Grant Outcomes Report

County: **Marion**	Date: **8/31/2017**
County Mailing Address& contact: **Greg DeBlase, REHS** **3180 Center St NE #2274** **Salem, OR 97301**	Amount of Grant: **$7,500**
Project Title: **Domestic Well Safety Promotion**	Grant award date: **12/22/2016**

PROJECT SUMMARY

One of our goals (objective 1) was to develop a sustainable system to provide information, resources and technical assistance to domestic well owners. We wanted to be able continue to maintain a consistent level of domestic well safety outreach after the grant project period was over. To accomplish this, we created a dedicated domestic well safety (DWS) webpage, a library of public service announcements and cross-trained environmental health staff to provide technical assistance specific to domestic well safety.

Since 25% of the population in Marion County is Hispanic, we allocated some of the grant funding for translating existing OHA Nitrate and Arsenic factsheets into Spanish. These are available on our DWS webpage and on the OHA DWSP webpage. We also hosted a community forum in Woodburn, a predominantly Hispanic area of the county, to increase community engagement in domestic well safety.

Another goal (objective 2) of this project was to increase water testing and hazard mitigation by domestic well users in high risk areas of the county. We were able to increase domestic well monitoring by sponsoring the testing of 81 wells in Marion County for both arsenic and nitrate. The test results confirm certain areas in the county are at higher risk for groundwater contaminated with arsenic or nitrate. The areas implicated by this study include: Lyons, Hubbard, Woodburn, Brooks, Gervais, NE Salem and South Salem.

PROJECT ACTIVITIES

a) Did you meet your objectives as stated in your application? Yes √ No ____
b) Please summarize your completed objectives.

Objective 1: develop a sustainable system to provide information, resources and technical assistance to domestic well owners. The activities we used to accomplish this objective include:

1. Developing a dedicated domestic well safety (DWS) webpage. This page has organized links for general information about private wells, well contaminants, well testing & regulations, and well maintenance & treatment. Through an internal Marion County translation service, we had the existing OHA fact sheets for arsenic and nitrate translated into Spanish. Links to both English and Spanish fact sheets are on our DWS webpage. The DWS webpage URL is: http://www.co.marion.or.us/HLT/PH/EHS/water/Pages/dws.aspx . The website has had 135 unique page views since March 2017 with the highest activity in April and May. Marion County Environmental Health (MCEH) will continue to support and update the DWS webpage.

2. A library of public service announcements (PSA's) was created and will be used to promote testing and hazard mitigation for domestic wells. The PSA's developed include the following topics: Arsenic, Total Coliform, Well Protection, Well Flooding, Nitrates, and Well Testing & Maintenance. The PSA's began being posted on the MCHD facebook page in August.

3. We trained technical staff by creating a written instructional document that that included information from Oregon State University, Drinking Water Services and the Oregon Domestic Well programs. Staff was given an initial written pre-test to test baseline knowledge in a staff meeting. The document was then given to staff to read. A final test was taken in survey monkey to determine knowledge gained. 80% (5 of 6) of the staff tested answered questions correctly by the end of the testing period. Monthly staff meetings during the grant period included discussions about calls received by staff and if training was adequate. We found most staff did not have any questions from the public as questions are all directed to the lead staff. Challenges with training this way included some staff not taking the survey in a timely manner and difficulty in wording questions that truly cover what the staff will need to know to answer questions from the public. An advantage to this method is that all staff has a document that they can review in case they forget. Future trainings will be done with a written test during staff meetings.

4. We hosted a community forum for interested community members on April 26, 2017. The class addressed well stewardship through testing and hazard mitigation and provided an overview of the local risk for contaminants. We chose Woodburn for the location of the class because it is one of the areas of the county known to be at higher risk for arsenic and nitrate contamination in the groundwater. A donation request was submitted and approved for a meeting room at the Silverton Health - Wellspring Conference Center in Woodburn. Having the conference room donated free of charge allowed us to put the funds budgeted for room rental towards our well testing activity. We invited Chrissy Lucas, a small farms/groundwater education program assistant with Oregon State University Extension Service, to present at the forum. She had a presentation already developed, with excellent props, that met our specific needs. Advertising for the class was done through new paper ads, flyers, community television, a Marion County press release, social media, and on the DWS webpage. Even with all of the mentioned

advertising, it was still challenging to get community members to sign up and attend the forum. We had 9 people pre-register for the class and only 7 people attend. A pre and post test was administered and showed that all attending were well informed but the information they received from the class did increase their knowledge on what contaminants to test for and when.

Objective 2: Increase water testing and hazard mitigation by domestic well users in high risk areas of the county. We used the majority of the grant funding to accomplish this objective by providing scholarships for well users to test their domestic wells for arsenic and nitrate. Waterlab Corporation in Salem agreed to help us with this project. We began to advertise the free well testing through the same channels we did for the community forum. The high risk areas of the county we were targeting included North Salem, Brooks, Gervais, Hubbard, Woodburn, Aurora, Gates, Idanha, Detroit, Mill City and Lyons.

A questionnaire was developed and provided to the EH support staff to screen the incoming phone calls. EH staff then followed up on the qualified callers and began creating a signup sheet for the free testing. Once signed up, the callers were instructed to pick up the testing bottle at Waterlab. The name and address of the well owners were faxed to Waterlab for verification. Some of the well owners were unable to pick up and return the samples to Salem, so EH collected and delivered 4 of the samples. Once the sample bottle was returned and analyzed for arsenic and nitrate, Waterlab emailed the results directly to EH. We were able to get email addresses for most of the well owners that signed up. That allowed us to email them the results. If either arsenic or nitrate was detected, we included the relevant fact sheet with the results email. If the result was high enough to recommend mitigation, the email was followed up with a phone call.

In July the requests for testing began to slow and then stopped. There was still funding left and we were worried we would not use it all. We decided to open up the testing to anywhere in Marion County, not just the high risk areas. MCHD issued an updated press release and EH was featured in the Statesman Journal holding court on 8/2/17. The response was more than we expected. Overall, we had a total of 89 people sign up for the testing and 81 sample bottles returned to Waterlab.

