

# AzOWRA Arizona Onsite Wastewater Recycling Association

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Dedicated to the Education of the Onsite Wastewater Industry and the Public

## First Flush

Volume 6, Issue 1  
Jan—March 2013

## AzOWRA Annual Membership Dinner Meeting

The 2013 Annual Membership Dinner was held January 13, 2013 at the Cantina Larado in Scottsdale. Twenty-two members and spouses attended and enjoyed a delicious meal. Members attending traveled to Scottsdale from Payson, Sierra Vista, Tucson, Prescott, and the greater Phoenix area. Election ballots were tallied and new officers and Board Members at Large were announced. Your new 2013 Board of Directors are listed below. Jake Garrett, P.E., Gila County Unit Manager, and OWAC Chairman, gave a presentation on what the OWAC committee is doing. There is an OWAC update on pages 3 & 4 of this newsletter.



### Meet Your 2013 Board of Directors

#### Executive Board of Directors

David Bartholomew, President	Kathryn Mills, Secretary
Brian Chiordi, Vice-President / President Elect	Lou Brown, Treasurer
Dustin Lewis, Past President	

#### Board Members At Large

Richard Bartholomew, P.E.	Jake Garrett, P.E.	Justin Ramsey, P.E.
Brian Bishop	Jeremy Johnson	Richard Sinclair
Suzanne Ehrlich, R.S.	Dawn Long	
Kitt Farrell-Poe, Ph.D.	John Mitchell	

The Board of Directors hold conference calls on a quarterly basis. The Executive Board hold conference calls between Board of Directors meetings. Anyone who is a member of AzOWRA is welcome to participate in the Board of Directors Conference Calls. If you are interested in participating, contact Kathy Mills at [kmills@millseng.com](mailto:kmills@millseng.com) to make arrangements.

## Memberships Are DUE for 2013

If you haven't already renewed your **AzOWRA** membership for 2013, the time to do so is **NOW!** Invoices were emailed to the 2012 membership in December and reminder invoices were sent out in February. Your membership will provide you with special benefits for the upcoming Education Conference and keep you in the network of what is happening in **AzOWRA**. A membership application and Code of Conduct is included in this newsletter on pages 8 & 9. **Join Today!!**

### AzOWRA Meeting Calendar

For Board Meeting Call-in  
Phone Number  
Contact Kathy Mills:

[kmills@millseng.com](mailto:kmills@millseng.com)

May 22, 2013  
6:00 pm  
Executive Board  
Conference Call

June 10, 2013  
1:30 pm  
Board of Directors

June 27-28, 2013  
5th Educational  
Conference & Exhibition  
Radisson Woodlands Hotel  
Flagstaff, AZ

### Industry Calendar of Events

March 22-23, 2013  
UA/NAWT Soil & Site Evaluation Class  
for Onsite Wastewater Treatment  
Systems  
Maricopa Agricultural Center  
37860 W Smith Enke Rd.  
Maricopa, AZ 85138

May 13 & 14, 2013  
In-depth Technology Education  
ATUs & Media Filters  
Subsurface Drip Dispersal  
Pima County Conference Room  
1313 S Mission Rd.  
Tucson, AZ

May 1-3, 2013  
86th Annual AZ Water  
Conference & Exhibition  
Renaissance Glendale Hotel  
9495 W. Coyotes Boulevard  
Glendale, AZ

Questions, comments or to remove your name from our mailing list, please contact [suzanne.ehrlich@co.yavapai.az.us](mailto:suzanne.ehrlich@co.yavapai.az.us)

## NESC Has More Than 1,400 Free Products

Information provided by  
**Kitt Farrell-Poe, Ph.D.**  
Water Quality Extension Specialist and Professor  
University of Arizona

### Online Shopping Cart Allows Easy Downloads

The National Environmental Services Center (NESC) reminds readers that we have an online shopping cart allowing our customers to download free PDFs. More than 1,300 products are currently available, including case studies, design manuals, and NESC's popular *Tech Briefs*. View the shopping cart by going to [www.nesc.wvu.edu/ecommerce/](http://www.nesc.wvu.edu/ecommerce/)

"What's great about this cart is that, while it offers many, many free products, it is very easy to use," says Jeanne Allen, NESC's business manager. "Products come from multiple sources and are searchable in the cart by key word. Visit our website where you can shop for your water and wastewater informational needs."

