



Well Said

WINTER 2018 • Newsletter of Arizona Water Well Association for our Members and Friends

The AzWWA Membership Meeting

Saturday, January 19, 2019

Coco's Restaurant
2026 N. 7th St.
Phoenix, AZ



Agenda

8:30am Meet & Greet

9am Speaker— Rita Maquire, Esq.

'Drought Contingency Plan Update'

Business meeting will follow the speaker presentation

Please join us !

Any questions, email admin@azwwa.org or call 480-609-3999

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(Scan and email to admin@azwwa.org)

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Number of people attending _____

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Thank you to Nathan White, with Northern Arizona Pump, for sending us a copy of the letter Harold Case sent to Shelly Shira in 2010, along with the picture of Bill Myers and Buck Weber. It was great reading Harold's comments and we appreciate the opportunity to reprint these articles of AzWWA history.

GOT NEWS?

Any upcoming or recent events?
Open Houses?
Other Events?
Jobsite Photos?
Articles?
New Products or Services?
Items for sale? Weddings? Births? Obituaries?

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# Arizona is on the Brink of Setting Off Another Colorado River Water War

Reprinted from AZCentral.com; Bruce Babbitt, Opinion Contributor

Published Nov. 17, 2018 | Updated Nov. 19, 2018

**Opinion: Arizona loses every time it blunders into a Colorado River war, former Gov. Bruce Babbitt says. We cannot do that this time with the Drought Contingency Plan.**



*Water is released from Glen Canyon Dam through a bypass tube on Nov. 5, 2018, during a high-flow experiment. The flood will help move sand and sediment down the Colorado River the way the river's natural flows did before construction of Glen Canyon Dam. (Photo: Mark Henle/The Republic)*

Arizona is once again at a critical decision point in the ongoing struggle to secure our water resources. If we fail to take the right course, we risk igniting yet another Colorado River water war.

Lake Mead, from which we draw our share of the Colorado River, is dropping to perilous levels. In order to stabilize lake levels and protect our water supply, the Department of Water Resources has negotiated an agreement with California and the other basin states to begin reducing water diversions from the Lake.

California and the other basin states are ready to sign the agreement, known as the Drought Contingency Plan (DCP). Arizona is the lone holdout, mainly because our state Legislature, caught up in special interest demands, has failed to ratify the DCP agreement.

## **CAWCD is overstepping its role**

Behind this legislative impasse are two groups threatening to block ratification. The first is the Central Arizona Water Conservation District (CAWCD), a local elected body that distributes our Colorado River water throughout central Arizona.

CAWCD is now reaching beyond its proper role by attempting to intervene in the interstate Colorado River negotiations. These interstate negotiations are the exclusive job of the Department of Water Resources, whose director is appointed by the governor to represent all Arizonans.

The ongoing conflict between the two agencies is more than a routine bureaucratic squabble. It has deadlocked legislative attempts at ratification of the DCP and jeopardizes our ability to negotiate effectively with surrounding Basin states.

## **Pinal County districts also are a threat**

The Colorado River produces less water than Arizona and other states are entitled to use. And that is a big problem for our drinking water.

(Continued on page 4)

(Continued from page 3)

The second threat to legislative ratification of the DCP comes from the Maricopa Stanfield Irrigation and Drainage District, the Central Arizona Irrigation District and several other agricultural districts located in Pinal County.

In 2004, these Pinal districts signed onto a far-reaching water settlement agreement worked out under the leadership of Sen. Jon Kyl. In that settlement the districts agreed that their use of Colorado River water would be phased out not later than 2030, after which they would go back to full reliance on groundwater.

In exchange for giving up long-term rights to Colorado River water and pumping more local groundwater, the districts bargained for and received heavily subsidized Colorado River rates to be paid for by property taxes levied on landowners in Phoenix, Tucson and throughout central Arizona.

These subsidies to the districts have now mounted to more than \$383 million.

### **It's time to make this transition**

The structure of the various federal laws and regulations governing the use of Colorado River water further requires that in times of extreme shortage, the Pinal districts will be required to accelerate their phase-out of Colorado River water even earlier.

That day has now arrived. The Pinal districts are once again back in the Legislature claiming that this early phase-out threatens their livelihoods and will result in large areas of agriculture suddenly going out of production.