Of all the wells tested, 53% (43/81) of them have detections of arsenic. 19% (15/81) of the wells have arsenic detections above the maximum contaminant level (MCL) of 10 ppb. The highest result for arsenic was in Lyons at 51 ppb. The number of wells with nitrate detections is 37 of 81 or 46%. Of those 37 wells with nitrate detections, 5 were over one-half of the MCL (10 mg/l) and 1 was over the MCL. We recommended additional/more frequent nitrate testing of the wells that were over one-half of the MCL. These test results are to be shared with the community-at-large to promote awareness of these high risk areas and to encourage testing of other domestic wells. The final report results will also be shared on the DWS webpage. (See attached maps for a graphical representation of all the test results)

c) Are there any key activities that still need to be implemented?

Since the demand for the water testing was more than we anticipated, we decided to use funding that was budgeted for PSA radio spots to allow for more water testing. We were still able to create a PSA library and they are currently being posted to social media. We hope in the future to run the PSA's through other outlets, including radio.

PARTNERSHIPS

Has your county collaborated with any partners to implement this project?

☒Yes ☐No

IF YES, what are the names of these partners and how has your organization worked with them in implementing the project?

Partner Name	Description of collaboration
Oregon State University Extension Service	Our guest speaker at our domestic well safety community forum was Chrissy Lucas with OSU Extension Service. She also helped us advertise for the class and well testing.
Waterlab Corporation	Waterlab is the testing lab we used for the well testing scholarships we provided.
Silverton Health	Donated a conference room at Woodburn Wellspring Conference Center for our community forum.
Oregon Health Authority	Provided monthly conference calls, support and guidance. Developed well testing result maps used in final report.

COMMUNICATION:

Type of communication event and location	Date (Month & Year)	Estimated number exposed to event
Marion County Press Releases	April 2017 and August 2017	
Woodburn Independent Paid Ad	April 2017	4,000 subscribers
CCTV Community Billboard	March 2017	Up to 55,000 cable subscribers
Statesman Journal Holding Court	August 2017	
MCHD Facebook Post	March 2017	1,720 followers
Marion County website & MCEH website	March 2017	135
Santiam Valley Weekly Newspaper Ad	April 2017	?
Marion Soil and Water Conservation District list serv	July 2017	?

Marion County Fair - Public Health Booth	July 2017	~20,000 attendees

BUDGET NARRATIVE

a) **Did the project remain within the original budget? Please describe any un-spent or over-spent funds.**
Yes, we were within the original budget. All of the un-spent funds could have been used for additional water testing if we would have had more time.

b) **Were there unanticipated costs? If so, how did you address them?**
No unanticipated costs were encountered.

c) **Were there activities you wanted to include in your project, but could not because of budget limitations? If so, what were the activities and their estimated costs?**
No, but we did have a huge demand for water testing in August and had to turn people away due to the project testing deadline of 8/15.

REFLECTIONS

a) **Describe any unanticipated benefits to your county or to participants, beyond the original objectives or planned activities.**
The initial objective for subsidized well testing was 70 arsenic and 70 nitrate tests. We were able to test an additional 11 wells adding 22 more test results to our project.

d) **Looking back, what would you have done differently?**
We discovered some effective ways to advertise our well testing towards the end of our project. If we had utilized the holding court meetings in Salem (Statesman Journal), Stayton and Silverton, we likely would have reached more wells in the target areas, would have had more time to conduct well testing and may have had more attend our community forum.

TELL THE STORY

Based on previous real estate and public water system well testing data, we knew there were areas in Marion County with high arsenic levels in the groundwater. Two of the well testing participants in our project were aware that their wells were in these high risk areas. Both have arsenic removal treatment systems installed. They used the free arsenic and nitrate testing being offered with our project as an opportunity to do follow up testing. Their samples were collected after treatment. The results for both samples were above the MCL for arsenic. In fact, one of them was the second highest arsenic result in our project (49 ppb). The other one was just slightly over the MCl of 10 ppb. Both well owners were grateful to receive the results and said they were going to have their treatment systems evaluated. EH

was able to help by providing technical assistance and resources for arsenic and arsenic removal treatment. We also recommended that they take another follow up arsenic sample once any changes or modifications are made to the existing treatment systems.

RECOMMENDATIONS / COMMENTS

This grant allowed us to build upon and help improve the domestic well safety resources available for all Oregonians. Sustainable resources such as our DWS website, library of PSA's and translated versions of the OHA arsenic and nitrate fact sheets will continue to be available to the public long after our grant period ends. The private well testing data we collected will also help to improve the groundwater quality information available for Marion County and for Oregon.