Among the free downloads are the Montana Water Center CDs (e.g., Operator Basics, Virtual System Explorer, Water Quality Expedition), which not only provide great training but are recognized for CEUs in various states.

**AzOWRA**  
Arizona Onsite Wastewater  
Recycling Association

## 5th Educational Conference & Exhibition

**The theme of the  
2013 Educational  
Conference is**

**Operation &  
Maintenance of  
Onsite Wastewater  
Systems**

**And remember, if  
you need  
Continuing  
Education Hours,  
this program is  
designed to meet  
your requirements.**

For more information contact:  
Suzanne Ehrlich,  
AzOWRA Conference Chairman  
[suzanne.ehrlich@co.yavapai.az.us](mailto:suzanne.ehrlich@co.yavapai.az.us)



**Recognized for  
Continuing Education  
Hours & PDH**



**June 27 & 28, 2013  
Flagstaff, Arizona**



# **OWAC (Onsite Wastewater Advisory Committee) Update:**

**Article submitted by Jake Garrett, P.E., OWAC Chairman**

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ADEQ's Onsite Wastewater Advisory Committee (OWAC) was reformed in January 2012. This action was prompted by requests from several members of the public who discussed the benefits to ADEQ's onsite program that could be provided by a public group of this type. Notable among those urging the reformation of OWAC are Lou Brown, Richard Sinclair, Dick Bartholomew and Jack Bale, all AzOWRA members. Committee size and makeup were discussed at initial public pre-formation meetings. Nominations were then requested through multiple widely distributed ADEQ e-mail lists to individuals and organizations that in turn passed on the nomination requests to their membership. Fifteen OWAC members were selected by ADEQ from those nominated. The membership represents all disciplines within the onsite wastewater industry, all sizes of areas (populous and rural areas) and is distributed across Arizona. Original OWAC members were: Suzanne Ehrlich, Dr. Kitt Farrell-Poe, Stu Spaulding, Dawn Long, Edwin Swanson, Richard Sinclair, Lowell Fagen, Paul Miller, Jake Garrett, Dustin Lewis, Justin Ramsey, Dr. Paul Trotta, Richard Bartholomew, Charlie Moses and Bryan Chiordi.

Richard Bartholomew was elected as the initial OWAC Chairman and Jake Garrett as the Vice-Chair each for a term of one year. Since its formation Stu Spaulding, Dustin Lewis and Charlie Moses have resigned from OWAC. Brian Bishop has been selected to replace Stu Spaulding. Nomination periods for the remaining two (2) open positions have now closed and the replacement members are expected to be named shortly. For the calendar year 2013 Jake Garrett was elected Chairperson of OWAC, after Dick Bartholomew asked not to be considered following his fall and Brian Bishop was elected Vice Chair. The immediate mission given to OWAC was

- Advise ADEQ on how to streamline and improve the Proprietary Product Listing (PPL) process and
- Present ADEQ with a revised Onsite Rule as a starting point for a formal rule making. OWAC first addressed the tasks of organizing itself, determining how business was to be conducted, learning the Open Meeting Law and determining how to comply with it.

