinney (Dept of Ecology), Kirk Cook (Dept of Ag), Jim Dyjak (Citizen), Jim Trull (SVID), Tom Tebb (Dept of Ecology), Helen Reddout (CARE), Tom Ring (Yakama Nation), Dan DeGroot (WDPC), John Van Wingerden (Port of Sunnyside), Gary Holwegner (Port of Sunnyside), Kathleen Rogers (Sunnyside), Bud Rogers (Sunnyside), Doug Moore (Sunnyside), Mike Shuttleworth (Benton County), Dianne Jung (Benton County), Deborah Harrison (Benton County), Steve Harrison (Benton County), Carl Hurlburt (Granger), Stuart Crane (Yakama Nation), Pony Ellingson (PGG), Troy Ross-Havens (Yakima County), Don Gatchalian (Yakima County), by telephone – Ralph Fisher (EPA)

Key Discussion Points

The following is the speaker presentation summary of Dr. Robert Stevens, retired soil scientist, IAREC Prosser – WSU

- More nitrogen is being imported into the Yakima Valley via nitrogen fertilizer and feed sources, than exported. Feed is the original N source in manure; is cycled through cows, nutrients are concentrated.
- Irrigation is an important driver in the nitrate contamination problem: moves nitrate (water soluble and mobile) below root zones (if over-applied) and ultimately to groundwater. Low natural precipitation can be a factor: nutrients accumulate at a shallow depth until moved by irrigation.
- Every time manure is applied, a percentage becomes available to crops that year and the rest becomes available in later years. This “lagging” source needs to be accounted for when manure is being repeatedly applied. Used example of 3 scenarios where soil tests showed high, medium and low nitrogen levels. High scenario: should crop multiple years with no additional application; medium: crop 1 or 2 years before application; low: needs application prior to first crop.

- Ammonia contained in manure is converted to ammonium, then nitrite (briefly), then nitrate which is mobile in soils. Some ammonia loss to the air from surface-applied manure happens quickly (average maybe 4 days, but is affected by temperature).
- Deep aquifers present a 2-edged sword: they are not as easily contaminated, but once they are; it takes a very long time for them to “clean up”.
- “Culprit crops”: from experience in the Columbia Basin, these are crops that use high rates of nitrogen but tend to be poor nitrogen scavengers due to less extensive root systems, etc. Examples: onions, mint, potatoes. Require good nitrogen management in order to prevent loss below root zone.
- Believe that rooting depths of crops and their ability to extract deeper nitrogen are generally over-estimated. Most occurs in the top 2 feet. Some roots may be deeper, but they are inefficient at removing nitrogen (depending on crop). Nitrogen removal is never 100% even under good management; more like 50% to 80%. Soil tests were historically usually only taken in the top 1 foot. Better to sample down to 2 feet and sometimes 3 to better understand what is going on.
- Triticale has become an important winter nitrogen scavenger crop where manure is applied. However, more research is needed because the growth, yield and therefore nitrogen uptake of triticale is highly variable. Planting dates and other factors can make a huge difference. It is easy to over-estimate the amount of nitrogen that triticale is removing because the crop is so variable.
- In early 90’s, did study on hops in Yakima Valley. At that time there was no good herbicide for hops, which led to lots of weeds, which were dealt with by frequent tillage, which led to high erosion rates and water quality problems. So started using manure to improve soil tilth and reduce erosion. This worked, but led to nitrate problems! Now the problems have been largely overcome by widespread use of drip systems, effective herbicides and use of PAM (polyacrylimide – flocculates soil and reduces erosion). This is an example of the interplay between farming practices.
- Salt build-up is a problem that can occur with repeated use of manure. Needs to be occasionally leached. Needs to be done at a time when nitrate levels in the soil are low to avoid leaching that as well. The idea that salt problems can be solved by applying more manure is a myth.
- Pen areas are probably not a significant source of nitrate contamination compared to field application because these areas “seal up” and prevent downward percolation. Can be risk for surface water contamination. Lagoons tend to seal as well, but there has been some interesting research looking at lagoon margins where liquid levels fluctuate, wetting and drying, and formation of cracks that can be a conduit for nitrate movement.
- An advantage with compost is that it is stable and more easily exported to where nutrients are in demand. Possible down side is the nutrient concentrations are variable, less often analyzed, and therefore more difficult to quantify in a nutrient budget.
- The big key to preventing field application from causing excess groundwater contamination by nitrates is to do accurate accounting of nitrogen (nutrient management planning). It’s like keeping an accurate nitrogen budget based on real analyses and realistic projections.
- BMPs work only if used; not if just filling a page in a book.

Resources Requested

None at this time

Recommendations for GWAC

None at this time

Deliverables/Products Status

None at this time

Proposed Next Steps

- Coordinate work with (a) Irrigated Ag Work Group, (b) Residential, Commercial and Industrial Work Group, and (c) Data Collection, Characterization and Monitoring Work Group to find nitrate sources
- Work with the consultant that will be hired to determine regulatory, BMPs and data monitoring plan
- Hold monthly meetings to make sure progress is being made in developing the work plan

Irrigated Agriculture Working Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

Mark Nielson (Chair) - Benton Conservation District
Kirk Cook - Department of Agriculture
Dr. Kefy Desta - Washington State University
Dr. Troy Peters - Washington State University
Elizabeth Sanchey - Yakama Nation
Jean Mendoza - Friends of Toppenish Creek
Jim Trull - Roza-Sunnyside Joint Board of Control
John Van Wingerden - Port of Sunnyside
Lonna Frans - U.S. Geological Survey
Ralph Fisher - U.S. Environmental Protection Agency
Ron Cowin - SVID
Stuart Turner - Turner & Co
Thomas Tebb - WA Department of Ecology
Scott Stephen
Mike Shuttleworth
Chelsea Durfey
Laurie Crowe
Lino Guerra
Robert Farrell
Terry Keenhan - Yakima County
Ali Sedighi - Yakima County

Meetings/Calls Dates

Meeting: Thursday, April 11, 2013, 11:00 AM – 1:00 PM
Location: Fire District #3, Prosser, WA

Participants

Key Discussion Points

- The group discussed the Workgroup protocols and the structure of the workgroup members. It was suggested that 11 core committee members (four Irrigators from Yakima County, two Irrigators from Benton County, one cropping system expert, and representatives from Irrigation District, WSU, Conservation District, WSDA) will be voting members who would represent stakeholders and would potentially implement the activities identified by the Irrigation Workgroup and approved by the GWAC. The group would be rigid in numbers and would have the ultimate vote on whether an activity, idea, or request is forwarded to the GWAC.

- Non voting members of the group will consist of Technical Advisory Members and they could vary in number and expertise depending on the needs of the Core Committee and the interest of the technical expert.
- The group agreed that they will incorporate additional public comments and ideas into the process. Also, the protocols that will be developed by the GWAC for the workgroup meeting will be in effect for the Irrigated Agriculture meeting (e.g. meeting operations, public's comments, etc).
- The group decided to propose Irrigation Water Management and Deep Soil Sampling as two early implementation activities to the GWAC. For both items, the experience and studies related to the Columbia Basin GWMA can be used as a starting point.
- The group supports the idea of having periodic joint meetings with the CAFO/Livestock and RCIMD Workgroups in the future. Dr. Robert Stevens, retired soil scientist from Washington State University's Prosser Irrigated Agriculture Research and Extension Center, will be invited as the guest speaker to the next CAFO/Livestock meeting (May 2, 2013) to discuss findings from his long experience with groundwater nitrate contamination. Charlie McKinney, Chair of the CAFO/Livestock Workgroup invited the group to attend this meeting.
- The Scope of Work for nitrate related BMPs that was developed by the CAFO/Livestock Workgroup was discussed and comments regarding this Scope of Work were provided to Yakima County for consideration. Yakima County will prepare a draft Scope of Work and will send it to the Livestock/CAFO and Irrigated Agriculture Workgroup members for approval. Based on this Scope of Work, a funding request will be submitted to the GWAC during the April 18th meeting for consideration.

Resources Requested

Recommendations for GWAC

- Develop a protocol for Workgroup meetings. It can be less formal than the GWAC meeting protocol but need some procedure on how to address public participation

Deliverables/Products Status

- Propose Irrigation Water Management and Deep Soil Sampling as two early implementation activities to the GWAC.

Proposed Next Steps

- Schedule the next meeting after the April 18th GWAC meeting and based on the feedback from that meeting.
- Discuss what kind of education and outreach from this group can be proposed to the EPO group for consideration.



STATE OF WASHINGTON

DEPARTMENT OF AGRICULTURE

P.O. Box 42560 • Olympia, Washington 98504-2560 • (360) 902-1800

February 20, 2013

Ali Sedighi, PhD, PE
Yakima County Public Works
128 N. 2nd St
Yakima, WA 98901

Dear Ali:

Here is a bulletined outline of what we discussed during our meeting on the 11th. Hope this helps. This provides an initial path forward for the macro monitoring component.

- 1) Yakima must develop a current database of all nitrate data collected within the boundaries of the GWMA.
 - WSDA will provide nitrate database used in the development of maps contained in the original multi-agency report issued in 2010
 - Data from EPA's investigation should be included in the database
 - Additional data collected from other sources should be sought that is not included in the WSDA database
- 2) A Quality Assurance Plan must be developed to be applied to the database. This Plan must mandate that wells remaining in the database have the following data:
 - Well logs specifying construction attributes
 - Verification of well location
 - Condition of well and well seal

Wells for which the basic data does not exist should not be considered for inclusion in the Yakima County database

- 3) Using the well locations remaining in the QA's database, a gap analysis should be conducted. It has been suggested that Visual Sampling Plan should be considered as a method by which this analysis could be made. Information on this software can be found at <http://vsp.pnnl.gov/>
- 4) Using the results of VSP and the current locations (vertical and horizontal) an analysis can be made of what it will take to develop a statistically valid sampling network. These results will inform the County as to potential costs to either expand the current network

(contained in the database) by using existing wells or construction of new wells to fulfill the network requirements.

- 5) It is recommended that the county consider using VSP as a starting point for establishing a grid for a deep soil monitoring network.

Item number 1 can be addressed by state and local agencies. Item number 2 will be somewhat time consuming and may require the assistance of a consultant. I would strongly suggest that a consultant be considered to conduct items 3, 4, and 5. While it is possible for county and state technical staff to accomplish this task the time commitment may be more that can be adsorbed.

During our discussion we also addressed irrigation water management, and how we would begin to address that issue. WSDA does have a comprehensive GIS based layer of all irrigated cropland in the Yakima Valley. Within this layer the irrigated method is noted. I would suggest that WSDA supply this information to the County as a starting point in developing a water budget for the GWMA.

Regarding the issue(s) surrounding micro monitoring (i.e. BMP monitoring). This does need to be a significant component of the monitoring work plan. I would strongly resist the temptation to assume that any BMP that's considered for the GWMA is effective in addressing groundwater quality. I think the County should take a "show me" approach. Having said that, I would look at a stepwise process such as:

- 1) Establish and evaluate results from a deep soil monitoring network
- 2) Compare those results with surrounding management techniques currently in place
- 3) Determine the current effectiveness or ineffectiveness of those techniques
- 4) Develop alternatives that have a high potential for effectiveness
- 5) Monitor those techniques

This would employ an adaptive management process where improvements are made and then verified for their effectiveness. If the level of effectiveness is not achieved, further modification of management techniques is made and then effectiveness (through monitoring) is assessed until the required level of effectiveness is achieved.

On the issue of characterization, WSDA will assist the County in developing a characterization report per the current work plan. It is likely that a significant of information can be utilized from the existing multi-agency report published in 2010. Additions to the report will be made based on the body of data collected since then. Included in the report will be recommendations on what and how to fill gaps in knowledge. These gaps will form the basis of workplan elements related to characterization for FY 2014. I would anticipate that the initial report could be completed no later than October 1, 2013.

Sincerely,

Kirk V. Cook, LG, LHG
Washington Department of Agriculture
Directors Office

Data Collection, Characterization, Monitoring Working Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

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

Meetings/Calls Dates

Meeting: Thursday, April 12, 2013

Participants

Kirk Cook; Ali Sedighi; Andres Cervantes; Kevin Lindsey; Matt Buchman; Charles Ellingson for Steve Swope; Don Gatchalian; Jan Whitefoot; Jean Mendoza; Dr. Kefy Desta

Key Discussion Points

The meeting was opened by Kirk who wanted a discussion regarding the letter submitted to Ecology by Benton County asking to be withdrawn from the Lower Yakima Groundwater Management Area. From a data collection and monitoring standpoint, the group discussed the ramifications of this action. The workgroup decided to ask for a discussion of this topic at the GWMA meeting on Thursday.

Status of data collection from different sources

Yakima has not yet received the database “dump” from the State Department of Health. This is currently being worked by Ginny Stern and should be ready within the next week. Other data sources were presented by Charles Ellingson discussed for potential consideration. These are:

- Upgradient/background wells at environmental monitoring sites. The background data from such sites should reflect regional conditions. Downgradient samples may not be appropriate unless the site is being evaluated as a point-N-source or sink. The downgradient samples could be affected by extreme and site-specific environmental conditions. Specific sites include landfills and Ecology cleanup sites. Only the N data would be included, although related redox data is pertinent. Data should be available through the State EIM, or through project managers.
- Upgradient and background wells at State Waste Discharge permit facilities. Examples are food processing wastewater sprayfields. In this case both upgrad and downgrad data may be appropriate assuming these facilities are to be evaluated as sources. Caution is warranted in interpreting data from such sites since we could have big changes in conditions over short distances which complicates application of such data as part of a regional assessment.