Appendix

A. Final Budget

B. Arsenic Test Results Map

C. Nitrate Test Results Map

D. Well Testing Results

E. OHA Arsenic Fact Sheet - Spanish

F. OHA Nitrate Fact Sheet – Spanish

G. OSU Well Checklist – Spanish

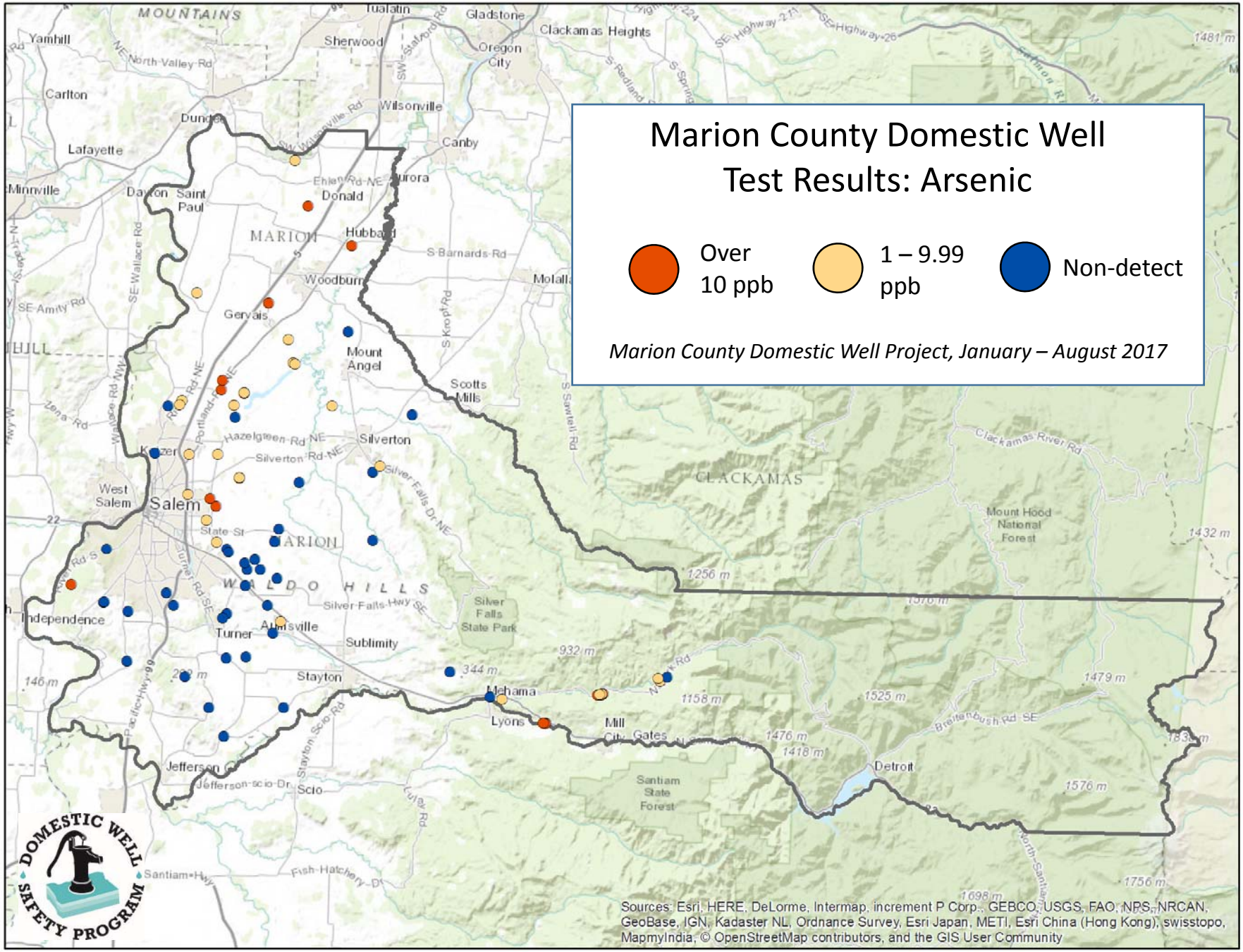
H. Community Forum Flyer

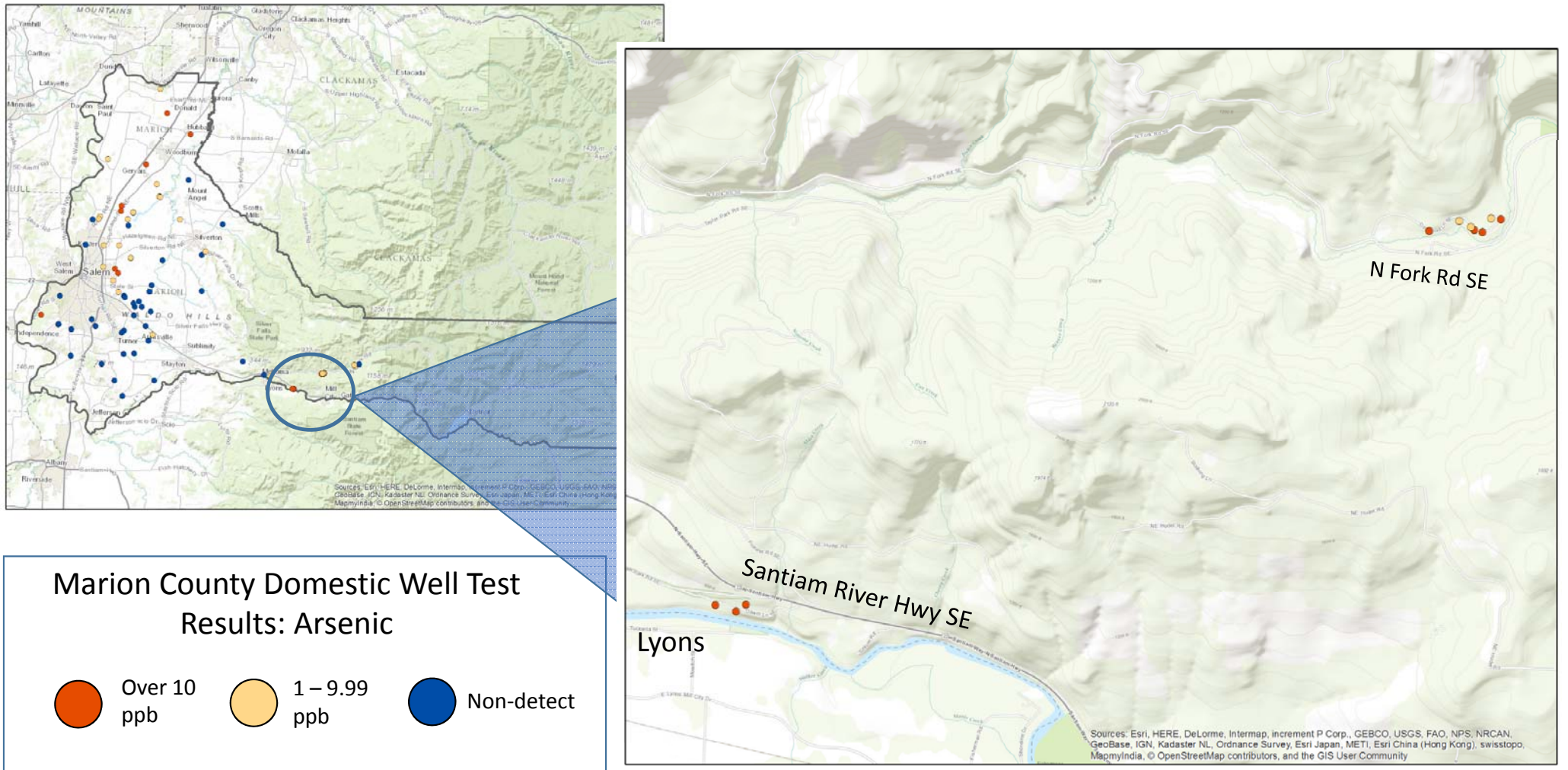
I. Well Testing Flyer

J. Public Service Announcements

Final Budget

ITEM	DESCRIPTION OF ITEM	COST
Testing Services	81 Tests for nitrate @$40 each 81 Tests for arsenic @$35 each	$6075
Translation Services	Translation OHA Arsenic and Nitrate Fact Sheets Translation of OSU well checklist	$336.18
Marketing	Woodburn Independent 3x5 Ad	$168.75
Printing	Posters advertising the testing (50 x .89) Handouts for the community forum (40 x .10)	$48.50
Room rental	Rental of room for community forum (Donated)	$0
Travel	Mileage to collect 4 water samples and to travel to community forum in Woodburn (175 x .535)	$93.62
TOTAL		$ 6722.05