The Pinal demand was originally for another \$100 million in property tax revenue to pay for Colorado River water that would be obtained from Phoenix, Tucson and Indian tribes that have permanent contracts for their share of Colorado River water and are opposed to giving up supplies upon which they rely.

That proposal has stalled, and there is now a convoluted scheme in circulation to subsidize the districts with water purchased elsewhere, with money for new infrastructure and by drawing down water previously saved in Lake Mead to stave off shortages. Taking water from another Lake Mead storage account is, of course, completely contrary to the goal of the Drought Contingency Plan.

Pinal County agriculture presently has the capacity to make the necessary transition sooner than it originally anticipated — without such extravagant public subsidies. The districts have historically relied on local pumped groundwater as a major source of irrigation water. They presently use about 50 percent groundwater for irrigation, and they can now manage to move to 100 percent.

### **Why the urgency? Let me tell you**

As this controversy drags on in successive legislative sessions some are asking, "Why the urgency? Does it really matter that it goes unresolved?"

It matters a lot. If the Drought Contingency Plan is not ratified soon California and the other Basin states may decide to proceed without us. That could be the beginning of another Colorado River water war.

Arizona has blundered into Colorado River wars in the past, and we usually lose. We must not go that way again. It is up to the Legislature and Gov. Doug Ducey to promptly ratify the Drought Contingency Plan as negotiated by the Department of Water Resources.

*Bruce Babbitt was former Arizona governor and U.S. Secretary of the Interior. He can be reached at brucebabbitt2000@yahoo.com.*



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# Arizona Pump Contractor Helps Maricopa County Sheriff's Office Recover Homicide Victim's Body from a Well in Goodyear, AZ

(Original source: Maricopa County Sheriff's Office)



The investigation started Sunday, October 21<sup>st</sup>, around 1:45p.m.when MCSO officers found the body of William "Bill" Cahill, 45, inside his car in the desert south of Riggs Road and Hunt Highway in Rainbow Valley. They said a hose was connected to the tailpipe of his car and ran into the car, filling it with carbon monoxide.

While investigating his death, detectives found Cahill's cell phone, accompanied by a note telling someone to watch the video clips on the phone. Detectives found multiple videos on his phone where he admitted to shooting his girlfriend, "Daisy", twice and tossing her body in a well somewhere in the desert. Investigators looked for the well at the time but were unable to find her, who was later identified as 37-year old Carolyn Dahlgren.

On Tuesday, October 23<sup>rd</sup>, detectives located a private well near Queen Creek Road and 155<sup>th</sup> Avenue in Goodyear that was 900 feet deep and 18-20 inches in diameter. That afternoon, **The Pump Company** received a call from MCSO asking for their help in retrieving her body. Although the well was 900' deep, she was found at about 360'-380' where her body had been caught on some timbers. The first try to retrieve her was unsuccessful but on the second try, they managed to hook onto a belt she was wearing and successfully recovered her body later that night.



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# Tom Poley Retires!

Congratulations to Tom Poley on his retirement effective December 1<sup>st</sup>, 2018!



Tom's career in the drilling industry started in 1976 at an Ingersoll-Rand facility in Pennsylvania. A few years later, he transferred to Ingersoll-Rand Equipment Sales (IRES) in Phoenix, eventually moving to Tucson. Although going through various changes with Ingersoll-Rand, Atlas Copco and Epiroc, he continued working as Territory Manager, selling drill rigs, tools and heavy equipment to the drilling and construction industries throughout the Southwest.

Tom's been involved with the *Arizona Water Well Association* since the early 1980's and wish him the best in his retirement! Hopefully, he'll have more time to concentrate on his music! Good luck and "Happy Trails"!



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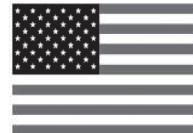
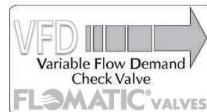
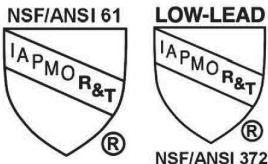
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# THE GROUNDWATER FOUNDATION NAMES GARY L. HIX AS 2019 WILLIAM A. MCCELLHINEY DISTINGUISHED LECTURER

Congratulations Gary!!! In October, the Groundwater Foundation announced that Gary L. Hix, RG, CWD/PI, will be the William A. McEllhiney Distinguished Lecturer for 2019.