- USGS agricultural drain water quality study data (establishes that drain water quality reflects shallow groundwater quality during the non-irrigation season). .
- CAFO groundwater monitoring data. Have decisions been made regarding the availability and inclusion of such data in the County's dbase? Or is that data being considered by other means?

Development of a draft scope of work (must be submitted to the GWAC on April 18th)

A draft scope was submitted to the work group for discussion. This draft could be used by the County as a basis for outside proposals to address initial needs of the GWMA. Suggestions were made and submitted to the Chair and as a result a modified draft has been submitted to the County for presentation and review by the GWMA committee on Thursday, April 18, 2013.

Scope of Work for "Nitrate Regulatory and BMP Assessment" developed by Yakima County

The workgroup reviewed the initial draft scope of work presented by the CAFO workgroup. Discussions centered on the BMP aspects were held. There is disagreement as to the role of BMP's and their effectiveness. As a result it was decided that the workgroup would not submit comments as a group to the CAFO committee but rather individual comments could be submitted.

The need for closer coordination between the Irrigated Ag, and CAFO workgroups was highlighted as a need.

Future meeting schedules and the possibility of joint meetings with the other Workgroups

The need to establish a schedule for meetings of the workgroup was discussed and as a result a schedule has been completed and sent to GWMA committee members through the end of the year. A majority of the meetings will be conducted via conference call; however when deemed necessary the group will hold joint meeting with other workgroups in a face to face setting.

Other Issues

The need to conduct a comprehensive nitrogen loading assessment was voiced. The workgroup agreed that this is a need and options to conduct that type of assessment should be discussed with the other workgroups as soon as possible.

Resources Requested

None at this time however, the workgroup sees a continued demand for development of preliminary documents ahead of contract work that may be conducted. Time constraints on members are becoming more and more of an issue.

Recommendations for GWAC

There is *at least* \$60,000 that can be used by the Data Workgroup before June 30th and the group has developed a draft Scope of Work for Yakima County with deliverables. Estimates for budget need development.

Deliverables/Products Status

Draft Scope of Work completed

Review by GWMA needed

Proposed Next Steps

The group will meet every month two weeks before the GWAC meetings. They can be in the form of conference calls or in-person meetings, based on the needs.

Approval of draft Scope of Work and development of budget

Data Collection, Characterization, Monitoring Working Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

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

Meetings/Calls Dates

Meeting: Thursday, May 2, 2013

Participants

Jean Mendoza, Kevin Lindsey, Lorraine Edmond, Mark Nielson, Steve Swope, Ali Sedighi

Key Discussion Points

The status of Scope of Work for the Initial Characterization Assessment was discussed. Yakima County has submitted Request for Proposals for this Scope of Work to potential consulting firms and they have until May 17, 2013 to respond. Interviews will be held by phone or in person during the last week of May.

Status of data collection from different sources

Yakima County has received the database “dump” from DOH and WSDA. The USGS has sent some nitrate data and additional nitrate data can be obtained from the USGS National Water Information System website (NWIS). Also, the EPA has sent some nitrate data from the new wells reported in the March 2013 report (Monitoring Well Installation and Data Summary Report, Lower Yakima Valley, Yakima County, Washington, March 2013). Other potential data sources are data from the EPA’s screening evaluation study and data from Port of Sunnyside. Charles Ellingson discussed some other sources of Nitrate data for consideration.

The possibility of adding nitrate tests in the future to Ecology’s Well Route and data base was discussed and considering that most of these wells are deep irrigation wells, the group decided that a data gap analysis should be performed first to find out if there is a need to add nitrate test to Ecology’s Well Route and data base in the future.

Yakima County will put all these data together and will send them to the selected consulting firm that will prepare the Initial Characterization Assessment.

The possibility of having a data management website for the GWMA was discussed and it was suggested that Yakima County should talk to Columbia Basin GWMA's GIS person, Patrick Royer, to discuss the options for this website.

Some group members provided comments regarding the Water Well Risk Assessment Survey that could be beneficial to the Data Work Group. These comments were sent to the EPO Workgroup for consideration.

Resources Requested

Recommendations for GWAC

Deliverables/Products Status

Proposed Next Steps

Dr. Robert Stevens, retired soil scientist from Washington State University's Prosser Irrigated Agriculture Research and Extension Center, will be invited as the guest speaker to the next CAFO/Livestock meeting (Thursday, May 23, 2013 from 5:00 PM to 7:00 PM at KDNA Granger) to discuss findings from his long experience with groundwater nitrate contamination. An invitation will be sent to the Data Workgroup to attend this meeting.

Data Collection, Characterization, Monitoring Working Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

Kirk Cook - Chair (Dept of Ag), Andres Cervantes (Dept of Health), Dr. Kefy Desta (WSU), Jan Whitetfoot (CCYR), Jim Trull (SVID), Kevin Lindsey (GSI - Consultant), Laurie Crowe (South Yakima Conservation District), Lonna Frans (USGS), Matt Buchman (USGS), Lorraine Edmond (Citizen), Mark Nielson (Benton County Conservation District), Steve Swope (PGG - Consultant), Stuart Turner (Turner & Co.), Thomas Tebb (Dept of Ecology), Ali Sedighi (Yakima County)

Meetings/Calls Dates

Conference Call: 10:30 AM – 12:00 PM, Thursday, June 6, 2013

Participants

Kirk Cook, Jean Mendoza, Kevin Lindsey, Ginny Stern, Pony Ellington, Andy Cervantes, Joye Redfield-Wilder, Melanie Redding, Don Gatchalian

Key Discussion Points

Agenda:

- ☐ Review of Tuesday's (June 4, 2013) Consultant Selection Committee Interviews
- ☐ Coordination between Yakima characterization work and that being conducted as part of the EPA consent Order
- ☐ Quality assurance requirements (Ecology) for all data collected as part of the LYV GWMA effort
- ☐ Interface with Irrigated Agriculture Work Group
- ☐ Other topics

Review of Tuesday's (June 4, 2013) Consultant Selection Committee Interviews

HDR, Inc was selected by the Consultant Selection Committee to do the two Scopes of Work, i.e., Scope of Work No. 1 Nitrate Regulatory Framework and Best Management Practices, and Scope of Work No. 2 is Initial Characterization Assessment and Data Management Plan. Yakima County contract process was explained and to have signed agreement with HDR, Inc. by June 25th. Pacific Groundwater Group is HDR's sub-consultant.

Coordination between Yakima characterization work and that being conducted as part of the EPA Consent Order

The Work Group discussed how the data collected from EPA Consent Order will be incorporated in Yakima County nitrate database. The information needs to be included in the database and is something that the consultant will do as part of accomplishing Scope of Work # 2 – Initial Characterization Assessment and Data Management Plan. The Farm Bureau has its own hydrogeologist consultant, and the five dairies in the EPA Consent Order has its own hydrogeologist. The information collected needs to be included in the Yakima County database.

Quality assurance requirements (Ecology) for all data collected as part of the LYV GWMA effort

The data collected as part of the technical work for the GWMA has to meet Department of Ecology QA/QC requirement. It was agreed that collecting nitrate information is the primary purpose of data collection but there should be some discussion on what to do with other information collected. Quality assurance is important and there is a need to determine how to qualify data and to explain if data is not meeting requirement.

Interface with Irrigated Agriculture Work Group

It was discussed that should Department of Ecology decide to honor Benton County's request to be excused from GWAC, Benton County Conservation District would also request to be excused. Due to the importance of this Work Group to the Data Collection and Monitoring, selection of a Chair for this workgroup needs to happen as soon as possible.

Other Topics

- ☐ Residential, Commercial and Industrial (RCI) Work Group has a volunteer Chair and will be discussed during the June 20th GWAC meeting. The Work Group's effort is important to complete "sources of nitrate" information.
- ☐ There was discussion about dairy lagoons and how that will be addresses. This will be part of HDR's tasks to determine regulatory and BMP gaps (Scope of Work No. 1).
- ☐ Pony of PGG shared a brief overview on how PGG will accomplish Scope of Work No. 2 - Initial Characterization Assessment and Data Management Plan
- ☐ Deep Soil Sampling was also brought up and Work Group's understanding was this work would be performed by Benton County Conservation District. The Work Group would like to know if BCCD is still going to do this work if they are excused from GWAC participation.
- ☐ There was discussion of using Heritage University to assist the GWAC conduct Survey No. 2 – Public Questionnaire.

Resources Requested

None at this time

Recommendations for GWAC

None at this time

Deliverables/Products Status

None at this time

Proposed Next Steps

- ☐ The Work Group would like to meet with HDR and PGG once the contract is in place. This may occur either during the July or August Data Collection, Characterization, Monitoring Work Group meeting.
- ☐ The Work Group is looking forward to the Residential, Commercial and Industrial Work Group assistance and information
- ☐ The Work Group needs to schedule the July and August meetings, and to decide whether to do it by conference calls or meeting at KDNA Granger with the consultant

EDUCATION & PUBLIC OUTREACH Working Group

Charge from Groundwater Management Area Advisory Committee

Incorporate comments and finalize the three (3) survey materials.

Working Group Members

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

Meetings/Calls Dates

Meeting: Thursday, April 4, 2013 9:00 AM – 11:00 AM

Participants

Andres Cervantes (DOH), Joye Redfield-Wilder (Ecology); Dean Effler (Public), Jean Mendoza – via phone (Friends of Toppenish Creek), Gretchen Stewart - via phone (EPA), Patricia Newhouse (Public), Tom Tebb – via phone (Ecology), and Don Gatchalian (Yakima County)

Key Discussion Points

I. Outreach Materials:

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

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

Resources Requested

N/A

Recommendations for GWAC

1. EPO is requesting the GWAC to review and approve the three surveys, healthcare provider letter and attachment.
2. Healthcare provider letter: the EPO is recommending that the letter be signed jointly by the Benton Franklin Health District & Yakima County Health District. Health districts to determine who their agency contact(s) will be.

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

Deliverables/Products Status

1. Surveys - 1. High Risk Well Users 2. Public Informational Questionnaire and 3. Health Professional Survey. All three draft documents are complete and approved by EPO. GWAC approved concept during March 21st GWAC meeting. EPO received and incorporated comments. Surveys 2 and 3 completed. Survey 1 required editing.
2. GWMA Web links - related agency Web links have been reviewed and organized. Requesting GWAC approval of proposed links. Approved during March 21st GWAC meeting.
3. Letter to health professionals - letter is complete. Requesting GWAC approval. Approved during March 21st GWAC meeting.
4. GWAC Logo - five logos were created; EPO reviewed and reduced choices to four; the choices will be presented to the GWAC with the request to approve one. GWAC members made selection and provided to Penny to tally. Logo # 1 received the most number 1 votes. Results shown below:

Votes	Logo 1	Logo 2	Logo 3	Logo 4
#1	9	5	4	3
#2	2	5	8	2
#3	2	8	4	3
#4	6	0	2	10

Logo Option 1: Water Drop in Pool



Groundwater Management Area (GWMA):

The purpose of the GWMA is to reduce nitrate contamination concentrations in groundwater below state drinking water standards

Proposed Next Steps

1. The EPO will finalize Survey # 1. Surveys # 2 and # 3 are final. Will seek signatures on the cover letter to health professionals for Survey # 3 from Yakima and Benton Health Districts.
2. Patricia Newhouse will present Spanish-language informational documents to ESL class, obtain feedback and report back to the EPO. Patricia will report back to EPO on student

feedback regarding the informational materials. Patricia also volunteered to use her ESL class as training and pilot group for GWMA informational materials.

Next meeting of the EPO is Wednesday, May 1, 2013 at 1:30 p.m., Yakima County Courthouse Fourth Floor, room 419. The call in number for conference call is (509) 574-2353. PIN - 2353#

EDUCATION & PUBLIC OUTREACH Working Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

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

Meetings/Calls Dates

Meeting: Wednesday, May 1, 2013 1:30 PM - 3:30 PM

Participants

Andres Cervantes (DOH), Joye Redfield-Wilder (Ecology), Patricia Newhouse (Public); Dean Effler - via phone (Public), Jean Mendoza – via phone (Friends of Toppenish Creek), Gretchen Stewart - via phone (EPA), Rachel Little - via phone (Benton Conservation District); Lisa Freund and Don Gatchalian (Yakima County)

Key Discussion Points

I. Surveys (1. High Risk Well Users; 2. Public Informational Questionnaire and 3. Health Care Professional Questionnaire)

1. High Risk Well User survey:

Need to finalize agreement(s) with the Benton Franklin and Yakima health districts for Survey contractors. Report back to GWAC at its May 16, 2013 meeting.

Work with Data Collection workgroup to identify Survey target areas (data gap areas)

Identify how potential Survey households will be approached.

Ensure training/messaging is provided to contract surveyors (Benton and Yakima health district employees) prior to Survey's launch.

2. Public Informational Questionnaire:

Brainstormed outreach methods for questionnaire. Matrix will be developed to identify potential groups, who will make contact with them and when.