Marion County Domestic Well
Test Results: Arsenic
Over 10 ppb
1 – 9.99 ppb
Non-detect
Marion County Domestic Well Project, January – August 2017
DOMESTIC WELL SAFETY PROGRAM
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



Marion County Domestic Well Test Results: Arsenic

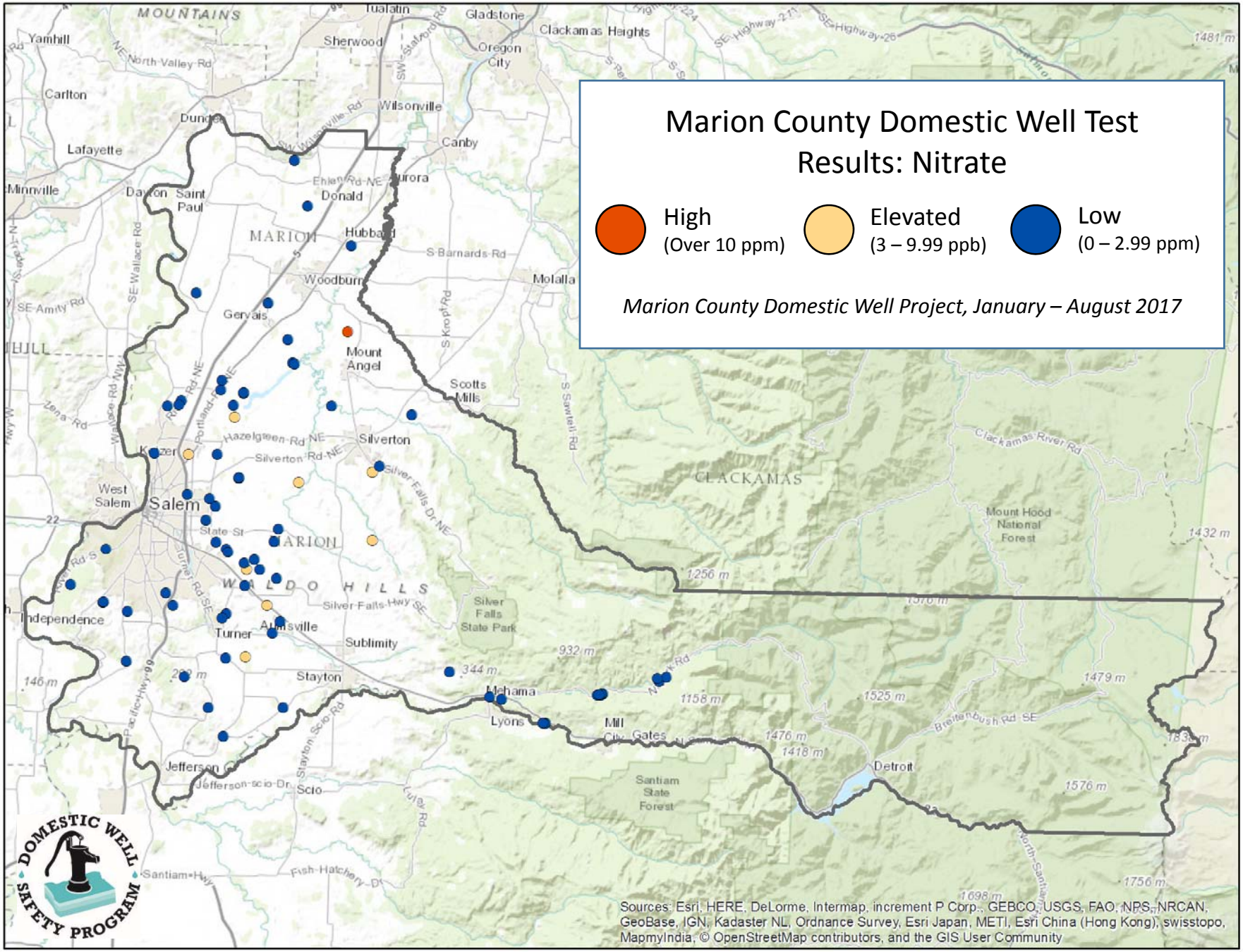
Over 10 ppb

1 – 9.99 ppb

Non-detect

Marion County Domestic Well Project, January – August 2017

DOMESTIC WELL SAFETY PROGRAM


Marion County Domestic Well Test Results: Nitrate
High
(Over 10 ppm)
Elevated
(3 – 9.99 ppb)
Low
(0 – 2.99 ppm)
Marion County Domestic Well Project, January – August 2017
DOMESTIC WELL SAFETY PROGRAM
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Marion County Domestic Well Safety Grant - Well Testing Results