Gary has been in the groundwater industry for nearly 40 years. A former licensed water well drilling contractor and registered geologist, he has been active in various associations including the NGWA and AZWWA. He is also contributing Water Well Journal® editor, has taught classes for the Bureau of Land Management and the University of Arizona Cooperative Extension Service. One of his most recent projects was publishing the e-book titled *Domestic Water Wells in Arizona, A Guide for Realtors and Mortgage Lenders*.



Gary will be presenting two lecture topics throughout the year – “Drilling Markets Change, So Must We” and “Drilling Disasters and What We Can Learn.”

**“Drilling Markets Change, So Must We”** – Economic conditions and technology transformations spur changes in any market, and the water well construction and drilling arenas are not immune to these external changes. In this lecture, he will discuss the need to develop a broader awareness of market changes and, more importantly, how to adapt. He will also cover how groundwater professionals can best approach constantly changing conditions and structure their business operations to ensure profitability.

**“Drilling Disasters and What We Can Learn”** – Anyone who has worked on, or been responsible for, a drill site can most likely recall at least one drilling disaster. And depending on personal experience, disaster can refer to anything from installing incorrect materials on a job site to failing to recognize a situation that caused injury. In this lecture, Gary will discuss how each of these experiences presents an opportunity to learn, to avoid similar distress in the future, and to contribute to business profitability and ongoing good will.

Established in 2000 to foster professional excellence, the **William A. McEllhiney Distinguished Lecture Series in Water Well Technology** honors the groundwater contractor and civil engineer from Brookfield, Illinois, who served as the founding president of the National Ground Water Association in 1948. Each year a panel of groundwater contractors chooses an outstanding groundwater professional to share his or her professional insights and experiences with the industry.

**NOTE:** The **Arizona Water Well Association** has the privilege of having TWO long-term members become McEllhiney Distinguished Lecturers! **Marvin Glotfelty, P.G.**, held this honor in 2012, speaking in 17 states and at various International events and now, **Gary Hix, RG, CWD/PI**, awarded this honor for 2019. We are one of only a few Associations who can claim this distinction!

The **Groundwater Foundation** is a nonprofit organization based in Lincoln, Nebraska with a mission to connect people, businesses, and communities through local groundwater education and action, making us all part of the solution for clean, sustainable groundwater. Since its inception in 1985, the Foundation has offered various education and action opportunities for youth and adults. The Groundwater Foundation is operated by the National Ground Water Association. To learn more, visit [www.groundwater.org](http://www.groundwater.org).



## New Arizona Drought Plan Would Put Pinal Farmers Back on Groundwater

Mike Christy / Arizona Daily Star / December 1, 2018

A new plan to deal with less Colorado River water being available for Arizona would give Pinal County farmers the same amount of water as previous plans – but with much of it in groundwater. The plan also would find new ways to provide backup, “mitigation” water for farms and other water users without taking hundreds of thousands of acre-feet of water from Lake Mead that had been proposed in previous plans – water that had been deliberately left in the lake to raise its elevation.

Those two ideas were centerpieces of a new Drought Contingency Plan, presented by ADWR on November 29th at a meeting of an advisory committee. The committee represents many key water interest groups – cities, farms, developers, tribes and ranchers.

This plan modifies another plan, recommended on November 15th by the governing board for the \$4 billion CAP – which delivers Colorado River water to Tucson, Phoenix, Pinal farmers and several Indian tribes. The new plan would cost more than \$100 million, to find replacement water for farmers, tribes and others affected by cuts in CAP deliveries and to compensate users who lose their water.

CAP General Manager Ted Cooke and ADWR Director Tom Buschatzke agreed that this proposal brings Arizona a step closer to a finished plan, ready for approval next year by the Legislature. But with farmers and developers raising concerns about this proposal, they said the committee will need numerous additional meetings before approving a final plan, raising questions as to whether one can be approved by the end of 2018 as the federal government has insisted on. “Closeness is in eyes of the beholder. In the eye of this beholder, I think we are very close,” Cooke said in a media briefing held after the four-hour meeting ended. “There are a finite number of remaining issues to sort out. There’s lots of work to do on detail.”

Seeing “a light at the end of the tunnel,” Cooke said he’s prepared to recommend something very close to this plan to CAP’s 15-member, elected governing board. But some elements still need clarifying, said Cooke, who declined to elaborate.

