Successes and Challenges Regarding Public Health Outreach to Well Owners in Rural Communities

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Arizona Private Wells
Types of Wells

Commercial: 416
Domestic: 89,286
Industrial: 646
Irrigation: 2,616
Mining: 352
Municipal: 216
Stock: 9,988
Utility: 95
Well Owners Workshops for Arizona’s Residents

**Presenters**
Janick Artiola, Ph.D., UA Cooperative Extension Water Quality Specialist
Gary Hix RG, retired well driller and past president of the Arizona Water Well Association

**Partner**
Arizona Department of Health Services (ADHS)

**Other (present-Past) Partners/Sponsors:**
UA-Superfund Research Program
ATSDR, EPA, ADEQ, UA-WRRC
University of Arizona Cooperative Extension

• **Mission:** To engage with people through applied research and education to improve lives, families, communities, the environment and economies in Arizona and beyond

• **Offices** in all 15 AZ counties and 8 Indian Reservations

https://extension.arizona.edu/about
Workshops Promotions
August 30, 2016
For Immediate Release
Jeff Schalau
County Director
Agent, Agriculture and Natural Resources
University of Arizona Cooperative Extension
840 Rodeo Dr. RC
Prescott, AZ 86303
(928) 445-6590 ext. 224

Domestic Well Owner’s Workshop

Do you have a private well? Do you drink your well water? Have you tested your well water quality lately? These are important questions that could impact the health and well-being of you and your family. The University of Arizona Cooperative Extension along with the Arizona Dept of Health Services, is offering a free workshop that will teach private well owners about geology and aquifers, regulations, well registration, well operation and maintenance, naturally occurring contaminants, when and how to sample well water, and home treatment options for your well water. Presenters are Dr. Janick Artilo, U of A Cooperative Extension Water Quality Specialist, and Mr. Gary Hix, Registered Geologist and Past President of the Arizona Well Assn. Water-related publications will be distributed free of charge to participants of this workshop.

The Domestic Well Owner’s Workshop will be held on Saturday, October 1st, 1:00pm to 4:00pm, at the Prescott Rodeo grounds, 840 Rodeo Drive, Bidg C. Prescott. Space is limited at this free workshop. Pre-registration is required – call or e-mail Lydia Watts at the U of A Cooperative Extension office in Prescott at 928-445-6590 ext. 221 or lydiawatts@email.arizona.edu. Persons with a disability may request a reasonable accommodation, such as sign language interpreter, by contacting 928-445-6590 ext. 221. Requests should be made as early as possible to arrange the accommodation.

Learn how to care for your well

Water Wells are investments that provide households with one of the key elements of survival: safe drinking water. In order to ensure water safety, it’s important that all well owners become knowledgeable on the best way to care and maintain their well and have a basic understanding of issues that arise along with owning a well. An estimated 10,000 households are currently using domestic wells for their water supply in Arizona. That is about 5 to 7 percent of the state’s population, and thousands of new wells are created each year. Are you one of the many households in Cochise County with a Domestic well, and want to know more about your well? Register now for the Water Wise September program “Arizona Domestic Well Owner’s Workshop” presented by Dr. Janick Artilo, University of Arizona Cooperative Extension Water Quality Specialist, and Gary Hix, past President of the Arizona Water Well Association, on Saturday, September 24 from 9 am to noon. The Arizona Department of Health Services, co-sponsor of this workshop, will be giving a special presentation on how you can be involved in a biomonitoring project, as well as letting you know how you can receive free water testing for heavy metals. The program will be held at the University of Arizona — Sierra Vista Campus, 1440 Columbus Ave, Guth Hall, Public Meeting Room. This program is free of charge and open to the public. Dr. Janick Artilo and Gary Hix have created an extensive workshop, covering the topics of water sources, regulations, domestic well maintenance, and water treatment. You will be introduced to Arizona Geology and aquifers, learn basic domestic well facts, as well as information on regulations, well registration, and Cochise County issues. Additionally, they will speak about naturally occurring contaminants, aquifer vulnerability, wellhead and source water protection, and what to sample for, and home water treatment options for your well water. Attendees will receive a hard copy of a brochure containing all the information presented at the workshop. In addition, a USB thumb drive will be given to all attendees with electronic versions of the Well Owner’s Guides and the Arizona Water Well Association. The guides are available on the Water Well Registry’s website, the Water Well Association, and many other water-related University of Arizona Cooperative Extension publications.

Register now to reserve your spot in this workshop! Water safety is important, so you won’t want to miss the vital information provided at this free event. To REGISTER for the Arizona Domestic Well Owner’s Workshop, contact Water Wise at 458-8278, ext. 2141 or email valeriavd@email.arizona.edu.