*results in red above MCL

City	Zip	Contaminant	Result	Date Collected	
Silverton	97381	Arsenic	ND	4/27/2017	
Lyons	97358	Arsenic	0.0020	4/27/2017	
Salem	97317	Arsenic	0.0060	4/17/2017	
Hubbard	97032	Arsenic	0.0131	4/21/2017	
Hubbard	97032	Arsenic	0.0159	4/20/2017	
Stayton	97383	Arsenic	ND	4/24/2017	
Lyons	97358	Arsenic	0.0249	5/3/2017	
Lyons	97358	Arsenic	0.0495	5/3/2017	
Silverton	97381	Arsenic	ND	4/20/2017	
Silverton	97381	Arsenic	0.0090	4/28/2017	
Lyons	97358	Arsenic	0.0028	4/24/2017	
Lyons	97358	Arsenic	ND	5/9/2017	
Gervais	97026	Arsenic	0.0076	4/24/2017	
Lyons	97358	Arsenic	0.0114	4/28/2017	
Salem	97303	Arsenic	0.0073	5/15/2017	
Aurora	97002	Arsenic	0.0020	4/27/2017	
Brooks	97305	Arsenic	0.0200	5/15/2017	
Woodburn	97071	Arsenic	ND	4/28/2017	
Gervais	97026	Arsenic	0.0287	5/3/2017	
Lyons	97358	Arsenic	0.0515	5/30/2017	
Lyons	97358	Arsenic	0.0290	5/8/2017	
Lyons	97358	Arsenic	0.0277	5/12/2017	
Lyons	97358	Arsenic	0.0064	5/26/2017	
Salem	97305	Arsenic	0.0024	5/12/2017	
Salem	97317	Arsenic	0.0079	8/2/2017	
Salem	97317	Arsenic	ND	5/12/2017	
Salem	97306	Arsenic	ND	5/26/2017	
Salem	97306	Arsenic	ND	5/15/2017	
Gervais	97026	Arsenic	0.0025	7/31/2017	
Lyons	97358	Arsenic	0.0114	5/29/2017	
Lyons	97358	Arsenic	0.0069	6/15/2017	
Salem	97306	Arsenic	ND	5/30/2017	
Turner	97392	Arsenic	ND	5/23/2017	
Salem	97305	Arsenic	ND	5/31/2017	
Salem	97317	Arsenic	0.0260	5/24/2017	
Lyons	97358	Arsenic	0.0079	5/31/2017	
Keizer	97303	Arsenic	ND	6/6/2017	
Salem	97305	Arsenic	0.0023	8/7/2017	
Marion	97325	Arsenic	ND	6/12/2017	
Salem	97305	Arsenic	0.0040	6/8/2017	
Lyons	97358	Arsenic	ND	6/14/2017	
Salem	97317	Arsenic	ND	7/24/2017	
Lyons	97358	Arsenic	0.0096	6/28/2017	

Keizer	97303	Arsenic	0.0025	6/23/2017	
Woodburn	97371	Arsenic	0.0037	7/10/2017	
Silverton	97381	Arsenic	ND	7/10/2017	
Salem	97317	Arsenic	ND	8/1/2017	
Salem	97302	Arsenic	ND	8/7/2017	
Salem	97305	Arsenic	0.0020	8/9/2017	
Salem	97305	Arsenic	0.0023	8/9/2017	
Salem	97317	Arsenic	ND	8/8/2017	
Salem	97317	Arsenic	ND	8/9/2017	
Salem	97317	Arsenic	ND	8/7/2017	
Salem	97305	Arsenic	0.0187	8/11/2017	
Salem	97301	Arsenic	0.0035	8/8/2017	
Salem	97306	Arsenic	ND	8/8/2017	
Turner	97392	Arsenic	ND	8/8/2017	
Brooks	97305	Arsenic	0.0100	8/3/2017	
Salem	97317	Arsenic	ND	8/9/2017	
Keizer	97303	Arsenic	ND	8/9/2017	
Salem	97305	Arsenic	0.0020	8/4/2017	
Salem	97317	Arsenic	ND	8/4/2017	
Brooks	97305	Arsenic	0.0050	8/3/2017	
Silverton	97381	Arsenic	ND	8/4/2017	
Salem	97305	Arsenic	0.0028	8/7/2017	
Salem	97317	Arsenic	ND	8/7/2017	
Turner	97392	Arsenic	ND	8/4/2017	
Silverton	97381	Arsenic	0.0031	8/9/2017	
Turner	97392	Arsenic	0.0030	8/4/2017	
Salem	97317	Arsenic	ND	8/3/2017	
Salem	97305	Arsenic	0.0032	8/10/2017	
Salem	97317	Arsenic	ND	8/11/2017	
Aumsville	97325	Arsenic	ND	8/14/2017	
Salem	97317	Arsenic	ND	8/7/2017	
Aumsville	97325	Arsenic	ND	8/3/2017	
Salem	97317	Arsenic	ND	8/8/2017	
Turner	97392	Arsenic	ND	8/4/2017	
Turner	97392	Arsenic	ND	8/7/2017	
Salem	97302	Arsenic	0.0291	8/11/2017	
Salem	97306	Arsenic	ND	8/10/2017	
Salem	97305	Arsenic	0.0101	8/11/2017	
Silverton	97381	Nitrate	3.36	4/27/2017	
Lyons	97358	Nitrate	0.51	4/27/2017	
Salem	97317	Nitrate	ND	4/17/2017	
Hubbard	97032	Nitrate	ND	4/21/2017	
Hubbard	97032	Nitrate	0.642	4/20/2017	
Stayton	97383	Nitrate	0.916	4/24/2017	
Lyons	97358	Nitrate	ND	5/3/2017	
Lyons	97358	Nitrate	ND	5/3/2017	
Silverton	97381	Nitrate	5.15	4/20/2017	