The plan got a big boost when Gov. Doug Ducey committed to recommending \$30 million in his proposed fiscal 2019-20 budget to pay various water users not to take some of the river water they have rights to. That idea would leave the unused water in Lake Mead. Ducey has made this plan a top priority, as a way of showing the state “has its act together” on water issues so as to encourage continued economic development.

But the political divide over this plan is a mirror image of the split over the plan recommended by the CAP board two weeks before. City and tribal officials who were wary of CAP’s proposal supported the new plan, while farmers and developers who supported the earlier plan were critical of this one. The drought plan is aimed at leaving enough river water in Lake Mead to keep it from rapidly falling to levels where it would be impossible to extract any water.

The lake has dropped by more than half since 2000, due to climate change, overuse and drought. The Bureau of Reclamation has said that at the rate it’s falling, there’s a 40 percent chance Mead will drop below 1,025 feet between 2024 and 2026, without a drought plan. At that level, the federal government might take over management of the river. Cities such as Tucson, with high-priority rights to CAP water, could lose some of their supplies.

As the plan is conceived, Arizona would lose about 500,000 acre feet of water – roughly one-third of CAP’s annual supply – when Mead drops below 1,075 feet at the end of a year and the feds declare the first shortage. A 57 percent chance exists of that happening by 2020, the reclamation agency has said. At 1,025 feet, CAP would lose nearly half its supply.

Until now, a big point of conflict was farmers’ insistence on “full mitigation” of planned CAP cuts. Cities and tribes took exception to earlier DCP proposals, because they called for the release of 400,000 acre-feet of water from Mead that Arizona had previously left there to prop it up.

The new proposal would still give the farmers water they say they need – 538,000 to 621,000 acre-feet over seven

(Continued on page 15)

(Continued from page 14)

years starting in 2020. But they would get river water only through 2022. Then they'd have to rely on pumping, and would get at least \$30 million federal financing to help them drill new wells and install other infrastructure. The farms, who first took CAP 30 years ago to replace "unsustainable" groundwater pumping, had already expected to lose all their CAP water by 2030 under a 2004 Indian water rights settlement. This would get them on groundwater much sooner.

The plan also would details ways of getting 400,000 acre feet of water from other sources to compensate for the water taken out of Mead to help farms and other users get mitigation water. Paul Orme, lobbyist for four irrigation districts, said their biggest concern is that this plan contains no clearly identified, assured federal source to pay for new wells. Most likely, they'd have to rely on several federal programs, including the large, omnibus farm bill approved periodically by Congress, to get the money.

"We'll have no certainty that that piece will be available by January 2019, when presumably the vote on DCP has to take place. This just can't be a hope and a prayer," said Orme.

Representatives of homebuilders associations from southern and central Arizona criticized the plan because unlike the CAP proposal, this one doesn't contain any "mitigation water" for developers. Until now, the three-county water district that runs CAP has set aside river water each year for replenishing aquifers that are pumped out for new development, but this plan wouldn't do that. Advisory committee member Rep. Rusty Bowers, who is about to become State House speaker, also raised concerns about the plan.

Acknowledging that this plan isn't perfect, Gila River Indian Community Gov. Stephen Ray Lewis said "it's the only viable plan we can see." While the tribes would lose some of their CAP water without mitigation in this plan, "It addresses our third rail," because it doesn't remove more water from the lake without finding other sources to put it back in. He also pledged to support federal financing for well infrastructure for Pinal farmers and give up tribal efforts to get such funding to help them. "All we have asked is to be treated fairly and equitably," he said.

Officials from Tucson, the Metro Water District northwest of Tucson, Phoenix and Scottsdale water agencies backed this plan. Tucson Water Director Tim Thomure said this proposal would offset the loss of Lake Mead water, provide federal money to help the farmers and not raise water rates to residents more than what had already been expected because river shortages will naturally raise prices due to supply and demand. "A deal that every single user can find something to hate is a deal that works," said Cynthia Campbell, water resources administrator for the city of Phoenix.

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## Arizona Water Officials Reach Agreement on Drought Plan

By Nevada Public Radio (KNPR) News Staff / December 6, 2018

Arizona water officials came to an agreement on a plan that deals with water shortages as the Colorado River water supply continues to decline.

The Drought Contingency Plan had already been signed off on by Nevada and California, but had stalled in Arizona as officials struggled to deal with how to take the most cutbacks should Lake Mead hit shortage levels.

The U.S. Bureau of Reclamation has said a shortage is all but inevitable and could hit as soon as next year.