For more information on wells, native plants, rainwater harvesting, and other topics promoting water conservation, you can visit Water Wise’s “Links” page at waterwise.arizona.edu. Water Wise is a Unit of the University of Arizona Cooperative Extension program whose Partners are Cochise County, the City of Sierra Vista, Ft. Huachuca, the Upper San Pedro Partnership, and Sulphur Springs Valley Electric Cooperative.
Workshops Completed (since 2016)

Attendees: 580

Total # of Workshops since 2008: 44
Workshop Topics Covered during Three-Hour Period

1. Introduction to Aquifers
2. Well Components, Ask a driller
3. Water Quality and Treatment Options
AZ Biomonitoring Project
Through mouth  Excreted through urine
### Metals Tested

#### Urine
- Arsenic
- Cadmium
- Manganese
- Mercury
- Selenium
- Uranium

#### Water
- Antimony
- Barium
- Beryllium
- Chromium
- Cobalt
- Copper
- Lead
- Molybdenum
- Nickel
- Silver
- Thallium
- Vanadium
- Zinc
- (+As, Cd, Hg, Mn, Se, U)

**“Biomonitoring” Metals**

**“200.8” Metals**
Successes

- Post-Workshop Anonymous Surveys (2017)

  “My Expectations Met”: Yes (94%)

  Overall Experience: 9.2
Challenges
Other Partners
USB Drives
Publications Include (thumb drive):

http://extension.arizona.edu/pub
Protect Your Health

What are the most common contaminants in Arizona groundwater?

**Arsenic**
Arsenic may be naturally present due to arsenic-containing rocks, which can leach into groundwater. High arsenic levels are found throughout Arizona.

**Bacteria**
Bacteria can be present due to a septic system leak or animal waste. Test water for “total coliform bacteria,” which will indicate the presence of bacteria that can harm human health.

**Fluoride**
Fluoride is present in most water sources from fluoride-rich minerals. It is particularly important to test your well water for fluoride if you have children.

**Nitrates**
Nitrates can be present due to agricultural activities, septic systems, or natural sources. It is particularly important to test your well water for nitrates if you have children.

**Uranium**
Uranium and other radioactive elements exist in groundwater. Uranium is one of the easiest and most inexpensive elements to test for in well water.

When should I get my well tested? What should I test for?

<table>
<thead>
<tr>
<th>All New Wells</th>
<th>Once a Year</th>
<th>Every 5 Years</th>
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<tbody>
<tr>
<td>• Arsenic</td>
<td>• Bacteria</td>
<td>• Arsenic</td>
</tr>
<tr>
<td>• Bacteria (total coliform)</td>
<td>• Fluoride</td>
<td>• Fluoride</td>
</tr>
<tr>
<td>• Fluoride</td>
<td>• Lead</td>
<td>• Lead</td>
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<td>• Nitrates</td>
<td>• Nitrates</td>
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<tr>
<td>• TDS*</td>
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<td>• TDS*</td>
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<tr>
<td>• Uranium</td>
<td></td>
<td>• Uranium</td>
</tr>
</tbody>
</table>

*Total Dissolve Solids
Arizona Labs Certified for Drinking Water Samples

Apache County
Global Environmental Consulting
Four Apache County Road 8235
Concho, AZ
928-537-7755

Coconino County
Nortest Analytical
2400 E. Huntington Drive
Flagstaff, AZ
928-774-2312

Inner Basin Environmental
2355 N. Steve Blvd
Flagstaff, AZ
928-774-2312

Maricopa County
Aerobiology Laboratory Associates Inc.
2228 W Northern Ave
Phoenix, AZ
602-441-3700

Apex Environmental Laboratory
2105 S. 48th Street, Ste 102
Tempe, AZ
602-437-0762

Aquatic Consulting & Testing
1525 W. University Drive, Ste 106
Tempe, AZ
480-921-8044

Fiberquant Analytical Services
5025 S 33rd St
Phoenix, AZ
(602)-276-6139

Legend Technical Services
17631 N. 25th Avenue, Phoenix, AZ
602-324-6100

Statewide Disinfection Services
344 S. Hawes Road
Mesa, AZ
480-981-8859

Nestle Waters North America
Phoenix, AZ
602-547-3834

TestAmerica – Cotton Center
4625 E. Cotton Center Boulevard, Ste 189
Phoenix, AZ
602-437-3340

Mohave County
Mohave Environmental Laboratory
2850 Landon Drive, Ste A&B
Bullhead City, AZ
928-754-8101

Pima County
Complete Analytical Services
4455 S. Park Avenue, Ste 110
Tucson, AZ
520-884-5811

Legend Technical Services
4585 S. Palo Verde
Tucson, AZ
520-327-1234

Turner Laboratories, Inc
2445 N. Coyote Drive, Ste 104
Tucson, AZ
520-882-5880

Yavapai County
Bradshaw Mountain Environmental Inc.
3050 N Windsong Dr. Ste 105
Prescott Valley
928-778-4510

Yuma County
Agri-Trend Lab & Consulting
3337 33rd Place Yuma, AZ
928-317-1127

Fresh Terra Services
1929 South Arizona Avenue
Yuma, AZ
928-257-3601

Rev. 05/18
Well Owner Website

Well Water Quality - Home

- Water Quality Data for Exempt Wells in Arizona

- Test Your Well
  Information on private well testing.

- Rules & Regulations
  Information to understand the rules that apply to your well or property.

- Emergencies
  What to do during/after a flood, wildfire, or other emergency.

- Maintain Your Well
  Tips to keep your private well healthy and germ-free.

- Resources
  Resources and materials for well owners.

In Arizona, on-site and public water systems are monitored and regulated by the Arizona Department of Environmental Protection.
THANK YOU

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