3. All Surveys:

Obtain Spanish translation

Create cover page/talking points for each survey

Resources Requested

List of GWAC members' community group/organization contacts (e.g., Rotary, church groups, volunteer boards). Requesting GWAC members make initial contact with their respective groups to assist EPO's outreach.

Recommendations for GWAC

Deliverables/Products Status

1. Surveys - 1. High Risk Well Users. Approved by GWAC at its April 2013 meeting. EPO has subsequently received a request from the Data Collection Workgroup to incorporate two additional questions. Edits underway.
2. Public Informational Questionnaire and 3. Health Professional Survey. Approved by GWAC at its April 2013 meeting. Both need introductions explaining the goal/purpose of the surveys.
3. GWMA Web links - related agency Web links have been reviewed and organized. Requesting GWAC approval of proposed links. Approved during March 21st GWAC meeting.
4. Letter to health professionals - Approved at March 21st GWAC meeting. Needs signatures and logos.
5. New mother brochure and attachments - text needs to be reformatted for brochure.

Proposed Next Steps

1. Finalize interlocal agreements for Survey #1 (Don Gatchalian)
2. Translate surveys into Spanish (Andy Cervantes, lead; Patricia Newhouse will review)
3. Contact YVCC and Heritage College about student involvement in outreach/surveys (Lisa Freund)
4. Obtain signatures on the cover letter to health professionals for Survey # 3 from Yakima and Benton Health Districts. Create header for letter that incorporates the health district and GWAC logos. (?)
5. Create and complete the outreach matrix and begin contacting community groups to gauge interest/opportunities for outreach. (Joye Redfield Wilder, Patricia Newhouse, Gretchen Stewart,)
6. Create cover page for each survey to include goal/purpose, key messages (Andy Cervantes, Jean Mendoza, Dean Effler)
7. Obtain Ecology's Well Route contact and send to Ali Sedighi. (Note: Joye Redfield Wilder provided contact: Avery Richardson)

Next meeting of the EPO is Wednesday, June 5, 2013 at 1:30 p.m., Yakima County Courthouse Fourth Floor, room 419. The call in number for conference call is (509) 574-2353. PIN - 2353#

EDUCATION & PUBLIC OUTREACH Working Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

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

Meetings/Calls Dates

Meeting: Wednesday, June 5, 2013 1:30 PM - 3:30 PM

Participants

Andres Cervantes (DOH), Joye Redfield-Wilder (Ecology), Patricia Newhouse (Public); Gretchen Stewart - via phone (EPA), Rachel Little - via phone (Benton Conservation District); and Lisa Freund (Yakima County)

Key Discussion Points

I. Surveys (1. High Risk Well Users; 2. Public Informational Questionnaire and 3. Health Care Professional Questionnaire)

1. High Risk Well User survey:

Status: waiting on the County's and Yakima Health District's (HD) final approval of the interlocal agreement for HD to administer the surveys. Pending any issues, County Commission will approve the agreement at its June 25, 2013 agenda meeting.

2. Public Informational Questionnaire:

Reviewed Heritage University's proposal to conduct the surveys door-to-door. (YVCC declined to submit a proposal)

Reviewed and finalized the questionnaire cover letter.

II. Spanish-Language Translation Discussion

Update on Survey translation (Andy Cervantes)

Member request for GWAC meeting summary translation (TABLED- requestor was absent)

III. Outreach opportunities

Joye Redfield Wilder discussed Ecology's upcoming contract with State Commission on Hispanic Affairs (Spanish-language programming; nitrates a possible topic) seeking coordinated participation with the GWAC and State Department of Health.

Outreach Matrix status

IV. May 16, 2013 EPA presentation

Andy Cervantes reviewed EPA data; can EPA provide more specific information on testing locations? Gretchen Stewart will coordinate with EPA staff to determine if information can be shared.

Resources Requested

\$5300 for an agreement with Heritage University to conduct Survey #2-Public Questionnaire-door-to-door.

A list of addresses/areas of data gaps from Data Collection and EPA for purposes of conducting Survey #2.

List of GWAC members' community group/organization contacts (e.g., Rotary, church groups, volunteer boards). Requesting GWAC members make initial contact with their respective groups to assist EPO's outreach.

Recommendations for GWAC

1. Enter into agreement with Heritage University for \$5300 to conduct 120-160 Survey #2-Public Questionnaires - door-to-door in high nitrate areas.
2. Advise the GWAC that the Benton-Franklin and Yakima County Health Districts will separately send the healthcare provider letter to their own constituencies. (GWAC approved joint letter in March; given uncertainty of Benton County GWMA status, EPO is recommending separate letters so Yakima County can proceed with dissemination in a timely manner.)
3. Participate in the Commission on Hispanic Affairs/Ecology Spanish-language radio program.

Deliverables/Products Status

Survey - 1. High Risk Well Users. Status: Waiting for County Commission approval of Agreement with Yakima Health District - (June 25, 2013 Commission agenda meeting).

- Survey - 2. Public Questionnaire. Status: Pursue Interlocal Agreement with Heritage University. Requesting Data Collection workgroup, with EPA input, to identify and forward **specific addresses for the survey to the EPO by June 14**. Conduct surveys both door-to-door and at community events.

Survey - 3. Advising the GWAC that the Benton-Franklin and Yakima County health districts will distribute the healthcare provider letters under separate cover. Pending signatures, letters are ready to be distributed.

GWMA Web site - ongoing meeting calendar is now available for viewing. A workgroup page with links to each working group is also available (<http://www.yakimacounty.us/gwma/>).

Proposed Next Steps

Survey #2

1. **By June 6:** Coordinate EPA/Data Collection Discussion. Request Data Collection group and EPA to identify specific addresses/areas for Survey #2-Public Questionnaire. (**Gretchen Stewart, Andy Cervantes**)

By June 14: Obtain Survey addresses/areas from Data Collection/EPA (**Andy Cervantes, Gretchen Stewart**)

By June 21: Pursue and finalize Interlocal agreement with Heritage College (**Lisa Freund**)

Provide Survey training to students

2. **By June 14:** Complete the survey translations (**Andy Cervantes**, lead; Patricia Newhouse will review)
3. **By June 14:** Complete the cover letters (goals, purpose, key messages) for surveys #1 and #3 (**Andy Cervantes, Dean Effler**)
4. **By June 25:** Finalize Yakima County Health District interlocal agreement for Survey #1 (**Don Gatchalian**)
5. Obtain signatures on the cover letter(s) to health professionals for Survey # 3 from Yakima and Benton Health Districts. (?)
6. Create and obtain GWAC input on the outreach matrix. Begin contacting community groups to gauge interest/opportunities for outreach. (**Joye Redfield Wilder, Patricia Newhouse, Gretchen Stewart, Lisa Freund**)
7. **by August 7:** review personal calendars to determine if there is another day/time option for the EPO's regularly scheduled monthly meeting, or maintain the status quo. (**All members**)

Next regularly scheduled meeting of the EPO will be **Wednesday, *August 7, 2013** at 1:30 p.m., Yakima County Courthouse Fourth Floor, room 419. The call in number for conference call is (509) 574-2353. PIN - 2353#

**As of this writing, no July meeting is scheduled.*

Attachment B

Benton County Request to Withdraw

Ecology's Acceptance of Benton County's Request to Withdraw

Jerome Delvin
District 1

Shon Small
District 2

James Beaver
District 3

**Board of County Commissioners
BENTON COUNTY**

David Sparks
County Administrator

Loretta Smith Kelty
Deputy County Administrator

Yakima County
Surface Water Division
Rec'd

APR 11 2013

Scan ☒ Email ☒ File ☒ Other ☐



09 April 2013

Sanjay Barik
Water Quality Program – Central Region Office
Washington Department of Ecology
15 West Yakima Avenue – Suite 200
Yakima, Washington 98902-3452

Re: Lower Yakima Valley Groundwater Management Area

Dear Mr. Barik:

Please accept this letter as Benton County's formal request to withdraw from the Lower Yakima Valley Groundwater Management Area (GWMA). Benton County's Intent is to petition for the formation of a new groundwater management area inclusive of all of Benton County.

Assessing our participation with the GWMA to this point, we have concerns about the functionality of the Advisory Committee, as well as the amount of active representation on the Committee afforded directly to Benton County interests. Moreover, it is our desire to address groundwater issues on a countywide basis. The existing GWMA addresses only the Yakima River Basin to Benton City, but we also want to examine the southern and eastern portions of Benton County (inclusive of Water Resources Inventory Areas 31, 37, & 40), as these are also areas of well-sourced withdrawals, intensive agricultural uses, and multiple wells with documented nitrate levels exceeding Safe Drinking Water Act standards.

We will be submitting a petition to request the creation of a new groundwater management area for Benton County in the near future, and look forward to working with your office to establish an administrative structure, budget, and funding for the new GWMA.

Sincerely,

BOARD OF COUNTY COMMISSIONERS


Shon Small, Chairman


Jerome Delvin


James Beaver



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

ORDER- THE LOWER YAKIMA VALLEY
GROUNDWATER MANAGEMENT AREA
DOCKET #8861-A

June 7, 2013

Benton County Board of Commissioners
PO Box 190
Prosser, WA 99350

RE: Benton County Request to Withdraw from the Lower Yakima Valley Groundwater
Management Area

Dear Commissioners Small, Delvin, and Beaver:

I have carefully considered your letter received on April 10, 2013, by Ecology's Central Regional Office requesting that Benton County be allowed to formally withdraw from the Lower Yakima Valley Groundwater Management Area (LYV-GWMA). Ecology is disappointed with Benton County's proposal to withdraw from this critically important work. As such, I spoke to Commissioner Delvin on Friday, May 17, 2013, to better understand the county's concerns with continued participation. During our conversation, Commissioner Delvin suggested that Benton County might reconsider its request to withdraw if all of Benton County was included in the LYV-GWMA.

After consulting with our staff and Yakima County, the "lead agency" appointed to undertake the activities necessary for the development of a groundwater management area, we have decided that we cannot agree to include the entire Benton County jurisdiction under the LYV-GWMA. To achieve progress in addressing high nitrates in groundwater in the Lower Yakima Valley, we must continue to focus our efforts and resources to the task at hand and support Yakima County's efforts in the Lower Yakima Valley.

It is our utmost desire to achieve meaningful outcomes toward addressing groundwater pollution affecting a large community of people in the Lower Yakima watershed, including as you point out, 45 percent of the existing LYV-GWMA area lying in Benton County. We strongly believe that groundwater nitrate contamination issues can be solved most efficiently and effectively by addressing the Lower Yakima Valley as a whole irrespective of political boundaries.



We respect the reasons and rationale provided in the referenced letter and subsequent conversations between Ecology and Benton County. In light of other known high nitrate groundwater contamination in Benton County, we appreciate the county's desire to petition for a county-wide Groundwater Management Area to address those areas outside of the Yakima Valley.

Already, Ecology is evaluating other areas in the state where high nitrate or other contaminants are affecting drinking water as we set priorities on our limited staff and budget resources. We must be prudent and note that funding is not assured for any new GWMA in the state and generally comes through the legislative process subject to other competing demands.

Nevertheless, your request to withdrawal from the LYV-GWMA is hereby granted.

Accordingly, the LYV-GWMA Advisory Board position(s) that represent Benton County, (Benton County Commission, Benton Conservation District, and Benton-Franklin County Health District) shall be withdrawn from active membership of the Advisory Board. In addition, the LYV-GWMA boundary designation shall be modified to remove Benton County in accordance with WAC 173-100-070 and in consultation with Yakima County as lead agency.

In the meantime, I recommend that Benton County remain engaged and communicate regularly with the LYV-GWMA and Yakima County as they continue to address nitrate contamination in the Lower Yakima Valley that exist in both Yakima and Benton Counties.

If you have any questions or concerns, please feel free to contact me or Tom Tebb, Ecology's Central Regional Director, at (509) 574-3989.

Sincerely,



Maia D. Bellon
Director

cc: Yakima County Commissioner Rand Elliott, LYV-GWMA Chair
Senator Jim Honeyford – 15th District
Senator Mike Hewitt – 16th District
Representative Terry Nealy – 16th District
Representative Maureen Walsh – 16th District
Senator Sharon Brown – 8th District
Representative Larry Haler – 8th District
Representative Brad Klippert – 8th District
Tom Tebb, Ecology – CRO
Vern Redifer, Director, Yakima County Public Services
Rick Dawson-Franklin Health District
Mark Nielson, Benton Conservation District

YOUR RIGHT TO APPEAL

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do both of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel Road SW STE 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

Attachment C

Contract with HDR, Inc

Yakima County Health District Agreement

Heritage University Agreement

EnviroIssues Contract Extension

FOR PROFESSIONAL SERVICES

A/E CONSULTANT AGREEMENT

This *Consultant Agreement for Professional Services* ("Agreement") is entered into as of June 26 2013 between Yakima County Public Services, of 128th North 2nd Street, Room 408 Courthouse, Yakima, Washington 98901-2614 ("Client"), and HDR Engineering, Inc. of 2805 Saint Andrews Loop, Suite A, Pasco, Washington 99301-6121 ("Consultant"). The parties agree as follows:

I. PROJECT. Client, as administrator for the Lower Yakima Valley Groundwater Advisory Committee ("GWAC"), desires to engage the services of Consultant to perform certain consulting, design, advisory, and/or surveying services for the Consulting Services for the Lower Yakima Valley Groundwater Management Area ("GWMA") Program ("Project").