Arizona's plan lays out \$100 million – including \$30 million in state tax revenue – that would pay to have water previously stored underground pumped out to meet some of the needs of farmers and others who would otherwise find themselves going without. It also involves paying some cash to tribes and others to buy water rights.

The Director of the ADWR says the plan primarily deals with finding ways to leave more water in Lake Mead. The plan still requires approval by lawmakers.

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### Minimum Wage Increase - January 1, 2019



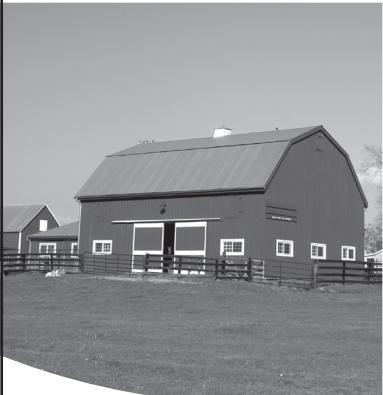
In accordance with 2016's Proposition 206, the minimum wage in Arizona will be increasing from \$10.50 to \$11.00 on January 1, 2019.

Posters, which are to be displayed in a place accessible to employees, can be found on the Industrial Commission website. The minimum wage posters include information on exemptions, tips and gratuities, retaliation, and more.

If you have any questions regarding the upcoming minimum wage increase, please contact the Labor Division within the ICA at (602) 542-4515 or refer to our FAQ page on our website.



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# ARIZONA SUPREME COURT APPROVES SAN PEDRO RIVER DEVELOPMENT

Reprinted from The HEARTLAND INSTITUTE

Submitted by Jesse Richardson, Water Systems Council

By Kenneth Artz

Arizona's Supreme Court has ruled a new 7,000 unit residential housing development planned near the San Pedro River can move forward, ruling Arizona's Department of Water Resources' (ADWR) had followed relevant state law when it concluded there is enough groundwater in a nearby desert aquifer to supply the needs of the proposed development.

## Court Battle

Conservationists sued ADWR over its decision to allow the Pueblo Del Sol Water Company to withdraw water from an aquifer 5 miles away from the proposed "Tribute" housing development to supply its water needs.

In the first step of the legal battle, they argued before the Maricopa County Superior Court, the court should block the development on the grounds the water supply was insufficient to satisfy the needs of wildlife and wildlands, including the federal government's "reserved" water rights, for national forests, national parks and other public lands. The county court ruled in their favor, saying DWR should have considered potential legal claims possibly affecting the availability of water, including the federal government's reserved water rights.

In 2016, a court of appeals tossed out the county court's decision. The appeals court determined state law does not require and cannot expect ADWR to anticipate legal challenges when making regulatory decisions. Conservationists appealed the ruling to the State Supreme Court which affirmed the appeals court's decision.

## Sticking To Statute's Language

Justice John R. Lopez IV, who wrote the state Supreme Court opinion, ruled the ADWR doesn't have the authority or responsibility to quantify the federal government's water rights – rights they, in fact, have yet to specify or claim.

"This case is not about the wisdom of the policy underlying the adequate water supply statute," Lopez wrote in the court's decision. "Our task is to discern the statute's meaning [and under current state law, DWR] "is not required to consider unquantified federal reserved water rights."

Tom Buschatzke, DWR's director, praised the decision, telling *azcentral.com* he believes the ruling makes clear his agency should limit the speculation when analyzing whether there are adequate water supplies for a proposed development.

"I think the court analyzed this issue correctly, ... limiting the speculation," Buschatzke told *azcentral.com*. "From our perspective, that allows them [the developers] to move forward."

*Kenneth Artz ([kennethcharlesartz@gmx.com](mailto:kennethcharlesartz@gmx.com)) writes from Dallas, Texas.*



## Mohave County Assessor Addresses State Conference on Water Shortage Issues

By DK McDONALD, The Mohave Daily News



A Mohave County Assessors Office staff member assesses a large well. The office assessed about 35 large wells in 2017 and an additional 92 have been added to the rolls through 2020.

Mohave County water issues were the focus of a recent presentation at the 2018 Arizona Tax Conference. “I wanted the other assessors in the state to understand how to look at these water issues throughout the state,” said Jeanne Kentch, Mohave County assessor. “It’s not all about Maricopa and seeing what they have to deal with. Our issues are different — we’re looking at issues that are currently changing as we speak.”