OWAC first addressed the tasks of organizing itself, determining how business was to be conducted, learning the Open Meeting Law and determining how to comply with it. As a starting point it has been agreed that **"all OWAC recommendations are based on the understanding that our charge is to protect public health and the environment."**

## **OWAC Committees:**

- A PPL Subcommittee was formed with Stu Spaulding as Chair. After 2 months Stu resigned and Suzanne Ehrlich stepped in as Chair and remains so at this time. Presently there are multiple manufacturers that have volunteered to have the PPL committee follow their product through the listing process from start to finish. The committee has researched the Proprietary Product process in several states and is evaluating the current AZ process relative to those in other states. This evaluation is also considering the role ADEQ should play in the process.
- An A316 Subcommittee is operational with Ed Swanson acting as its Chair. This committee is addressing rule changes that will be needed so that this program can fulfill its intended purpose. There is an ACDEHSA Report of Inspection Form committee operating separately so the A316 subcommittee is not including forms in its discussions.
- Paul Miller is the Chair of a Public Participation and Education Subcommittee. Public outreach and involvement has been a topic at every meeting and continues to be one of the main focus points of OWAC. As we move forward it is obvious that educating the public about onsite systems and the owner's responsibilities is crucial to our industry's success.

## **OWAC Update Continued:**

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- Brian Chiordi is Chair of the Operations and Maintenance Subcommittee. This committee is working to develop rationale for ongoing O & M for onsite systems of all types and a consistent method of implementing the recommended O & M.
- Major discussions have been held on
  - Performance of systems with gray water removed from the waste stream.
  - Gray water systems and the relationship of ADEQ rules to IRC building codes
  - Changing the wastewater indicator organism from Total Coliform to Fecal Coliform or e-coli. This move is being considered to bring AZ more in alignment with national testing agencies as well as the national trend toward Fecal Coliform or e-coli as the preferred indicators in the drinking water environment. Joelle Wirth is heading a group that will develop a recommendation for OWAC consideration.
  - Nitrogen pollution and contamination in AZ ground waters. In addition the question “How nitrogen can be addressed as old systems with flows of 3,000 gpd to 20,000 gpd want to grow or portions of their overall system begin to fail” is being discussed.
  - Splitting the 4.02 permit into treatment and disposal components to bring consistence to all Type 4 General Permits.

At the November OWAC meeting the committee voted to request ADEQ to provide funding for a facilitated 2-day Rule Workshop to be held February 4 & 5, 2013, in Phoenix. The objective of the workshop was for regulators and industry professionals in attendance to establish the

- Overall direction for the rule to take to be ahead of Arizona and National trends,
- Identify major issues that are critical to address, and
- Quickly move through local barriers, history and preconceived notions to reach a general consensus on the ingredients for the next rule change.

OWAC membership recognized the value this workshop would (and did) provide by laying the groundwork for a rule change effort that will be beneficial to the regulated public, the environment and those charged with protecting the environment and the public interest.

Every citizen and wastewater professional is encouraged to participate in the OWAC and subcommittee meetings. Participation can be in person at the ADEQ building in Phoenix or by teleconference. OWAC meetings are held on the 3<sup>rd</sup> Friday or every month. You can get on the notification list by e-mailing David Burchard [db2@azdeq.gov](mailto:db2@azdeq.gov) and requesting to be on the OWAC notification list.

**Please Participate! Your input counts!**

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The OWAC meetings for the remainder of this year are the third Friday of every month. The meetings currently have a 2 hour open discussion from 8 am to 10 am and then a formal meeting with motions, etc. from 10:30 am to 12:30 pm. Meetings are held in Room 3175 at the ADEQ Building at 1110 W. Washington, Phoenix, AZ 85007.

Subcommittees set their own meetings and they are normally not more than 1 month in advance. If anyone is interested in receiving information about these meetings, contact David Burchard [db2@azdeq.gov](mailto:db2@azdeq.gov) and requesting to be on the OWAC notification list.

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# Cesspools: Water Quality and Your Property Value

## The Hard, Cold Facts about Cesspools:

Cesspools have been around for decades. And they have also been a problem for the property owners and regulators alike. This article shows what one county in Arizona is doing to address this issue.

Information provided by  
**Jake Garrett, Manager**  
Gila County Wastewater Department

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A cesspool is an outhouse with running water. Cesspools discharge untreated waste into the soil that will ultimately contaminate the ground water. **Cesspools have not been approved for use in Arizona since 1976 because they are a major source of ground water contamination.** No permits for the construction of new cesspools have been issued since that time.