II. OBJECTIVES AND SCOPE OF SERVICES. Consultant shall perform the following services for the Project Nitrate Regulatory Framework and Best Management Practices and Initial Characterization Assessment for the Lower Yakima Valley GWAC ("Services"), as described in the *Scope of Services* attached to this *Agreement* as *Exhibit "A"*.


III. PAYMENT. Client shall pay Consultant as compensation for the Services at hourly rates according to the *Schedule of Billing Rates* attached to this *Agreement* as *Exhibit "B"*, plus expenses, up to an amount not to exceed two-hundred sixty-six thousand, four hundred and two dollars (\$266,402.00).

IV. STANDARD PROVISIONS. The standard provisions for this *Agreement* are on the next page.

V. ADDITIONAL PROVISIONS. The following additional provisions shall apply to this *Agreement*:

HDR Engineering, Inc. shall transfer all digital and paper materials, including, without limitations, files, records, and maps, regarding the Project to Client or Client's designee within 30 days of termination of this Agreement under this Additional Provision. Transfer of materials does not include proprietary records or property.

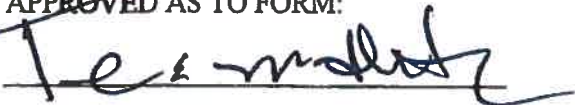
CONTRACTOR / CONSULTANT

By 
Title Senior Vice President

Date June 19, 2013



Attest: Tiera L. Girard
Clerk of the Board

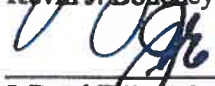
APPROVED AS TO FORM:



BOARD OF YAKIMA COUNTY COMMISSIONERS


Michael D. Leita, Chairman


Kevin J. Bonchey, Commissioner


J. Rand Elliott, Commissioner
*Constituting the Board of County Commissioners
for Yakima County, Washington*

BOCC298-2013
June 25, 2013



STANDARD PROVISIONS**1. Payments.**

1.1 Monthly Invoices. Monthly invoices shall be issued for all Services performed under this *Agreement*.

1.1.1 Lump Sum. A lump sum contract is based on the percentage of work completed; and the contract amount may be increased for any unanticipated event, which is beyond Consultant's control and which increases the level of services required to complete the Project.

1.1.2 Time and Materials. A time and materials contract is based on the hourly rates set forth in Consultant's prevailing *Schedule of Billing Rates*, which may be amended from time to time, plus expenses.

1.1.3 Retainers. Retainers are applied toward the final invoice.

1.2 Expenses. Expenses include all out-of-pocket costs for technical, professional and clerical services and all costs for transportation; meals and lodging; laboratory tests and analyses; telephone; printing, copying, and binding. County shall pay all governmental fees, permits and charges.

1.3 Payment Date. Invoices are due and payable within thirty (30) days after the date of the invoice.

1.4 Past Due Accounts. Any invoice not paid within thirty (30) days after the date of the invoice shall bear interest at an annual rate of 18% on the daily outstanding balances.

1.5 Stop Work. Consultant may stop work on the Project and withhold delivery of all work product until County's obligations to Consultant are paid in full.

1.6 Disputes. Invoices shall outline the Services performed, and the charges and expenses for such Services. Disputes regarding an invoice shall be forwarded in writing to Consultant within twenty (20) days of the date of the invoice. If County does not dispute the invoice within the prescribed time period, the invoice shall be deemed to be accurate.

1.7 Estimated Fees. Estimated fees for Services to be performed are only estimates, and such fees may not accurately reflect the ultimate charges to County.

2. Notice to Proceed. This *Agreement* constitutes County's notice to proceed with the Services.

3. Subconsultants. Consultant may retain subconsultants to assist Consultant in performing the Services.

4. Extra Work. If County desires work to be performed beyond the Services described in this *Agreement* ("*Extra Work*"), County must authorize the *Extra Work* by signing a written supplement. If a written supplement is impracticable, then a written or electronic statement authorizing the *Extra Work* is required. Payment for all *Extra Work* shall be on a time and materials basis.

5. Safety and Construction. Consultant is not responsible for construction means, methods, techniques, sequences of procedures, or safety precautions and programs related to the work performed by contractors, subcontractors, or anyone else associated with the Project.

6. Cost Estimates. Consultant does not warrant construction cost estimates.

7. Use of Documents. County shall retain ownership to all documents and work products under this *Agreement*, and Consultant or other entities may only use such documents and work product in connection with the Project.

8. Professional Standards. Consultant shall perform the Services according to the standard of care ordinarily exercised under similar conditions by similarly qualified professionals who are currently practicing in the area where Consultant is located. Consultant makes no express or implied warranties.

9. Indemnity. The Contractor's Mutually Negotiated Waiver of Employer's Immunity under Title 51 RCW agrees, intends and promises

that its duty to defend, indemnify, and hold harmless Yakima County, its officers, employees, agents, volunteers, and insurers under this *Agreement* shall be fully effective regardless of any provision to the contrary in Title 51 RCW, Washington's Industrial Insurance Act. Accordingly, based upon mutual negotiation between the Contractor and Yakima County, Contractor hereby expressly waives its immunity from tort liability under Title 51 RCW, but only to the extent such legal rights under this *Agreement* or other applicable law to be fully defended, indemnified, and held harmless by Contractor from claims or suits by Contractor's workers or employees, or any assignee of or anyone subrogated to any of their rights or their interests for injuries or losses experienced by Contractor's workers or employees caused by the acts or omissions of Contractor or by the acts or omissions of anyone directly or indirectly employed by or under contracted with Contractor or anyone for whose acts Contractor might be liable absent the provisions to Title 51 RCW.

10. Liability Insurance. The Consultant shall have liability insurance with coverage in the sum of \$2,000,000 and shall provide proof of insurance if requested. The coverage provided to Yakima County, its officers, employees, agents, volunteers, and insurers as Additional Insureds shall be primary and not contributory to any other insurance that may be available to such Additional Insureds.

11. Limitation of Liability. Consultant's liability for its acts, errors or omissions is limited to the total fee for the Services performed under this *Agreement*. All actions or proceedings are barred three years after County knew or should have known of any claim or damage, or five years after substantial completion of the Services, whichever occurs first.

12. Alternative Dispute Resolution. In the event that any dispute shall arise as to the interpretation of this agreement, or in the event of a notice of default as to whether such default does constitute a breach of the contract, and if the parties hereto cannot mutually settle such differences, then the parties shall first pursue mediation as a means to resolve the dispute. If the afore mentioned methods are either not successful then any dispute relating to this *Agreement* shall be decided in the courts of Yakima County, in accordance with the laws of Washington. If both parties consent in writing, other available means of dispute resolution may be implemented.

13. Attorney's Fees. If any legal action or proceeding is commenced relating to this *Agreement*, the prevailing party is entitled to recover its reasonable attorneys' fees and costs.

14. Termination. This *Agreement* may be terminated upon fifteen (15) days written notice to the other party. In such event, County shall pay Consultant for all Services performed, under the scope of work and for all related expenses incurred prior to the effective date of termination.

15. Governing Law and Venue. This *Agreement* shall be governed by the laws of the state of Washington. Venue for any action or proceeding shall be in the Superior Court of Yakima County.

16. Survival. The provisions of this *Agreement* shall survive its termination and completion of Services.

17. Complete Agreement. This *Agreement* constitutes the complete and final understanding between the parties and may be amended by the prior written consent of both parties.

18. Nondiscrimination. The Consultant agrees that it shall not discriminate against any person on the grounds of race, creed, color, religion, national origin, sex, sexual orientation, age, marital status, political affiliation or belief, or the presence of any sensory, mental or physical handicap in violation of the Washington State Law Against Discrimination (RCW chapter 49.60) or the Americans with Disabilities Act (42 U.S.C. 12101 et seq.) or any other applicable state, federal or local law, rule or regulation.

Consulting Services for the Lower Yakima Valley GWAC

Scope of Services

June 2013



**2805 Saint Andrews Loop
Suite A
Pasco, WA 99301-6121
(509) 546-2040**

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EXHIBIT A

SCOPE OF SERVICES

Background

The Lower Yakima Valley Groundwater Advisory Committee (GWAC) through Yakima County selected HDR Engineering and Pacific Groundwater Group (PGG) to assist them in developing Nitrate Regulatory Framework and Best Management Practices (lead by HDR) and Initial Characterization Assessment (lead by PGG). The work will support the GWAC in working toward the goal of reducing nitrate in groundwater within the Lower Yakima Valley Groundwater Management Area (GWMA) to concentrations that are below state drinking water standards.

The Scope of Services presented below presents tasks that address the GWAC's request for proposal requirements and also reflects the results of discussion on project approach with the GWAC during our June 4, 2013 interview.

The scope assumes that the GWAC will provide a single point of contact for each task.

Task 1 – Project Management

Objective

The purpose of this task is to monitor, control and adjust scope, schedule, and budget as well as provide monthly status reporting, accounting, and invoicing.

HDR Services

1. Prepare a Project Management Plan (Project Guide) outlining the project scope, team organization, schedule, and communications information.
2. Coordinate and manage the project team.
3. Subcontract with and manage project subconsultants, Pacific Groundwater Group, Clint Shock, and Bob Stevens.
4. Prepare monthly status reports describing the following:
 - A. Services completed during the month
 - B. Services planned for the next month
 - C. Needs for additional information
 - D. Scope/schedule/budget issues
 - E. Schedule update and financial status summary
5. Prepare monthly invoices formatted in accordance with contract terms.
6. Project Manager will attend monthly project management meetings with the client Project Manager to review project scope, schedule, and budget issues.

Client Responsibilities

1. Review monthly status reports and provide timely input on any issues/concerns
2. Timely processing and payment of invoices.

-
3. Review and process contract change requests and amendments, if needed.

Assumptions

1. HDR's budget is based on 9 month project schedule.
2. One project management phone call will be held per month with 30 minutes of project manager time will be required.
3. Invoices will be HDR standard invoice format.
4. Expense backup will not be provided with invoices but will be available for review at HDR.
5. Project management meetings may conducted by telephone and no travel is required.

Deliverables

1. Scope of services, schedule (Gantt chart or project milestones), and budget (PDF file and two copies).
2. Subconsultant subcontracts.
3. Monthly reports and invoices (one copy with invoice can be mailed or e-mailed PDF file)
4. Monthly project schedule and budget updates.

Task 2 – Regulatory Review

Objective

Identify local, state, and federal regulations, policy, and guidance on control and management of nitrates for groundwater protection.

HDR Services

1. Perform a review of local, state, and federal regulations, policy, and guidance on control and management of nitrates for groundwater protection. The starting point of the review will be the Table 3: "Nitrate and Bacteria Sources and Authorities to Address Them" from the Lower Yakima Valley Groundwater Quality Preliminary Assessment and Recommendation Document, Ecology 10-10-009.
2. Prepare a draft and final Regulatory Review technical memorandum (Technical Memorandum #1) that summarizes the regulatory framework with focus on groundwater nitrate and regulations, policy, and guidance on nitrogen management. A draft of this technical memorandum will be submitted to the GWAC and a predetermined selection of resource agencies, and other stakeholders for their review. Once comments are received, the document will be updated and finalized.

Client Responsibilities

1. Respond to questions or comments on inquiries.
2. Review deliverables and return with one set of composite comments to HDR within two weeks of transmittal.

Assumptions

1. Deliverables will be provided as PDF files and distributed by email.

-
2. GWAC members reviewing the deliverables will review and submit one set of consolidated comments on deliverables transmitted by HDR within two weeks of the date of transmittal.
 3. The GWAC will provide input on identifying resource agencies and other stakeholders to provide comments on the draft document. These agencies and other stakeholders will be requested to provide input within the two week review timeframe.
 4. There will be one review and response to comments to the draft Regulatory Review technical memorandum.
 5. There will be no meetings or travel.

Deliverables

1. Draft Regulatory Review technical memorandum (Draft Technical Memorandum #1).
2. Final Regulatory Review technical memorandum (Technical Memorandum #1).

Task 3 – Develop BMP Database

Objective

Identify applicable Best Management Practices (BMPs) and create database of those BMPs.

HDR Services

1. Conduct a web-based BMP search from local, state, and federal agencies and conduct up to five interviews with key persons involved with BMP development, research, and implementation. HDR will identify BMPs that focus on nitrogen management that result in groundwater protection that includes: nutrient management, crop management, irrigation management, soil management, and groundwater management.
2. Compile BMPs identified in step 1 above into database of BMPs to include the following information: BMP type, description, references, effectiveness, use in GWMA, and relevant information on effectiveness.
3. Develop the database in Microsoft Access and provide availability to the GWAC.
4. Produce a summary of the database for distribution to GWAC members for review.
5. Collect comments provided by GWAC members for subsequent use in future tasks.

Client Responsibilities

1. Respond to questions or comments on inquiries.
2. Review deliverables and return with one set of composite comments to HDR within two weeks of transmittal.