Silverton	97381	Nitrate	ND	4/28/2017	
Lyons	97358	Nitrate	ND	4/24/2017	
Lyons	97358	Nitrate	0.38	5/9/2017	
Gervais	97026	Nitrate	0.66	4/24/2017	
Lyons	97358	Nitrate	ND	4/28/2017	
Salem	97303	Nitrate	0.2	5/15/2017	
Aurora	97002	Nitrate	ND	4/27/2017	
Brooks	97305	Nitrate	0.215	5/15/2017	
Woodburn	97071	Nitrate	10.8	4/28/2017	
Gervais	97026	Nitrate	ND	5/3/2017	
Lyons	97358	Nitrate	ND	5/30/2017	
Lyons	97358	Nitrate	0.342	5/8/2017	
Lyons	97358	Nitrate	ND	5/12/2017	
Lyons	97358	Nitrate	ND	5/26/2017	
Salem	97305	Nitrate	ND	5/12/2017	
Salem	97317	Nitrate	ND	8/2/2017	
Salem	97317	Nitrate	1.36	5/12/2017	
Salem	97306	Nitrate	0.441	5/26/2017	
Salem	97306	Nitrate	0.443	5/15/2017	
Gervais	97026	Nitrate	ND	7/31/2017	
Lyons	97358	Nitrate	ND	5/29/2017	
Lyons	97358	Nitrate	ND	6/15/2017	
Salem	97306	Nitrate	ND	5/30/2017	
Turner	97392	Nitrate	8.21	5/23/2017	
Salem	97305	Nitrate	7.94	5/31/2017	
Salem	97317	Nitrate	ND	5/24/2017	
Lyons	97358	Nitrate	ND	5/31/2017	
Keizer	97303	Nitrate	2.53	6/6/2017	
Salem	97305	Nitrate	ND	8/7/2017	
Marion	97325	Nitrate	0.796	6/12/2017	
Salem	97305	Nitrate	ND	6/8/2017	
Lyons	97358	Nitrate	0.353	6/14/2017	
Salem	97317	Nitrate	ND	7/24/2017	
Lyons	97358	Nitrate	ND	6/28/2017	
Keizer	97303	Nitrate	1.53	6/23/2017	
Woodburn	97371	Nitrate	ND	7/10/2017	
Silverton	97381	Nitrate	4.48	7/10/2017	
Salem	97317	Nitrate	ND	8/1/2017	
Salem	97302	Nitrate	0.264	8/7/2017	
Salem	97305	Nitrate	ND	8/9/2017	
Salem	97305	Nitrate	ND	8/9/2017	
Salem	97317	Nitrate	ND	8/8/2017	
Salem	97317	Nitrate	0.601	8/9/2017	
Salem	97317	Nitrate	3.2	8/7/2017	
Salem	97305	Nitrate	ND	8/11/2017	
Salem	97301	Nitrate	0.2	8/8/2017	
Salem	97306	Nitrate	0.407	8/8/2017	

Turner	97392	Nitrate	ND	8/8/2017	
Brooks	97305	Nitrate	ND	8/3/2017	
Salem	97317	Nitrate	1.23	8/9/2017	
Keizer	97303	Nitrate	ND	8/9/2017	
Salem	97305	Nitrate	8.53	8/4/2017	
Salem	97317	Nitrate	2.2	8/4/2017	
Brooks	97305	Nitrate	ND	8/3/2017	
Silverton	97381	Nitrate	0.309	8/4/2017	
Salem	97305	Nitrate	0.85	8/7/2017	
Salem	97317	Nitrate	1.96	8/7/2017	
Turner	97392	Nitrate	0.643	8/4/2017	
Silverton	97381	Nitrate	ND	8/9/2017	
Turner	97392	Nitrate	0.327	8/4/2017	
Salem	97317	Nitrate	ND	8/3/2017	
Salem	97305	Nitrate	ND	8/10/2017	
Salem	97317	Nitrate	ND	8/11/2017	
Aumsville	97325	Nitrate	ND	8/14/2017	
Salem	97317	Nitrate	6.21	8/7/2017	
Aumsville	97325	Nitrate	2.96	8/3/2017	
Salem	97317	Nitrate	ND	8/8/2017	
Turner	97392	Nitrate	2.39	8/4/2017	
Turner	97392	Nitrate	ND	8/7/2017	
Salem	97302	Nitrate	ND	8/11/2017	
Salem	97306	Nitrate	ND	8/10/2017	
Salem	97305	Nitrate	ND	8/11/2017	

El arsénico en el agua de pozo: Lo que debe saber

El arsénico es un elemento que ocurre naturalmente y se encuentra en la corteza terrestre. No tiene color, olor o sabor. Cuando el agua fluye a través de ciertas formaciones de roca, el arsénico se puede disolver y ser llevado a los acuíferos subterráneos y al agua de su pozo. El arsénico es un peligro para la salud.

Debe analizar si hay arsénico en el pozo por lo menos una vez en la vida del pozo.

El arsénico y su salud

El consumo a largo plazo de agua con arsénico superior al estándar de agua potable puede aumentar el riesgo de problemas de salud de la piel, sistema circulatorio, sistema nervioso, pulmones y vejiga. Estos problemas de salud incluyen algunas formas de cáncer.

El arsénico y el agua de su pozo

La única forma de saber si tiene arsénico en el agua de su pozo es haciendo un análisis. Contáctese con un laboratorio autorizado para las instrucciones específicas de cómo recoger, guardar y enviar la muestra. La prueba le costará entre $30-$45. Para encontrar un laboratorio autorizado en Oregón, visite www.healthoregon.org/wells.

El arsénico es medido en partes por billón (ppb). También puede ser medido en miligramos por litro (mg/L). Por ejemplo, 10 ppb en lo mismo que 0.010 mg/L. El estándar seguro de agua potable (también llamado máximo nivel contaminante o MCL) para el arsénico es 10 ppb. Si su agua tiene niveles de arsénico mayores a 10 ppb (0.010 mg/L), debe cambiarse a agua de botella u otra fuente de agua potable segura y buscar opciones de tratamiento.

Para más información:

- Propietarios privados con preguntas relacionadas a salud, arsénico en su agua, mantenimiento del pozo y recomendaciones para el análisis llamar al
- 971-673-0977 o al correo electrónico domestic.wells@state.or.us.
- Para preguntas sobre opciones de tratamiento para su pozo doméstico, contáctese con el especialista de agua potable en el departamento de salud local (http://tinyurl.com/DWcontacts).

Interpretando los resultados del arsénico

Resultados del Arsénico	Uso del Agua	Recomendaciones
10 ppb o menor (0.010 mg/L o menor)	**SEGURO** para tomar, cocinar y todos los otros usos domésticos.	Analice el agua una vez cada tres años
Entre 10 y 99 ppb (0.010 y 0.090 mg/L)	**NO ES SEGURO** para tomar, mezclar en bebidas, cocinar, o lavar frutas y vegetales. **NO ES SEGURO** para que tomen las mascotas. **SEGURO** para todos los otros usos domésticos, incluyendo bañarse, lavar platos, lavar ropa, regar jardines.	No hierva el agua. Utilice agua de botella (o un sistema de filtración de agua aprobada) para tomar, cocinar y lavar frutas y vegetales. Utilice agua de botella para las mascotas. Supervise a los niños para ayudarles a evitar tragarse el agua mientras se bañan, cepillan los dientes, etc.
Entre 100 y 499 ppb (0.100 y 0.499 mg/L)	Las mismas restricciones anteriores. **NO ES SEGURO** para regar jardines. **SEGURO** para todos los otros usos domésticos.	Si usted tiene un sistema de tratamiento, analice el agua por lo menos una vez al año. Analice el agua sin tratamiento (unidad de tratamiento previo) por lo menos cada tres años.
500 ppb y superior (0.500 mg/L y superior)	**NO ES SEGURO** para todos los otros usos domésticos.	Contáctese con el especialista de agua potable local.