Cesspools may not be repaired in any way. When a cesspool fails it must be replaced by an approved Onsite Wastewater Treatment and Disposal System or the property must cease to be occupied. Replacement is very difficult or impossible due to small lot size, poor soils, proximity to streams and other severe lot constraints.

In current ADEQ regulations cesspools are not a permitted method of wastewater treatment and disposal and are prohibited expressly under R18-9-A309(A)(4) and R18-5-408(D). Because of this fact many financial institutions are not lending on properties serviced by a cesspool.

### **Cesspool Definition:**

Underground pit into which raw household wastewater is discharged and from which the liquid seeps into the surrounding soil; may or may not be partially lined.

### **How a Cesspool Functions:**

A cesspool is a covered hole or pit for receiving sewage from a house. Another way of thinking about a cesspool is that it is an outhouse with running water. Usually the walls are constructed out of concrete, brick or concrete blocks and the top cover is usually a poured concrete slab or timbers. The constructions of the sidewalls are loose to allow the effluent water to penetrate through the holes, allowing the water to pass into the native soil while the solids build up in the pit.

This solid waste, very similar to what you see in outhouse pits, may partially crumble into smaller pieces over time and be partially carried into the environment in a totally untreated state by the new liquids entering the cesspool. This material is a host for many disease-causing viruses, bacteria, and parasites. Unlike septic systems, cesspools provide no treatment of the raw sewage and thus discharge untreated human waste into the soil and ultimately contaminate the ground water.

By contrast, septic systems remove 100% of the disease-causing viruses, bacteria, and parasites. In a properly designed and installed septic system the tank retains 60 to 70% of the solids, oil, and grease that pass into the system and provides some treatment. The partially treated wastewater is then discharged into the drainfield (leach lines or leach areas), where the surrounding soil provides final treatment of the sewage prior to its discharge into the environment.

### **Cesspools in Gila County:**

Cesspools were the preferred method of waste disposal in Gila County through the late 1960's. At that time, a transition to installation of septic systems started and by 1984 all permitted installations were septic systems. Based on US Census 2000 information, it is estimated that there are nearly 3,000 cesspools still in operation in Gila County. Most properties utilizing cesspools for human waste disposal are located in dense unincorporated areas in southern Gila County and the forest subdivisions of northern Gila County, Tonto Basin and Young. Dense from an on-site sewage system point of view means greater than 2 homes per acre. Most of these densely populated areas have 8-10 homes per acre. Many of

## Cesspools Continued:

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these areas are along and very close to flowing streams and are major contributors to stream pollution.

### **Cesspool Failure:**

When a cesspool's lid, sides or structural members deteriorate or collapse and sewage comes to the surface or backs up into the home, it is determined to have failed and must be corrected immediately. Possible corrective actions include:

- Ceasing use of the home or
- Install an appropriate wastewater treatment system.

Most cesspools are located on extremely small lots. In addition, these lots usually have very poor soil conditions and steep slopes and/or large retaining walls and may be very near running streams. *These conditions will almost always preclude installation of a conventional septic system.* In many cases installation of a more costly alternative sewage treatment system that treats sewage to a much higher degree, requires less disposal area and overcomes many site specific obstacles will not be possible.

### **Arizona Department of Environmental Quality (ADEQ) Cesspool Statement:**

"ADEQ recognizes that a number of residential cesspools remain in operation in Gila County and across the state. However, since their operation is generally prohibited and .... They unacceptably endanger water quality and the public health and safety ... their continued operation should not be encouraged. ADEQ believes that home inspectors and on-site transfer inspections that may occur should encourage potential buyers to require the installation of a permitted facility."

### **Gila County Policy Statement**

The current Gila County Wastewater Department policy regarding **waste systems installed prior to 1976** is stated in the Gila County Health Department letter dated 12/9/1996 and partially quoted here:

"**Any** system that was installed prior to 1976 including but not limited to cesspools, homemade septic tanks, or other sewage disposal hybrid devices would be grandfathered in until these "systems" fail or the residence plumbing is modified."