Assumptions

1. Deliverables for review will be provided as PDF files and distributed by email. The Microsoft Access database files will be provided by email.
2. The database will be developed in Microsoft Access and will be made available to the GWAC. However, for database control purposes, HDR will maintain the database until completion of the Scope of Services, at which time the database will be provided to the GWAC.

-
3. GWAC members reviewing the deliverables will review and submit one set of consolidated comments on the BMP Database Summary transmitted by HDR within two weeks of the date of transmittal.
 4. No travel or meetings will be required for this task.

Deliverables

1. Initial BMP Database Summary in PDF.
2. Microsoft Access database following completion of Scope of Services.

Task 4 – BMP Effectiveness Evaluation

Objective

Using the BMP database developed in Task 3, develop the database further to include data to support an effectiveness evaluation.

HDR Services

1. Perform a technical effectiveness evaluation using the BMP database. The technical criteria are anticipated to include the following:
 - A. GWMA goals
 - B. Type and watershed location
 - C. Current level of implementation
 - D. Capital and O&M costs
 - E. Implementation and maintenance
 - F. Monitoring
 - G. Limitations (impacts)
2. Prepare BMP Technical Effectiveness Evaluation Summary technical memorandum (Technical Memorandum #2). Distribute the memorandum to the GWAC for preparation of the workshop (described below). A draft of the technical memorandum will be distributed to GWAC members for review and comment and a final will be issued after response to comments.
3. Conduct a workshop (Workshop #1) to collect regulatory, economic, and social acceptance input from GWAC committee members that focuses on the following aspects:
 - A. How does BMP fit into current regulatory framework?
 - B. Implementation
 - C. Acceptability
 - D. Implementation of any technical or financial assistance needed

Client Responsibilities

1. Respond to questions or comments on inquiries.
2. Schedule, arrange a location, and participate in a workshop (Workshop #1).

-
3. Review deliverables and return with one set of composite comments to HDR within two weeks of transmittal.

Assumptions

1. BMP Technical Effectiveness Evaluation Summary technical memorandum will be delivered as PDF files and distributed by email. This will be distributed prior to the workshop and will be discussed during the workshop.
2. There will be one review and response to comments to the draft "BMP Technical Effectiveness Evaluation Summary" technical memorandum.
3. Bob Stevens will provide senior technical review of the technical effectiveness evaluation.
4. Travel costs for Mike Murray, Jay Decker, and a project engineering to attend the workshop are included.

Deliverables

1. Draft BMP Technical Effectiveness Evaluation Summary technical memorandum (Technical Memorandum #2).
2. Final "BMP Technical Effectiveness Evaluation Summary" technical memorandum.

Task 5 – Reports and Presentations

Objective

Compile the technical information developed in Tasks 2, 3, and 4 in a final report and presentations.

HDR Services

1. Compile the information in the Regulatory Review technical memorandum (Technical Memorandum #1), BMP Technical Effectiveness Evaluation technical memorandum (Technical Memorandum #2), and GWAC input from BMP acceptability workshop (Workshop #1) into a draft final report.
2. Provide draft final report to GWAC for review and conduct a second workshop (Workshop #2) to: (a) present findings, (b) answer questions, and (c) prioritize BMPs of GWAC interest.
3. Update the draft final report based on the secondary workshop. Incorporate prioritization of BMPs of GWAC interest.
4. Provide revised draft final report to the GWAC for review. Obtain comments from GWAC and finalize the report for submittal.
5. Prepare and present a summary of the BMPs of interest to the GWAC.

Client Responsibilities

1. Respond to questions or comments on inquiries.
2. Schedule, arrange a location, and participate in a second workshop.
3. Schedule and arrange a location for the BMPs of GWAC interest presentation.
4. Review deliverables and return one set of composite comments to HDR within two weeks of each transmittal.

Assumptions

1. Deliverables will be provided as PDF files and distributed by email.
2. GWAC members will review and submit one set of consolidated comments within two weeks of the date of each transmittal.
3. There will be one review and response to comments to the first draft final report and one review and response to comments after the workshop and incorporation of the prioritization of BMPs of GWAC interest into the final report.
4. The presentation of BMPs of GWAC interest shall be a single event twenty to thirty minute presentation with MS PowerPoint slides.
5. Clint Shock will provide senior technical review of the final report.
6. Travel costs for Mike Murray, Jay Decker, and a project engineering to attend the workshop are included.
7. Travel costs for Mike Murray and Jay Decker to attend the final presentation are included.

Deliverables

1. Draft final report prior to the workshop.
2. Second draft final report after the workshop that incorporates prioritization of BMPs of GWAC interest.
3. Final report.
4. Presentation of BMPs of GWAC interest.

Task 6 – GWMA Meetings and Workshops

Objective

Provide a mechanism for consultant team members to participate in additional meetings and/or workshops as determined to be in the best interest of furthering the objectives of the GWAC.

HDR Services

1. Attend and participate in meetings or workshops as authorized.

Client Responsibilities

1. Respond to questions or comments on inquiries.
2. Provide written authorization to attend meetings or workshops under this optional task.

Assumptions

1. The authorization to attend and participate meetings or workshops includes travel time and expenses and labor follow up on action times.

Deliverables

NA

Task 7 – Initial Characterization Assessment

This scope of services will be performed by Pacific Groundwater Group (PGG) as subconsultant. PGG's scope of services is presented in Attachment 1.

Task 8 – BMP Implementation Assistance and Monitoring

This task will be defined later and amended to the contract at the discretion of the GWAC and Yakima County.

Task 9 – Monitoring Plan Implementation

This task will be defined later and amended to the contract at the discretion of the GWAC and Yakima County.

Schedule

The schedule below is based upon an assumed notice proceed date no later June 26, 2013.

Task	Activity Description	Completion Date
2	Draft Regulatory Review Technical Memorandum (Technical Memorandum #1)	7/19/13
3	Initial BMP Database Summary	8/30/13
4	Draft BMP Technical Effectiveness Evaluation Summary (Technical Memorandum #2)	9/27/13
5	Draft Final Report	11/22/13
6	For Task Detail See Attachment 1: Pacific Groundwater Group Initial Characterization Assessment Scope of Services	4/15/14

Compensation

The estimated total contract amount to complete the professional services identified in this Scope of Services is two-hundred fifteen thousand, one hundred and nine dollars (\$215,109.00). If the optional tasks described in Attachment 1 are included, the estimated total contract amount to complete the professional services identified in this Scope of Services is two-hundred sixty-six thousand, four hundred and two dollars (\$266,402.00). A summary of the costs by task is presented below.

Scope Tasks	HDR Labor	Expenses	Subtotal
Base Scope Tasks:			
Task 1 - Project Management	\$8,952	\$796	\$9,748
Task 2 - Regulatory Review	\$6,081	\$465	\$6,546
Task 3 - Develop BMP Database	\$11,374	\$610	\$11,984
Task 4 - BMP Effectiveness Evaluation	\$20,305	\$3,968	\$24,273
Task 5 - Reports and Presentations	\$25,333	\$5,212	\$30,545
Task 6 - GWMA Meetings and Workshops	\$8,000	\$2,000	\$10,000
Task 7 - Initial Characterization Assessment (PGG)	\$2,232	\$119,781	\$122,013
Task 8 - BMP Implementation Assistance and Monitoring (TBD)	\$ -	\$ -	\$ -
Task 9 - Monitoring Plan Implementation (TBD)	\$ -	\$ -	\$ -
Base Scope Total	\$82,277	\$132,832	\$215,109
Optional Task 10 – Communication, Source Mapping, Deep Sampling and Data Publishing Assessment (See description of Tasks 4a, 4b, 4c, and 4d in Attachment 1)	\$ -	\$51,293	\$51,293
Base Scope and Optional Tasks Total	\$82,277	\$184,125	\$266,402

The cost of PGG's base scope tasks described in Attachment 1 is presented below.

PGG Base Scope Tasks	Subtotal
Task 1 - Develop Database and QA/QC Plan	\$55,288
Task 2 - Evaluate Historic Data and Develop Monitoring Plan	\$54,072
Task 3 - Project Management	\$10,421
PGG Base Scope Total	\$119,781

Professional services rendered in connection with this scope will be billed on a Time and Materials basis to the estimated total contract amount in accordance with the terms and conditions outlined in the signed Agreement.

Exhibit B – Schedule of Billing Rates provides a breakdown of the hourly billing rates:

**Attachment 1:
Pacific Groundwater Group
Initial Characterization Assessment
Scope of Services**

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PGG SCOPE OF SERVICES

Task 1 – Develop Database and QA/QC Plan

Task 1a – Core Data and QA/QC requirements

Objective

Develop core data and QA/QC requirements for sampling stations (wells and drains) and water quality parameters.

Services

1. Select station location information, monitoring parameters, and laboratory analytical methods for inclusion in database. Include recommendations for changes to database design.
2. Produce Draft Core Data recommendations memo and submit to GWAC
3. Consider GWAC comments and submit final memo
4. Review QA/QC used by EPA in work under Dairy Agreed Order
5. Review Ecology requirements and coordinate with Ecology
6. Produce Draft QA/QC appendix to Work Plan and submit to GWAC, will include QA relating to stations and analytical methods
7. Consider GWAC comments and submit final memo

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.
2. The County will provide all available analytical data
3. GWAC will resolve conflicting comments and provide one set of composite comments for the draft Core Data recommendations memo and QA/QC appendix within two weeks of submittal

Assumptions

1. All available data is in MS Access or Excel format
2. Deliverables will be delivered as PDF files and distributed by email.
3. GWAC comments on draft deliverables are provided to PGG within two weeks of transmittal.
4. There will be one review and response to comments to the draft data elements memo

Deliverables

1. Draft and final data elements memo and QA/QC requirements appendix.

Task 1b – Compare data to QA requirements and obtain additional data

Objective

Compare existing sampling station and water quality entries to core data and QA/QC requirements, obtain additional existing data to supplement the database.

Services

1. Locate and enter core data and QA/QC info into database where missing, as possible using existing data
2. Compare entries to QA/QC requirements and flag accordingly
3. Select stations requiring field verification. Link stations to EPO, EPA, and County contacts, as available.
4. Develop Draft Field Verification Work Plan and cost estimate.
5. Consider GWAC comments, submit final Work Plan, and address possible budget issue for field verification.

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.
2. GWAC will resolve conflicting comments, and provide one set of composite comments for the Draft Field Verification Work Plan within two weeks of submittal

Assumptions

1. Deliverables will be delivered as PDF files and distributed by email.
2. GWAC comments on draft deliverables are provided to PGG within two weeks of transmittal.
3. There will be one review and response to comments to the draft work plan.

Deliverables

1. Updated database identifying station and water quality entries of varying quality and usefulness for future application.
2. Draft and final Field Verification Work Plan and cost estimate.

Task 1c – Conduct field verifications

Objective

Conduct field verifications to evaluate accuracy of database entries for sampling stations.

Note: Budget for this task has not been included in the cost estimate because a cost estimate will be provided as part of Task 1b above.

Services

1. Visit wells and document well location, water quality sampling ports, wellhead conditions.
2. Update database.
3. Prepare draft and field data report.

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.
2. Contact well owners to gain well access within 2 weeks of receiving the final Field Verification Work Plan (Task 1b deliverable).

Assumptions

1. Deliverables will be delivered as PDF files and distributed by email.
2. GWAC comments on draft deliverables are provided to PGG within two weeks of transmittal.
3. There will be one review and response to comments to the draft field data report.

Deliverables

1. Draft and final field data report.

Task 1d – Update Database

Objective

Prepare revised database of wells meeting QA/QC requirements for submittal to Yakima County for inclusion into database.

Services

1. Enter field data collected as part of Task 1c – Field Verification.

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.

Assumptions

1. None.

Deliverables

1. Updated database including data from field verification task.

Task 1e – Report to GWAC

Objective

Provide a summary report of activities to the GWAC.

Services

1. Develop the Task 1 draft and final status report for GWAC.
2. Present the draft report to GWAC for discussion and feedback
3. Consider GWAC comments. Re-evaluate recommendations. Submit final Task 1 report.

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.
2. Resolve conflicting comments and provide one set of composite comments on Task 1 draft status report within two weeks of submittal.

Assumptions

1. Attendance of one person at one GWAC meeting
2. Deliverables will be delivered as PDF files and distributed by email.
3. GWAC comments on draft deliverables are provided to PGG within two weeks of transmittal.
4. There will be one review and response to comments to the draft status report
5. The presentation of the draft report shall be a twenty to thirty minute presentation with MS PowerPoint slides. The presentation will be presented once to the GWAC.

Deliverables

1. Task 1 draft and final status report for GWAC.

Task 2 – Evaluate Historic Data and Develop Monitoring Plan

Task 2a – Perform water quality trend analysis

Objective

Identify areas with trending nitrate concentrations.

Services

1. Develop trend methodology
2. Analyze existing nitrate data for trends
3. Produce draft and final reports on water quality trends

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.
2. Resolve conflicting comments and provide one set of composite comments on draft water quality trend report within two weeks of submittal.

Assumptions

1. Water quality trend analysis will be performed on nitrate data provided by the WDOH.

2. Deliverables will be delivered as PDF files and distributed by email.
3. GWAC comments on draft deliverables are provided to PGG within two weeks of transmittal.
4. There will be one review and response to comments to the draft water quality trend report

Deliverables

1. Draft and final reports on water quality trends.

Task 2b – Identify Data Gaps

Objective

Identify gaps in existing LYV nitrate groundwater data. Identify gaps in areal coverage, coverage by aquifer, and areas where trend data are lacking.