OHA 8341 (3/16)

Este documento puede ser provisto en un formato alterno para las personas con discapacidad o en un lenguaje además del inglés para personas con destrezas limitadas en el inglés. Para solicitar esta publicación en otro formato o lenguaje, contáctese con el Programa de Seguridad en el Pozo Doméstico al 971-673-0977 o al 711 para TTY.

Oregon Health Authority
DIVISIÓN DE SALUD PÚBLICA
SALUD PÚBLICA DEL MEDIO AMBIENTE

DOMESTIC WELL SAFETY PROGRAM

Nitrato en el agua de su pozo: Lo que debe saber

El nitrato es una forma natural de nitrógeno que no tiene color, olor o sabor. Es un componente esencial de seres vivos. A pesar que el nitrato puede ocurrir naturalmente en el agua subterránea, a menudo los niveles altos son asociados con las actividades humanas. El nitrato es una parte importante del estiércol animal, aguas servidas y fertilizantes comerciales. El nitrato en el agua de pozo es un peligro potencial para la salud.

Debe analizar por nitrato por lo menos una vez al año.

El nitrato y su salud

La presencia de nitratos en el agua potable pueden causar una variedad de efectos a corto y largo plazo. Los infantes están particularmente bajo un fuerte riesgo del síndrome de bebé azul, algunos casos resultando en muerte.

El nitrato y el agua de su pozo

La única forma de saber si el agua de su pozo tiene nitrado es analizándola. Contáctese con un laboratorio acreditado para instrucciones específicas de como colectar, guardar y enviar la muestra. El análisis costará entre $20-$40. Para encontrar laboratorios en Oregón, visite www.healthoregon.org/wells.

El nitrato es medido en partes por millón (ppm) o miligramos por litro (mg/L) (1mg/L = 1 ppm). El nitrato ocurre naturalmente en el agua de la superficie y subterránea, en concentraciones hasta 1-2 mg/L no es dañino en estos niveles. El estándar de agua potable segura (también llamada nivel máximo de contaminante o MCL) de nitrato es 10 mg/L. Si los niveles de su agua son mayores de 10 mg/L, debe cambiarse a agua en botella o a otra fuente de agua potable segura y buscar opciones de tratamiento.

Para más información:

- Propietarios privados con preguntas relacionadas a salud, mantenimiento del pozo y recomendaciones para el análisis llamar al l 971-673-0977 o al correo electrónico domestic.wells@state.or.us.
- Para preguntas sobre opciones de tratamiento para su pozo doméstico, contáctese con el especialista de agua potable en el departamento de salud local (http://tinyurl.com/DWcontacts).

Interpretando los resultados de nitrato

Resultados de nitrato	Uso de agua	Recomendación
10 ppm (mg/L) o menor	**SEGURO** para todos los usos. Concentraciones mayores de 4 ppm pueden indicar contaminación.	Analice el agua por lo menos una vez al año.
Entre 11 y 40 ppm (mg/L)	**NO ES SEGURO** para bebés o mujeres que están o van a embarazarse. **SEGURO** para uso a corto tiempo* por adultos saludables (excepto mujeres embarazadas), mascotas y ganado. **SEGURO** para otros usos domésticos, incluyendo bañarse, lavar platos, lavar ropa o regar el jardín.	Utilice el agua en botella o agua de una fuente segura. No hierva el agua. Supervise a los niños para ayudarles a evitar tragarse el agua mientras se bañan, se cepillan los dientes, etc. Para consejos sobre el tratamiento, contáctese con un especialista local de agua potable.
Más de 40 ppm (mg/L)	**NO ES SEGURO** para tomar. **SEGURO** para otros usos domésticos, incluyendo bañarse, lavar platos, lavar ropa o regar el jardín.	Para consejos sobre el tratamiento, contáctese con un especialista local de agua potable.

*El uso a largo plazo representa un riesgo para todos. No utilice para infantes y mujeres quienes están o pueden embarazarse.

OHA 8342 (6/16)

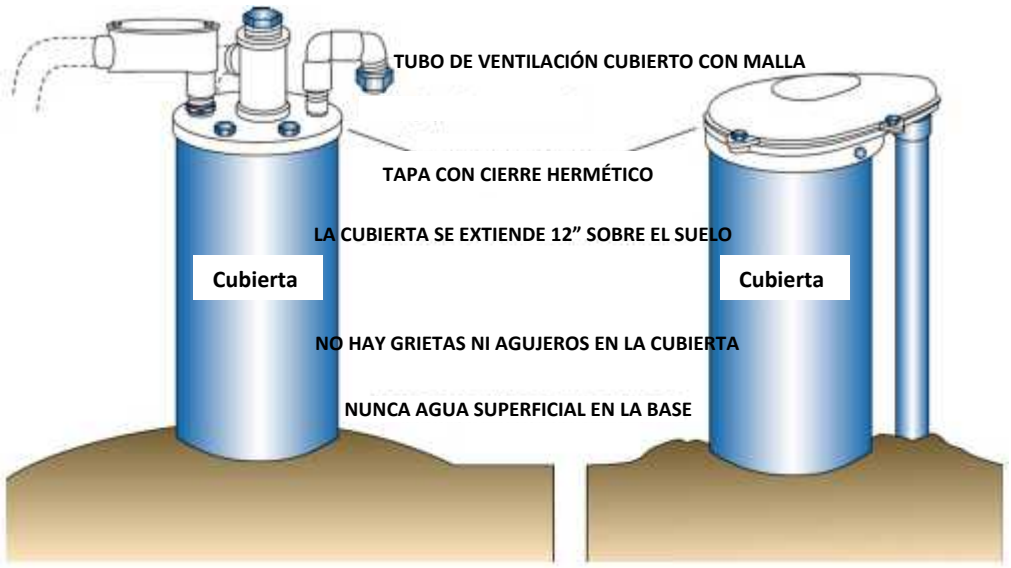
Este documento puede ser provisto en un formato alterno para las personas con discapacidad o en un lenguaje además del inglés para personas con destrezas limitadas en el inglés. Para solicitar esta publicación en otro formato o lenguaje, contáctese con el Programa de Seguridad en el Pozo Doméstico al 971-673-0977 o al 711 para TTY