For the county, the increasing number of large agricultural wells drilled in the Hualapai Basin, an aquifer that supplies Kingman, creates a multi-layered problem — tracking and valuing the wells themselves for the county rolls and the sustainability of so many industrial wells pulling from what may be a diminishing aquifer.

In May 2017, the Arizona Department of Water Resources estimated the annual withdrawal of the aquifer increased to 32,000 acre-feet, almost four times its annual recharge. In February of this year, the US Geological Service confirmed the estimate and estimated the potential withdrawal could exceed 100,000 acre-feet per year, Kentch said.

An acre-foot is the volume of water needed to cover an acre of land to one foot deep. It’s about 325,000 gallons, enough water to support up to three households for one year. Earlier this year, the Arizona Legislature appropriated \$100,000 to ADWR for an independent consultant to estimate the rate of groundwater depletion in the northwest basins planning area and estimate the number of years remaining in the basin.

“(Arizona Rep.) Regina Cobb was instrumental in getting the state to pay a little bit of money for this study,” Kentch said. “It costs a lot of money to do these studies and (\$100,000) is not enough because we need to do this almost every year or every couple of years in order to find out how far we’re pulling. We can go off the monitor wells to see how far the water level is dropping, but unless you know how big a pool you have underneath there — how much water, what the height is doing — you don’t know how much is going out.” Mohave County well owners, as in other rural areas, can pump any amount of groundwater without reporting their water use to anyone. Nor does the state have to inform the county when a drilling permit is granted, Kentch said.

“All they need is a permit from ADWR to say ‘We’re going to drill a well and it’s going to be this deep and this wide,’ and (ADWR) gives them a certification to say OK. There’s nothing that stops them. There is nothing on the books anywhere in the entire state that says ‘do you have enough water to drill that well?’ ”

(Continued on page 25)

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The need to track the number of well applications is a recent phenomenon. The assessor's office used the well map on ADWR's website to get the list of wells

requiring valuation. Under state law, developers can't build subdivisions in some areas of the state unless they can prove they have a 100-year water supply, Kentch explained. Prior to 2014 there was little farming in the county other than on the Colorado River and Fort Mojave Indian Tribal lands using Colorado River water allocation. Most agriculture use of land in the county was grazing land.

An investor/developer attempted to create many subdivisions in the county, but couldn't show ADWR a 100-year water supply was available and ultimately the subdivisions failed, Kentch said. The same investor did some small-scale farming on one of the failed subdivisions, as farming did not require the same 100-year water supply certification.

Suddenly the number of agricultural wells drilled in the Hualapai Valley Basin skyrocketed, Kentch said. The developer submitted to ADWR about 85 large well applications in 2014 and 40 or more since then, Kentch said. With the other applications for large wells, the total count of new applications for large wells county-wide is about 150.

"Originally the land was to be developed and that changed, now it's agriculture," Kentch said. "Other assessors have been hearing that we've got a bunch of agriculture up here now, but they didn't realize how big the wells are and how much they cost to put in until we did a presentation on it a year ago."

The volume of water necessary to farm in the area requires large deep wells, not addressed in valuation literature, Kentch explained.

"In the rest of the state, you don't need a 24-inch wide, 1,200-foot deep well to be put in," Kentch said. A similar county commissioned well cost more than \$1 million, which made it apparent that significant value was escaping the roll.

Mohave County commissioned a study to establish market-based costs associated with wells of the type found. Each similarly equipped well generated an additional \$13,000 to \$14,000 in annual taxes. Kentch said she'd like to see the county granted a rural management area in order to protect the Hualapai Basin water supply.

"A rural management area would allow us to have our own public policy to protect our area," Kentch said. "We don't have that ability right now — all we can do is go off what the state law says. I'm not against farmers — it's unfortunate that because I'm valuing the wells, they think that I'm against farming. But it's just I feel that we need to farm efficiently and effectively and water conservatively." In the coming weeks, Kentch will introduce the same tax conference presentation to Mohave County Board of Supervisors and the public.

"We still need to fight for Mohave County's water," Kentch said. "Just because we got that \$100,000, we still need to tell the governor that we need to protect our own area here."