Services

1. Develop procedure for evaluating coverage and confidence in 3D distribution of monitoring stations
2. Identify objectives for future monitoring (BMP effectiveness, trend, hotspot, basin average, health risks, common water supply aquifers, etc)
3. Provide recommendations on new sampling stations to meet objectives
4. Identify a set of monitoring stations for each objective
5. Work with GWAC to develop private property access agreements for monitoring on private and corporate property as necessary
6. Produce draft and final data gaps report

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.
2. Assist in securing access for future sample collection and possible future monitoring well installation.
3. Resolve conflicting comments and provide one set of composite comments on draft data gaps report within two weeks of submittal.

Assumptions

1. Deliverables will be delivered as PDF files and distributed by email.
2. GWAC comments on draft deliverables are provided to PGG within two weeks of transmittal.
3. There will be one review and response to comments to the draft data gaps report.

Deliverables

1. Draft and final reports on gaps in monitoring station coverage and recommended methods to fill gaps.

Task 2c – Develop Monitoring Plan

Objective

Prepare the monitoring plan used to evaluate new BMP effectiveness, trend, hotspot, basin average, health risks, common water supply aquifers, etc.

Services

1. Write draft and final monitoring plans
2. Prepare draft and final monitoring system cost estimates

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.
2. Resolve conflicting comments and provide one set of composite comments on draft monitoring plan within two weeks of submittal.

Assumptions

1. Deliverables will be delivered as PDF files and distributed by email.
2. GWAC comments on draft deliverables are provided to PGG within two weeks of transmittal.
3. There will be one review and response to comments to the draft monitoring plan.

Deliverables

1. Draft and final monitoring plans, draft and final cost estimates.

Task 2d – Report to GWAC

Objective

Provide a summary report of Task 2 activities to the GWAC.

Services

1. Develop the Task 2 draft and final status report for GWAC.
2. Present the draft report to GWAC for discussion and feedback
3. Consider GWAC comments. Re-evaluate recommendations. Submit final report.

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.
2. Resolve conflicting comments and provide one set of composite comments on Task 2 draft status report within two weeks of submittal.

Assumptions

1. Attendance of one person at one GWAC meeting
2. Deliverables will be delivered as PDF files and distributed by email.
3. GWAC comments on draft deliverables are provided to PGG within two weeks of transmittal.
4. There will be one review and response to comments to the draft Task 2 status report
5. The presentation of draft report shall be a twenty to thirty minute presentation with MS PowerPoint slides. The presentation will be presented once to the GWAC.

Deliverables

1. Task 2 draft and final status report for GWAC.
2. Presentation to the GWAC.

Task 3 – Project Management**Objective**

The purpose of this task is to monitor, control and adjust scope, schedule, and budget as well as provide monthly status reporting, accounting, and invoicing.

Services

1. Link with County, EPO, CAFO, Agr, and Muni/Commercial groups
2. Monthly invoicing
3. Input to quarterly progress reports
4. Resolve scope/budget issues as scope evolves

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.

Assumptions

1. The project duration will be 8 months.
2. Expense backup will not be provided with invoices but will be available for review at PGG.

Deliverables

1. Monthly reports and invoices (one copy with invoice can be mailed or e-mailed PDF file)
2. Monthly project schedule and budget updates.

Optional Tasks

The following optional tasks have been identified for the GWAC's consideration to complement the Scope of Services described above. These tasks may be performed independently. Optional tasks may impact project schedule.

Task 4a – Additional GWAC/Data Committee Communication

Objective

Provide additional information to the GWAC in the form of Workshops, attend Data Committee meetings

Services

1. GWAC Workshops on current conditions and monitoring plan
2. Attend GWAC Meetings (2)
3. Attend Data Committee meetings by phone (8)

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.
2. Schedule and arrange a location for the workshops

Assumptions

1. None.

Deliverables

1. Workshops on current conditions and monitoring plan.

Task 4b – Map Land Use Related to Nitrate Sources

Objective

Develop a map of possible nitrate generating land uses to aid in monitoring point selection.

Services

1. Research nitrate generating land uses
2. Produce GIS map

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.
2. Provide land use coverages, permits, maps, and metadata as available for possible nitrate generating land uses.

Assumptions

1. None.

Deliverables

1. GIS coverage of possible nitrate-generating land uses

Task 4c – Deep Soil Sampling Program

Objective

Collect soil samples to measure current deep soil conditions and effectiveness of new BMP implementation.

Services

1. Communicate with Agr group to identify sample locations and access
2. Develop Draft and Final Monitoring Plans
3. Procure access agreements
4. Develop Cost Estimate
5. One Round of Sampling (20 locations assumed for budgeting purposes. May change during development of the monitoring plan)
6. Produce draft and final report on deep soil sampling results.

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.
2. Assist with access agreements
3. Resolve conflicting comments and provide one set of composite comments on draft plan and draft report within two weeks of submittal.

Assumptions

1. Samples will be collected from 10 feet depth or less using a Geoprobe.
2. A maximum of 20 samples will be collected from up to 20 locations.

Deliverables

1. Draft and final monitoring plans.
2. Draft and final report summarizing deep soil sampling event and analytical results.

Task 4d – Data Publishing Assessment

Objective

Evaluate best methods to distribute data to public.

Services

1. Perform evaluation of best methods to distribute data to public. Existing data repositories such as EIM will be investigated, as well as custom data portals.
2. Prepare report to GWAC on findings with associated cost estimates.

Client Responsibilities

1. Identify a single point of contact who is authorized to represent the GWAC for this task.
2. Provide guidance on preferred data publishing method.

Assumptions

1. None.

Deliverables

1. Report on data publishing options and recommendations with associated cost estimates.

Schedule

Task	Activity Description	Completion Date
	Authorization to proceed	7/1/13
1a	Core Data and QA/QC requirements	8/1/13
1b	Compare data to QA and obtain additional data	9/15/13
1c	Conduct field verifications	11/1/13
1d	Prepare revised database	11/15/13
1e	Report to GWAC	11/21/12
2a	Water quality trend analysis	12/15/13
2b	Data gaps	2/1/14
2c	Develop monitoring plan	3/15/14
2d	Report to GWAC	4/15/14
3	Project Management	Ongoing

Exhibit B – Schedule of Billing Rates

HDR Schedule of Billing Rates

Employee Name	Discipline	2013 Billing Rate
Nona Diediker	Managing Principal	\$186.03
Michael Murray	Regulatory & BMP Lead	\$163.40
Teresa Peterson, David Kuhns, Lauren Perreault	Project Engineer	\$98.33
Gudrun Young	Project Controller	\$115.01
Jan McKinniss	Project Assistant	\$58.78
Jay Decker	Project Manager	\$208.66

The above Schedule provides hourly rates for billing and reimbursement of services delivered from inception through January 2014 under this contract. It is agreed that in January 2014 and in January in any successive years, a modification will be issued authorizing a new schedule of Billing Rates for the period January through December of that year. The actual date in January that the new scheduled rates will be effective is yet to be determined.

PGG Schedule of Billing Rates

Employee Name	Discipline	2013 Billing Rate
Steve Swope, Charles Ellingson	Principal	\$192.50
Inger Jackson, Glen Wallace, Dawn Chapel	Sr. Technical	\$132.00
Wayne Rennick, Travis Klaas	Technical	\$110.00
Chris Keener	Support	\$88.00

The above Schedule provides hourly rates for billing and reimbursement of services delivered from inception through January 2014 under this contract. It is agreed that in January 2014 and in January in any successive years, a modification will be issued authorizing a new schedule of Billing Rates for the period January through December of that year. The actual date in January that the new scheduled rates will be effective is yet to be determined.

**AGREEMENT BETWEEN
YAKIMA HEALTH DISTRICT AND
YAKIMA COUNTY PUBLIC SERVICES DEPARTMENT**

This AGREEMENT is between the Yakima Health District, 1210 Abtanum Ridge Drive, Yakima, WA 98903, hereinafter referred to as "HEALTH DISTRICT" and Yakima County through its Public Services Department, 128 N. Second Street, Yakima, WA 98901, referred to as "COUNTY" or "PUBLIC SERVICES".

WITNESSETH:

In consideration of the terms and conditions contained, the parties agree to as follows:

1. **Project.** HEALTH DISTRICT agrees to do all work and furnish materials necessary for performing the work in accordance with this Agreement. The HEALTH DISTRICT will provide the necessary resources for performing such work as set forth in the Scope of Services (Attachment "A").
2. **Payment.** COUNTY agrees to pay for the work described herein to the HEALTH DISTRICT the **TOTAL SUM (not to exceed amount) of \$50,000** (including but not limited to taxes and NSF fees), to be paid at the completion of the services, or on a monthly basis, based on invoices prepared and submitted monthly by the HEALTH DISTRICT for services provided.
3. **Amendments.** This agreement contains all terms and conditions agreed upon by all parties. No change or addition to this Agreement shall be valid or binding upon either party unless such change or addition is in writing and executed by both parties. All terms of the attached Attachment A are incorporated herein by this reference.
4. **Independent Contractor.** The parties agree that, for purposes of this agreement, the HEALTH DISTRICT or any employees of the HEALTH DISTRICT act as independent contractors, are not considered employees of the COUNTY, and are not entitled to any benefits that Yakima County provides its employees.
5. **Professional Standards.** HEALTH DISTRICT shall perform the Services according to the standard of care ordinarily exercised under similar conditions by similarly qualified professionals who are currently practicing in the area where HEALTH DISTRICT is located
6. **Indemnity. Indemnification/Hold Harmless:** HEALTH DISTRICT shall defend, indemnify and hold the County, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or resulting from the acts, errors or omissions of the HEALTH DISTRICT in performance of this Agreement, except for injuries and damages caused by the sole negligence of the County. Should a court of competent jurisdiction determine that this Agreement is subject to RCW

4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the HEALTH DISTRICT and the County, its officers, officials, employees, and volunteers, the HEALTH DISTRICT liability, including the duty and cost to defend, hereunder shall be only to the extent of the HEALTH DISTRICT negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the HEALTH DISTRICT's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Agreement.

7. **Limitation of Liability.** All actions or proceedings are barred three years after County knew or should have known of any claim or damage, or five years after substantial completion of the Services, whichever occurs first.
8. **Attorney's Fees.** If any legal action or proceeding is commenced relating to this Agreement, the prevailing party is entitled to recover its reasonable attorneys' fees and costs.
9. **Termination.** This *Agreement* may be terminated upon thirty (30) days written notice to the other party. In such event, County shall pay HEALTH DISTRICT for all Services performed, under the scope of work and for all related expenses incurred prior to the effective date of termination.
10. **Governing Law and Venue.** This *Agreement* shall be governed by the laws of the state of Washington. Venue for any action or proceeding shall be in the Superior Court of Yakima County.
11. **Survival.** The provisions of this *Agreement* shall survive its termination and completion of Services.
12. **Complete Agreement.** This *Agreement* constitutes the complete and final understanding between the parties and may be amended by the prior written consent of both parties.
13. **Nondiscrimination.** The HEALTH DISTRICT agrees that it shall not discriminate against any person on the grounds of race, creed, color, religion, national origin, sex, sexual orientation, age, marital status, political affiliation or belief, or the presence of any sensory, mental or physical handicap in violation of the Washington State Law Against Discrimination (RCW chapter 49.60) or the Americans with Disabilities Act (42 U.S.C. 12101 et seq.) or any other applicable state, federal or local law, rule or regulation.
14. **Assignment.** The HEALTH DISTRICT shall not assign or subcontract any portion of the contracted activities without obtaining prior written approval from the County.
15. **Term.** The term of this Agreement is for five (5) months, commencing upon entry of this agreement but shall not be in effect beyond, Any subsequent amendments shall be made annually and take effect upon the first of each calendar year, not to exceed 5 years and following agreement as to any amendments to the scope of work.

(Agreement name & number)

DONE this 25 day of June 2013

YAKIMA HEALTH DISTRICT



Andre Fresco, MSEPH
Administrator, Yakima Health District

BOARD OF YAKIMA COUNTY COMMISSIONERS


Michael D. Leita, Chairman


Kevin J. Bouchey, Commissioner


Attest: Tiera L. Girard
Clerk of the Board


J. Rand Elliott, Commissioner
*Constituting the Board of County Commissioners
for Yakima County, Washington*

BOCC297-2013
June 25, 2013

~~Approved as to form:~~


Deputy Prosecuting Attorney



Approved as to Form:


Deputy Prosecuting Attorney

ATTACHMENT A
Scope of Services

TASK 1 – Conduct Survey Number 1 – Assessment of Health Risk and Water Supply Well (Attachment B)

1. The HEALTH DISTRICT shall provide resources sufficient to conduct a minimum of 250, and up to 320 household surveys using the form “Risk Assessment for Water Supply Wells – Lower Yakima Valley GWMA” Questionnaire (Attachment B). Services will include the following:
 - a. Site visits to test tap water with test strips, and take samples using laboratory bottles
 - b. Deliver the sample bottles to the designated testing laboratory
 - c. Take pictures of the wellhead to document site visit and findings
 - d. Obtain GPS location and depth of the wells/residents for GIS database
 - e. Fill out the questionnaire in Attachment B and provide the information to PUBLIC SERVICES.