Oregon Health Authority
DIVISIÓN DE SALUD PÚBLICA
SALUD PÚBLICA DEL MEDIO AMBIENTE

DOMESTIC WELL SAFETY PROGRAM

Lista de Control del Pozo

1. ¿Sabe usted la ubicación de su pozo, fosa séptica, y campo de drenaje?
2. ¿El pozo y los sistemas sépticos fueron construidos dentro de los últimos 20 años?
3. ¿Es su pozo más profundo que 50 pies?
4. ¿En los últimos tres años ha hecho pruebas del agua?
5. ¿En el último año, ha inspeccionado su pozo? Dos tipos de pozos comunes y los detalles de inspección están indicados a continuación:



6. ¿Tiene cuidado de mantener lejos del pozo las fuentes de contaminación?
    - No hay químicos en el cuarto de la bomba
    - Los animales confinados están excluidos del área cerca del pozo
    - Los tanques de combustible, mezclas de pesticidas, y estiércol están por lo menos a 50 pies de distancia y en declive del tanque
7. ¿Está seguro que no hay pozos viejos, sin uso en su propiedad?
8. ¿Por lo menos ha sido 5 años desde que su pozo séptico fue bombeado e inspeccionado?
9. El área del campo de drenaje ¿está protegido del peso de animales grandes, vehículos, y libres de lugares mojados y de hedor?
10. ¿Se siente usted confiado que sabe cómo mantener el sistema del pozo y el sistema séptico para proteger la calidad de su agua potable y prevenir reparaciones costosas?
11. ¿Considera la calidad del agua cuando selecciona prácticas de administración en su propiedad? ¿Se siente cómodo que el porcentaje de fertilizante, pesticida e irrigación no están amenazando la calidad del agua?

Si su respuesta es ***NO*** a cualquiera de estas preguntas, lea la información indicada en la página en el internet para conocer más sobre cómo puede proteger al suministro de agua potable, la salud de su familia y su inversión.

Domestic Well Safety:

Well and Groundwater Basics

The class is designed for domestic well owners to learn the basics of groundwater and water well stewardship. Learn steps to protect the health of your family, neighbors, animals, your property investment, and the safety of groundwater resources.

The class is free but space is limited.

When: April 26th, 2017 6:30pm to 8pm

Where: Wellspring Conference Center, 1475 Mt Hood Ave, Woodburn

RSVP: 503-588-5407 or gdeblase@co.marion.or.us
More information at: http://www.co.marion.or.us/HLT/PH/EHS/

Marion County Environmental Health in partnership with OSU Extension Service

Marion County
OREGON
Health Department

OSU
Oregon State University
Extension Service

Free Domestic Well Testing

Marion County Environmental Health is offering free well testing for arsenic and nitrate.

We have a limited amount of tests available and our goal is to target the areas of Marion County where these contaminants have been identified. The target areas of the county are:

- North County: including North Salem, Brooks, Gervais, Hubbard, Woodburn and Aurora
- East County: including Gates, Idanha, Detroit, Mill City and Lyons

The free testing is available to property owners in Marion County who get their drinking water from a private/domestic well.

Contact us at **503-588-5346** to participate.

More information at: http://www.co.marion.or.us/HLT/PH/EHS/

Marion County
OREGON
Health Department

Domestic Well Safety - Public Service Announcements

Arsenic:

Do you know if your well water is safe? Arsenic is a naturally occurring element that has been detected in some of the groundwater in Marion County. Drinking water with high levels of arsenic can increase the risk of many health problems, including cancer. Private wells are not regulated, so all testing is the responsibility of the well owner. It is recommended that all private wells be tested for arsenic at least once. For more information, contact the Marion County Health Department at 503-588-5436 or http://www.co.marion.or.us/HLT/PH/EHS/ .

Total Coliform:

Do you know if your well water is safe? Testing for coliform bacteria is the most common way to find out. A detection of total coliform may indicate the well needs maintenance or it may be subject to surface contamination. If E. coli is detected, the well may be contaminated with fecal pollution and is not safe to drink. Private wells should be tested for coliform every year. For more information, contact the Marion County Health Department at 503-588-5436 or http://www.co.marion.or.us/HLT/PH/EHS/ .

Well Protection:

Well water can easily be contaminated by household chemicals, oil, gas and pesticides. Do not store these items in the well house or near the well. Contact your local garbage collection company about oil recycling and hazardous waste disposal programs. Never dump these chemicals on the ground or pour them down the drain. For more information on protecting your well water, contact the Marion County Health Department at 503-588-5436 or http://www.co.marion.or.us/HLT/PH/EHS/ .

Well Flooding:

Flood water can contaminate private wells. It is the responsibility of the owner to monitor their well water quality. Don't use water from a flooded well for any purpose until you've talked with proper health authorities. Stay away from the well pump while flooded to avoid electric shock. Have the water tested to make sure it's safe. Just because it looks and smells safe, doesn't mean it actually is. For more information, contact the Marion County Health Department at 503-588-5436 or http://www.co.marion.or.us/HLT/PH/EHS/ .

Nitrate:

Have you tested your well for nitrate? Drinking water that has high levels of nitrate can increase the risk of many health problems. Nitrates are associated with septic systems and commercial fertilizers. You

should test your well water for nitrate and if high levels are found then you should drink bottled water, find a new source or install treatment. Do not boil the contaminated water. Boiling can increase nitrate levels. For more information, contact the Marion County Health Department at 503-588-5436 or http://www.co.marion.or.us/HLT/PH/EHS/ .

Well Testing and Maintenance:

Even if your private well water looks and tastes great your well still needs maintenance. Some contaminants have no smell, taste or color so you should get your well water tested once per year. Watch for changes in your surroundings such as construction or flooding and test accordingly. Check the wellhead regularly to make sure it is sealed. You should keep a record of all tests and repairs that happen to your well. For more information, contact the Marion County Health Department at 503-588-5436 or http://www.co.marion.or.us/HLT/PH/EHS/ .