In support of this policy the following practices were implemented:

### **Nuisance Complaint Investigation:**

Should failure be discovered through the complaint process, while investigating a possible Environmental Nuisance or during any normal business activity undertaken by Gila County, the failure must be immediately corrected. Possible corrective actions include:

- o Ceasing use of the home or
- o Install an appropriate wastewater treatment system.

**(Failure** means any structural or hydraulic failure and is evidenced by such things as collapsed lids, deterioration of sidewall structural components, back-up of sewage into the home, groundwater contamination or surfacing of sewage.)

### **Building Clearance:**

The Wastewater Department will not approve the submittal of building plans for any property served by a cesspool if those plans expand the footprint of buildings or structures on the property or alter the wastewater flow characteristics (bedrooms or plumbing fixtures) of the property.

In April, 2008 in response to ADEQ's cesspool statement, the clearance practice was modified to state that only life-safety remodel projects in homes served by cesspools will be cleared for building plan submittal provided that the cesspool does not meet the definition of failure and the life-safety changes do not expand the home footprint. Life-safety remodel projects are those projects required by the building code to correct safety or health hazards.

### **Conclusion:**

Don't let your dependence on a cesspool get you into a hole that you can't dig yourself out of!

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# Who is **AzOWRA**

(**A**rizona **O**nsite **W**astewater **R**ecycling **A**ssociation)...

## and Why Join Now?

The Arizona Onsite Wastewater Recycling Association's (**AzOWRA**) mission is to

*“Provide value to our membership and property owners through communication, education, training, quality services and advocacy regarding onsite and decentralized wastewater treatment, reuse and management”.*

**Join Today.** There are various ways that **AzOWRA** can benefit you. **AzOWRA:**

- Represents the diverse interests of professionals who work in the onsite wastewater industry;
- Provides networking opportunities with professionals involved in the onsite wastewater industry throughout Arizona and other states;
- Creates a forum for workshops and educational programs at a discounted fee;
- Provides training for developing your business
- Affords opportunities to shape and develop state policy affecting the onsite community;
- Helps you keep current with local and national trends in the onsite wastewater industry;
- Offers free subscriptions to Onsite Installer magazine and Pumper magazine; and
- Makes newsletters and other information available on the **AzOWRA** website – [www.azowra.org](http://www.azowra.org)

**Join Today and Get Involved!!** There are various ways that you can help the organization. Share your talents. Tell us how you would like to be involved:

- Educating the public about onsite wastewater systems
- Writing an article for the newsletter
- Teaching a training program
- Updating the website
- Working to find advertisers for the website and newsletter
- Planning the 2013 Educational Conference
- Scheduling an informational meeting for potential new members in your area
- Serving as a Board Member
- Serving as an Officer
- Coordinating with regulatory agencies for rule revisions
- Other: \_\_\_\_\_

To complete your 2013 membership application fill in the form, sign the Code of Conduct, and send the application, Code of Conduct and fee to: **AzOWRA, 717 5th Street, Prescott, AZ 86301.**



ARIZONA ONSITE WASTEWATER RECYCLING ASSOCIATION
2013 MEMBERSHIP APPLICATION

MEMBERSHIP FEE MEMBERSHIP TYPE

- [ ] \$ 50.00 INDIVIDUAL
[ ] \$200.00 BUSINESS or INSTITUTIONAL ORGANIZATION - 3 Individuals Maximum -
Additional Individuals @ \$50.00 each
Includes website and newsletter advertising

THE VISION: The Arizona Onsite Wastewater Recycling Association is dedicated to serve all who participate in the Arizona onsite industries.

THE MISSION: Provide value to our membership, rural and suburban property owners, those engaged in the onsite trades, and Arizona residents in general through education, training, promotion of quality services and advocacy regarding onsite wastewater treatment, reuse and management.