Assumption: It is estimated that the average site survey will cost approximately \$100 per site visit including all costs including transportation. The Yakima Health District will use 8 to 10 employees, including several bilingual speakers. The surveys will be conducted for several months, commencing from July 1, 2013 and finished by October 31, 2013. The Health District may request the balance of any unbilled funds up to the \$49,000 limit, at the close of this agreement to offset any additional costs incurred or not covered by the site visit and laboratory fees.

2. Estimated Cost – \$100 per site visit and \$27.50 testing laboratory fee (Cascade Analytical Laboratory Nitrate Test). Total amount not to exceed \$49,000 including testing laboratory fees
3. Deliverables:
 - a. Completed survey forms (Attachment B)
 - b. Partially completed forms due to occupant information insufficiency
 - c. Information described above
 - d. Any mutually agreed upon reports

Task 2 – Distribute Survey Number 3 – Health Care Provider Questionnaire (Attachment C)

1. The HEALTH DISTRICT shall distribute Survey No. 3, with cover letter, methemoglobinemia fact sheet and GWMA program map to the health providers within the GWMA area (Attachment C).
2. Estimated Cost – There are approximately 600 health providers in the GWMA area. It is estimated this effort will cost approximately \$1,000 which includes labor, telephone, mailing and postage, etc.
3. Deliverables:
 - a. Completed survey forms (Attachment C)

- b. Information described above
- c. Any mutually agreed upon reports

BUDGET ESTIMATE

Task	Amount
Task 1. Conduct Survey 1 –Risk Assessment For Water Supply Wells including obtaining certified lab results	49,000.00
Task 2. Distribute Survey 3 – Health Care Provider Questionnaire	1,000.00
TOTAL (Not to Exceed Amount)	50,000.00

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

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

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

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

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

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

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

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



Dear Medical Provider:

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

This letter is being written in cooperation with the Yakima Health District, which is an active member of the advisory committee, and is designed to alert you to the health risks associated with nitrate contamination.

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

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

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

If you are concerned about a patient, the appropriate testing should be done to verify your diagnosis. Upon confirmation you should report the condition to the communicable disease section at the Yakima Health District. Environmental Health personnel at the Health District should be able to assist you with water quality information, if available, as well as assist the family with sampling of their water as needed.

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

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

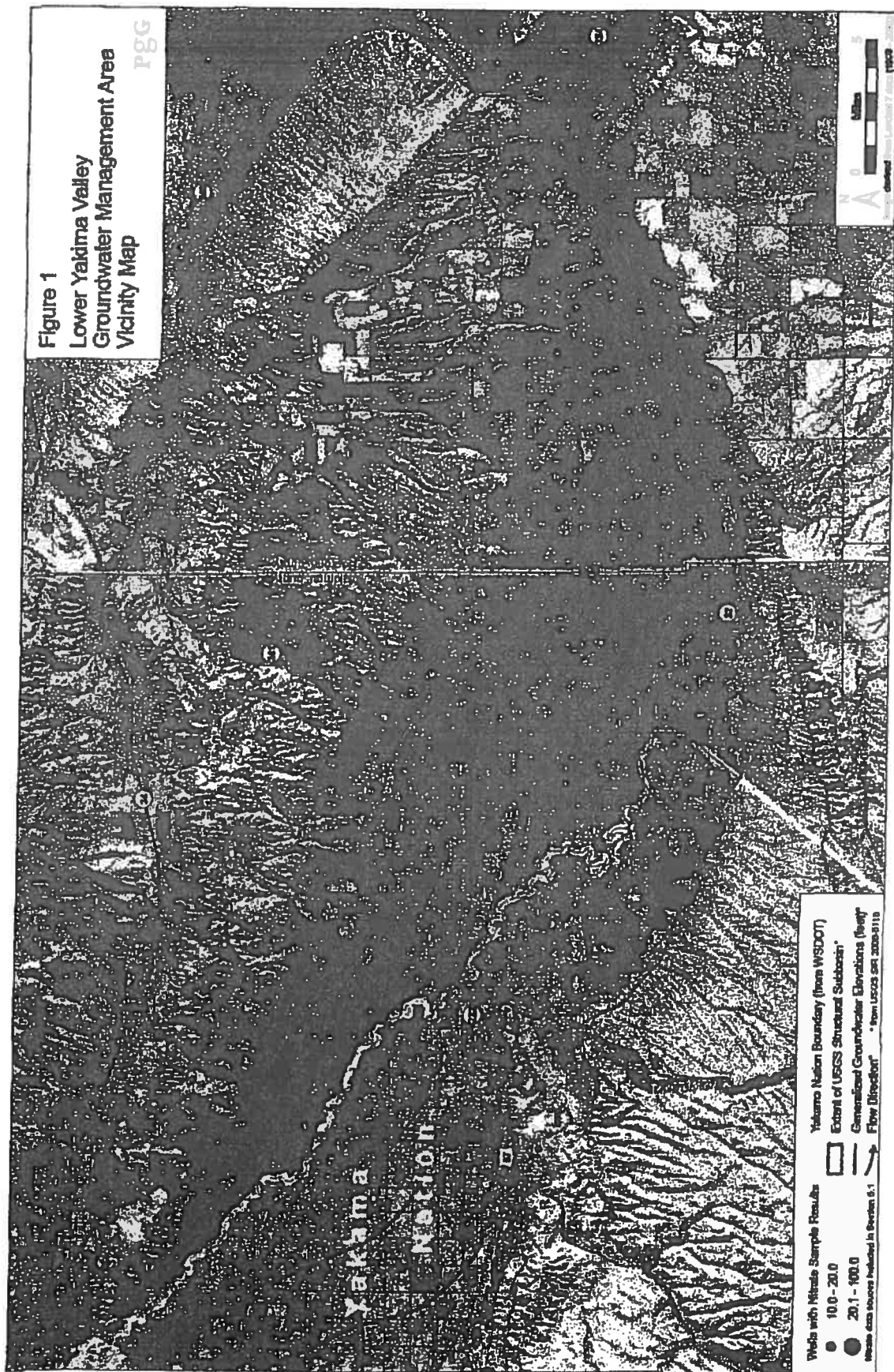
Suspected sources of nitrate contamination are from a variety of land uses, including commercial fertilizers for crop production, animal manures, septic systems and land application of waste water.

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

Sincerely,

Andre Fresco, Administrator
Yakima Health District

attachments: Methemoglobinemia In Infants
LYGWMA Vicinity Map



Questionnaire for Health Care Providers

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

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

Comments:

2. Are you aware of the relationships between methemoglobinemia and

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

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

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

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

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

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

MAILING _____ OTHER (Please describe) _____

Questionnaire for Health Care Providers

7. Please share your thoughts on this subject

(END OF SURVEY)

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

Name: _____

Mailing Address: _____

Phone: _____

E-mail: _____

Thank you for participating in this survey.

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

**AGREEMENT BETWEEN
HERITAGE UNIVERSITY AND
YAKIMA COUNTY**

This AGREEMENT is between Heritage University, 3240 Fort Road, Toppenish, WA 98948, hereinafter referred to as "UNIVERSITY" and Yakima County through its Public Services Department, 128 N. Second Street, Yakima, WA 98901, referred to as "COUNTY".

WITNESSETH:

In consideration of the terms and conditions contained, the parties agree to as follows:

1. **Project.** The UNIVERSITY agrees to do all work and furnish materials necessary for performing the work in accordance with this Agreement. The UNIVERSITY will provide the necessary resources for performing such work as set forth in the Scope of Services (Attachment "A").
2. **Payment.** COUNTY agrees to pay for the work described herein to the UNIVERSITY the TOTAL SUM (not to exceed amount) of \$5,300 (including but not limited to taxes and NSF fees), to be paid at the completion of the services, or on a monthly basis, based on invoices prepared and submitted monthly by the UNIVERSITY for services provided.
3. **Amendments.** This agreement contains all terms and conditions agreed upon by all parties. No change or addition to this Agreement shall be valid or binding upon either party unless such change or addition is in writing and executed by both parties. All terms of the attached Attachment A are incorporated herein by this reference.
4. **Independent Contractor.** The parties agree that, for purposes of this agreement, the UNIVERSITY or any employee or student of the UNIVERSITY act as independent contractors, are not considered employees of the COUNTY, and are not entitled to any benefits that Yakima County provides its employees.
5. **Professional Standards.** The UNIVERSITY shall perform the Services according to the standard of care ordinarily exercised under similar conditions by similarly qualified professionals who are currently practicing in the area where the UNIVERSITY is located.
6. **Indemnity. Indemnification/Hold Harmless:** The UNIVERSITY shall defend, indemnify and hold the County, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or resulting from the acts, errors or omissions of the UNIVERSITY in performance of this Agreement, except for injuries and damages caused by the sole negligence of the County. Should a court of competent jurisdiction determine that this Agreement is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the UNIVERSITY and the County, its officers, officials, employees, and volunteers, the UNIVERSITY'S liability, including the duty

and cost to defend, hereunder shall be only to the extent of the UNIVERSITY'S negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the UNIVERSITY'S waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Agreement.

7. **Limitation of Liability.** All actions or proceedings are barred three years after County knew or should have known of any claim or damage, or five years after substantial completion of the Services, whichever occurs first.
8. **Attorney's Fees.** If any legal action or proceeding is commenced relating to this Agreement, the prevailing party is entitled to recover its reasonable attorneys' fees and costs.
9. **Termination.** This Agreement may be terminated upon thirty (30) days written notice to the other party. In such event, County shall pay the UNIVERSITY for all Services performed, under the scope of work and for all related expenses incurred prior to the effective date of termination.
10. **Governing Law and Venue.** This Agreement shall be governed by the laws of the state of Washington. Venue for any action or proceeding shall be in the Superior Court of Yakima County.
11. **Survival.** The provisions of this Agreement shall survive its termination and completion of Services.
12. **Complete Agreement.** This Agreement constitutes the complete and final understanding between the parties and may be amended by the prior written consent of both parties.
13. **Nondiscrimination.** The UNIVERSITY agrees that it shall not discriminate against any person on the grounds of race, creed, color, religion, national origin, sex, sexual orientation, age, marital status, political affiliation or belief, or the presence of any sensory, mental or physical handicap in violation of the Washington State Law Against Discrimination (RCW chapter 49.60) or the Americans with Disabilities Act (42 U.S.C. 12101 et seq.) or any other applicable state, federal or local law, rule or regulation.
14. **Assignment.** The UNIVERSITY shall not assign or subcontract any portion of the contracted activities without obtaining prior written approval from the County.

Term. The term of this Agreement is for two (2) months, commencing upon entry of this agreement but shall not be in effect beyond October 31, 2013.

(Agreement name & number)

DONE this 25 day of June 2013

HERITAGE UNIVERSITY



Siri Strom, Assistant Vice President
and Controller, Heritage University



Attest: Tiera L. Girard
Clerk of the Board

BOCC296-2013
June 25, 2013

Approved as to form:


Deputy Prosecuting Attorney

BOARD OF YAKIMA COUNTY COMMISSIONERS




Michael D. Leita, Chairman



Kevin J. Bouchey, Commissioner


J. Rand Elliott, Commissioner
*Constituting the Board of County Commissioners
for Yakima County, Washington*

Approved as to Form:


Deputy Prosecuting Attorney

ATTACHMENT A
Scope of Services

TASK 1 – Conduct Survey Number 2 – Public Informational Questionnaire (Attachment B)

- 1. The UNIVERSITY shall provide adequate resources sufficient to conduct a minimum of 120, and up to 160 household surveys using the form “Public Informational Questionnaire” (Attachment B). Location of household site visits will be identified by the County. Services will include the following:**
 - a. Site visits to households identified in the GWMA addressing list (Attachment C)**
 - b. Fill out the questionnaire in Attachment B and provide the information to PUBLIC SERVICES.**

Assumptions:

The University will recruit a total of 16 students to administer the Public Informational Questionnaire for the Lower Yakima Valley Groundwater Advisory Committee (GWAC).

16 students will work in 8 pairs, with one bilingual (Spanish and English) in each pair. The University will strive to match the students administering the survey with the cultural makeup of the Lower Yakima Valley (students have self identified as White, Yakama or bilingual Hispanic).

Students will be recruited from Heritage University College of Arts and Sciences and College of Education, and are hand-picked based on their skills, abilities and eagerness to help their communities regarding the nitrate issue.

Students will carry and display official identification cards issued by the University.

Students will receive training by a representative of the Groundwater Advisory Committee (GWAC) and/or a member of the GWAC's Education and Outreach Working Group to ensure quality control prior to administering the survey.

Students will be flexible and available to work in the evenings and on weekends to ensure maximum coverage of household members.

Students will log all miles traveled and all addresses of households visited.

Students will check in with Dr. Jessica Black at Heritage University before and after each household is visited (for safety).

Students will deliver the completed surveys to Dr. Black after each day out.

Dr. Black will compile the surveys weekly and deliver them weekly to Lisa Freund, Yakima County Public Services. Should the GWAC request that the data be entered into a database or spreadsheet, the University is willing and able to do so.