Please check the MEMBER CATEGORY for AzOWRA's Online Directory and Resource Guide that you should be listed (5 can be listed).

Table with 5 columns: Academic/Educator, Environmentalist, Equipment Manufacturer, Site Evaluator, Tank Maker/Supplier, Builder/Developer, Government/Regulatory Official, Operator, Soil Scientist, Vendor/Product Supplier, Compliance Monitor, Installer, Realty/Mortgage Service Provider, Student, Other Interested Party, Consulting Engineer, Laboratory Services Provider, Researcher, System Designer, Institutional Organization, Contractor, Maintenance Provider, Service Provider, System Inspector.

Prefix \_\_\_ First \_\_\_\_\_ MI \_\_\_\_\_
Last \_\_\_\_\_ Suffix \_\_\_\_\_
Title \_\_\_\_\_
Company Name \_\_\_\_\_
Address \_\_\_\_\_
City \_\_\_\_\_ St/Prov \_\_\_\_\_ Zip/Post Code \_\_\_\_\_
Telephone \_\_\_\_\_ Fax \_\_\_\_\_
Email \_\_\_\_\_

Payment Information

Amount Enclosed (US\$) \$ \_\_\_\_\_ Check Enclosed \_\_\_ MasterCard \_\_\_ Visa \_\_\_
Credit Card Number \_\_\_\_\_
Expiration Date \_\_\_\_\_ 3 digit Security Code (found on back of card) \_\_\_\_\_
Date \_\_\_\_\_ Mailing Zip Code \_\_\_\_\_
Signed \_\_\_\_\_
Print Name on Card \_\_\_\_\_

Please complete this form and either fax or mail it to:
Arizona Onsite Wastewater Recycling Association, Inc.
717 5th Street
Prescott, AZ 86301
Fax: 928-778-2835

Contributions to AzOWRA are not deductible as charitable contributions for federal income tax purposes. However, dues payments may be deductible as an ordinary and necessary business expense. Please consult your tax advisor for more information.

Sponsoring Member: \_\_\_\_\_



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## CODE OF CONDUCT

### **PREAMBLE**

Members of the Arizona Onsite Wastewater Recycling Association (AzOWRA) are committed to the highest standards of integrity, professionalism and ethical conduct in the onsite wastewater recycling industry (Industry). AzOWRA members represent all sectors of the Industry. Members are dedicated to provide the highest possible quality of service, products, construction, education and research.

### **GENERAL OBLIGATIONS**

Members shall endeavor to know, understand, follow, and abide by the local, county, state, and national statutes, codes, laws, standards, regulations and ordinances applicable to the Industry to best of their ability. Members shall compete honestly, ethically and lawfully, through competent performance of their own skills, merits and expertise in the Industry. Members shall avoid any act that might promote their individual interests at the expense of the integrity of the Industry and avoid conduct that might discredit the Industry or deceive others. Members will seek to educate the public in the proper use and maintenance of their systems and about onsite wastewater systems in general.

### **OBLIGATION TO OTHERS**

Members shall represent themselves and the benefits of AzOWRA faithfully and honestly with integrity and professionalism. They shall seek to enhance the reputation of the Industry by the way they perform their services and communicate with their customers, clients, other members of AzOWRA and the public. They shall present their credentials, training, experience and abilities with honesty, integrity and pride. Members shall accept only those work assignments which can be performed within their field of competence and expertise. Members shall avoid conflicts of interest through proper disclosure. Members shall always seek to enhance the reputation of the Industry with others in the way they communicate and interact.

### **OBLIGATION TO PROFESSIONALISM**

Members shall strive to maintain and advance their skills and knowledge of the Industry. They will continually seek to improve their own professional expertise by staying informed of scientific and technological developments in the Industry. They shall always seek to advance the integrity of the Industry. Members shall take responsibility for their own errors and not seek to alter or obscure facts in an effort to justify their actions. Members shall always conduct themselves in a ethical and professional manner and shall uphold this Code of Conduct.

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Member Signature

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Date