Heritage University participants will make a presentation to the Groundwater Advisory Committee, at the GWAC's regularly scheduled monthly meeting, at the conclusion of the project to discuss their experiences.

Outcomes

The primary outcome is the administering of Public Informational Questionnaire to a minimum of 120 individual households that are pre-identified by the GWAC.

In addition, 16 Heritage University students will:

- Receive training in how to administer questionnaires
- Receive valuable experience in conducting environmental justice/environmental health research (administering questionnaires)
- Gain practical experience on how to become empowered and proactive in helping their own communities - these students will receive additional training by Dr. Black on what Community-Based Participatory Research is and what they can do as community members. The University aims to empower the students to do positive action. Many students often state they want to make a difference, but are not sure how. This is one activity that will give them a window into what they can do.

Timeline

Heritage University students are available immediately. The students have been briefed that they will be working in pairs for safety, that they will be driving throughout the Lower Yakima Valley, and that they need to be available during evening and weekend hours when household members are most likely to be home.

We anticipate each student pair (eight total) will be able to reach between 15 and 20 households during the month of July. We anticipate by the end of July (four weeks) between 120 and 160 individual surveys will have been administered. This number can likely be increased, but these are the numbers we will deliver a minimum.

The surveys will be conducted starting on the contract execution date and finishing four weeks later.

Budget

Heritage University requests \$5300 total in budget. The budget will go toward students for gas mileage reimbursement and for their participation.

Gas mileage: each student will get stipend of \$300 (16 students = \$4800 total) that will be used to cover their costs for driving and also provide them with a small stipend for their participation (it is difficult to predict the exact mileage each student will travel but we anticipate that the \$300 should be sufficient to cover their gas expenditure). The stipend will be the remaining funds from the \$300.

Students will be required to log all mileage. The remaining \$500 will be used by the University to cover its costs associated with the project.

2. Deliverables:

- a. Completed survey forms (Attachment B)
- b. Information described above
- c. Any necessary reports

BUDGET ESTIMATE

Task	Amount
Task 1. Conduct Survey 2 – Public Informational Questionnaire	\$5,300.00
TOTAL (Not to Exceed Amount)	\$5,300.00

Attachment B – Survey No. 2

(Copy of Survey No. 2 will be added here)



Lower Yakima Valley Groundwater Management Area

Informational Public Questionnaire

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

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

PRIVATE WELL

SHARED WELL

COMMUNITY WATER

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

TAP WATER

BOTTLED

TREATED WATER

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

TAP WATER

BOTTLED

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

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

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

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

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

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

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

Please describe: _____

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

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

Lower Yakima Valley Groundwater Management Area

Informational Public Questionnaire

Please describe _____

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

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

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

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

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

RADIO TELEVISION NEWSPAPER NEIGHBORS AT WORK HEALTH CARE Other

(END OF SURVEY QUESTIONS)

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

Name: _____

Mailing Address: _____

Phone: _____

E-mail: _____

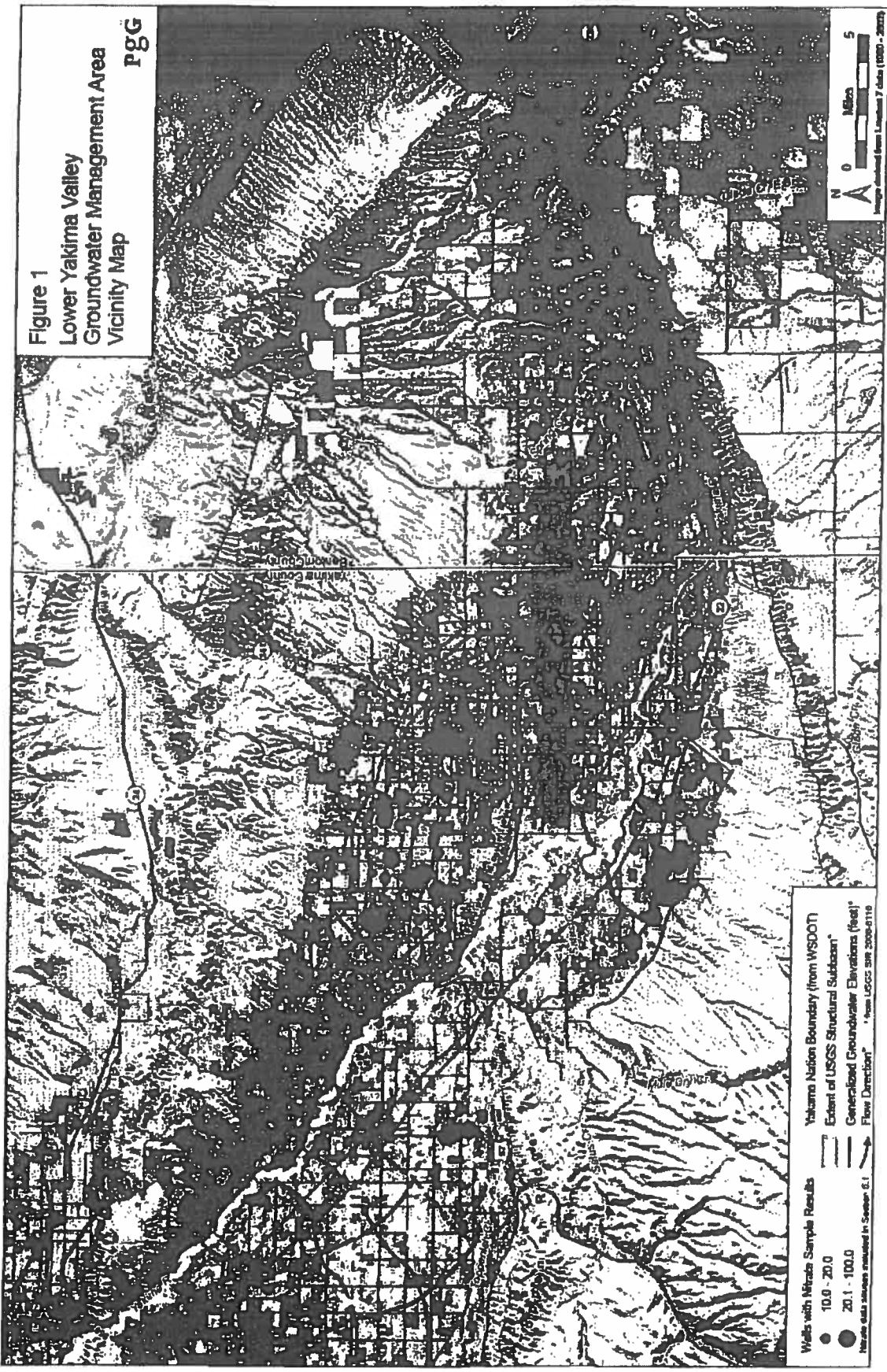
Thank you for participating in this survey. We will use the information to increase our understanding of what people know about groundwater contamination and to improve our efforts to educate people on how to identify and prevent nitrate contamination of the groundwater.

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

Attachment C – GWMA Addressing List

(To include map and specific addresses)

Figure 1
Lower Yakima Valley
Groundwater Management Area
Vicinity Map
p. 66



Wells with Miratec Sample Results
 10.0 - 20.0
 20.1 - 100.0
 Miratec data samples recorded in Section 6.1

Yakima Nation Boundary (from WSDOT)
 Extent of USGS Structural Subbasins
 Generalized Groundwater Elevations (feet)
 Flow Direction

Scale: 0 to 5 Miles, 0 to 8 Kilometers
 Image Modified from USGS 7.5' Data (1980 - 2000)

**PROFESSIONAL SERVICES AGREEMENT
FACE SHEET**

CONTRACTOR IS A <input type="checkbox"/> SUBRECIPIENT <input checked="" type="checkbox"/> VENDOR		CONTRACT NUMBER:
1. NAME/ADDRESS: EnviroIssues 101 Stewart Street, Ste 1200, Seattle 98101	2. ORIGINAL CONTRACT AMOUNT: \$46,134.00	5. PREVIOUS CONTRACT AMOUNT: N/A
	3. CASH MATCH REQUIREMENT: \$0	6. MODIFICATION AMOUNT: # 1 \$34,846.00
	4. TOTAL CONTRACT AMOUNT: Not to exceed \$80,980.00	7. NEW TOTAL CONTRACT AMOUNT: N/A
8. CONTACT INFO: Penny Mabie (206)269-5041 www.enviroissues.com pmabie@enviroissues.com	9. COUNTY PROGRAM CONTACT INFO: Name, Title – Lisa Freund Dept. – Public Services Address – 128 N. Second Street City, State Zip – Yakima, WA 98901 Phone – (509) 574-2300 Email – lisa.freund@co.yakima.wa.us	10. COUNTY FISCAL CONTACT INFO: Name, Title – Carmen Hayter Dept. – Public Services Accounting Address – 128 N. Second Street City, State Zip – Yakima, WA 98901 Phone – (509) 574-2280 Email – Carmen.hayter@co.yakima.wa.us
11. CONTRACT START DATE: May 29, 2012		12. CONTRACT END DATE: December 31, 2013
13. FUNDING AUTHORITY: Washington State Dept of Ecology – 100% State Toxics Control Account		
14. CFDA NUMBERS(S): N/A		15. CFDA TITLE(S): N/A
16. PURPOSE: The Contractor shall perform professional services as defined by the Statement of Work incorporated herein.		
EXHIBITS: When the box below is marked with an X, the following Exhibits are attached and are incorporated into this Contract by reference: <input checked="" type="checkbox"/> Exhibits (specify): EXHIBIT A – Scope of Work & Budget, Amendment No. 1		
This Contract contains all of the terms and conditions agreed upon by the parties and all documents attached or incorporated by reference, include Basic Interagency Agreement or its successor. No other understandings or representations, oral or otherwise, regarding the subject matter of this Contract shall be deemed to exist or bind the parties. The parties signing below warrant that they have read and understand this Contract and have authority to enter into this Contract.		
NAME OF CONTRACTOR <u><i>EnviroIssues, President</i></u> Name of Authorized, Title <u><i>4/23/13</i></u> Date		BOARD OF YAKIMA COUNTY COMMISSIONERS <u><i>[Signature]</i></u> Michael D. Leita, Chairman <u><i>[Signature]</i></u> Kevin L. Bouchey, Commissioner <u><i>[Signature]</i></u> J. Kand Elliott, Commissioner Constituting the Board of County Commissioners for Yakima County, Washington Approved as to form: <u><i>[Signature]</i></u> Deputy Prosecuting Attorney
Attest: <u><i>Tiera L. Girard</i></u> Tiera L. Girard, Clerk of the Board		

BOCC219-2013
April 30, 2013

GENERAL TERMS AND CONDITIONS

EXHIBIT A

SCOPE OF WORK – AMENDMENT NO. 1

Amendment Number 1 extends the contract from May 31, 2013 to December 31, 2013. With the exception of the new contract amount, revised scope of work, budget and contract completion date, all conditions in the Original Agreement remain the same.

EnviroIssues will support Yakima County and the Lower Yakima Valley Groundwater Management Area by providing facilitation services for the GWAC. This support will include the following services:

Task – GWAC meeting planning and facilitation

- Participate in up to two preparatory conference calls prior to each of eight advisory committee meetings to discuss meeting strategy, objectives, agenda and information needs
- Review and provide input and advice on informational materials prepared by technical team to support advisory committee agenda items
- Develop committee deliberation products (i.e. charter, work plan, decision matrices, etc.)
- Develop GWAC meeting agendas (one draft and one final) (up to 8 agendas)
- Check in with committee members between meetings as needed (up to two hours per meeting)
- Facilitate committee meetings up to three-hours in duration (up to 8 meetings)
- Assist the GWAC in a self-assessment of their processes and operations

Deliverables

- Miscellaneous process tools (charter, work plan, matrices, etc.)
- Draft and final agendas (up to 8)

Assumptions

- GWMA staff provide note-taking and meeting summaries
- GWMA staff organizes meeting rooms, meeting notifications and other logistics.
- GWMA and technical team provide technical report / other information copying and distribution

Cost estimate

Task – GWAC meeting planning and facilitation	Penny Mabie \$175	Daniel Brody \$65
• Participate in up to two preparatory conference calls prior to advisory committee meetings to discuss meeting strategy, objectives, agenda and information needs	16	
• Review and provide input and advice on informational materials prepared by technical team to support advisory committee agenda items	16	
• Develop GWAC meeting agendas (one draft and one final) (up to 8 agendas)	8	8
• Develop committee deliberation products (i.e. charter, workplan, decision matrices, etc.)	16	16
• Check in with committee members between meetings as needed	16	
• Facilitate GWAC meetings (up to 8)	40	
• Six hours of travel time per meeting (up to 8 meetings)	48	
• GWAC Self-Assessment and evaluation of processes and operations	6	4
Total Hours	166	28
Total Labor Cost	\$29,050	\$1,820

Expenses	Per meeting	Quantity
• Includes printing of agendas, process tools, mileage, lodging and meeting supplies	\$497.00	8
Amendment No. 1 - Total Direct Expenses		\$3,976
Amendment No. 1 - Total Project total		\$34,846
Original Contract Amount		\$46,134
New Contract Amount Not To Exceed		\$80,980

(See Scope of Work for detailed description of duties)