## **TENTATIVE PROGRAM SCHEDULE TO DATE**

*Continuing education certificates will be provided to seminar attendees*

### **Thursday, February 7, 2019**

|                       |                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7:30 am               | Registration Opens                                                                                                                                                                                                                                                                                                                                                       |
| 7:30 am – 8:00 am     | Continental Breakfast                                                                                                                                                                                                                                                                                                                                                    |
| 8:00 am – 9:00 am     | <b><u>Polymers and Additives: The Ability to Modify the Behavior of Dirt</u></b><br><b>Speaker:</b> George Dugan, Technical Sales Manager CETCO<br><b>Seminar Summary:</b> Polymers and Additives: The ability to modify the behavior of dirt.                                                                                                                           |
| 9:15 am – 10:15 am    | <b><u>Troubleshooting Submersible Pumps, Motors &amp; Control Boxes</u></b><br><b>Speaker:</b> Dan Painter, Product Training and Development Manager, Flint & Walling<br><b>Seminar Summary:</b> Troubleshooting submersible pump ends and using multi-meter to troubleshoot motors and boxes.                                                                           |
| 10:30 am -11:30 am    | <b><u>Drilling Safely and New Crane Standard</u></b><br><b>Speaker:</b> John Fowler, CSP Safety Supervisor, National EWP<br><b>Seminar Summary:</b> Procedures for air and fluid pressure inspections and hazards, the use and inspection of wire ropes and rigging, the new OSHA crane standard and how it affects the drilling and pump industry.                      |
| 11:30 am – 12:30 pm   | Lunch on your own                                                                                                                                                                                                                                                                                                                                                        |
| 11:00 am – 3:00 pm    | Exhibitor setup                                                                                                                                                                                                                                                                                                                                                          |
| 12:30 pm – 1:30 pm    | <b><u>Well Loss- Where it Occurs</u></b><br><b>Speaker:</b> Thom Hanna Hydrogeologist, Johnson Screens<br><b>Seminar Summary:</b> The contributing factors to well loss will be examined and how well design and construction can help prevent well inefficiencies.                                                                                                      |
| 1:45 pm – 2:45 pm     | <b><u>How to Properly do an Insulation Test</u></b><br><b>Speaker:</b> Kyle Widdison, CWD/CPI, Widdison Turbine Services, LLC<br><b>Seminar Summary:</b> Discuss various methods and equipment available to test both submersible and vertical motors, how to trouble shoot submersible wire and motor winding damage, discuss case histories and provide valuable tips. |
| 3:00 pm – 6:00 pm     | Exhibit Hall Open; Hospitality Meet & Greet in Exhibit Hall; Beverages Available                                                                                                                                                                                                                                                                                         |
| 5:30 pm – 6:00 pm     | Bidder sign up for Auction                                                                                                                                                                                                                                                                                                                                               |
| 6:00 pm – 8:30 pm (?) | Buck Lively Scholarship Auction/Raffle Food & Beverages Available                                                                                                                                                                                                                                                                                                        |

### **Friday, February 8, 2019**

|                     |                                                                                                                                                                                                                                                                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7:30 am – 9:00 am   | Continental Breakfast                                                                                                                                                                                                                                                                                                                      |
| 8:00 am – 9:00 am   | <b><u>Legal Updates and Exempt Wells</u></b><br><b>Speaker:</b> Jesse Richardson, Jr., Policy & Research Advisor, Water Systems Council<br><b>Seminar Summary:</b> The latest information about current litigation, proposed state and federal regulations impacting the groundwater industry.                                             |
| 9:15 am – 10:15 am  | <b><u>A Comparison of Thread Types and Joint Strength</u></b><br><b>Speaker:</b> Kyle Widdison, CWD/CPI, Widdison Turbine Services, LLC<br><b>Seminar Summary:</b> Discussions on what we can learn from between the 8V and 8R thread pattern, the difference between casing and tubing used in the oil patch and the water well industry. |
| 10:00 am – 12:30 pm | Exhibit Hall Open                                                                                                                                                                                                                                                                                                                          |
| 11:30 am – 12:30 pm | Buffet Lunch in Exhibit Area                                                                                                                                                                                                                                                                                                               |
| 12:30 pm – 3:30 pm  | Exhibit Teardown                                                                                                                                                                                                                                                                                                                           |
| 12:30 pm – 1:30 pm  | <b><u>What to Expect from a Roadside Vehicle Inspection</u></b><br><b>Speaker:</b> Trooper Darold Kassebaum, Nevada Highway Patrol and DPS<br><b>Seminar Summary:</b> Federal DOT rules that pertain to moving water well equipment over the roadway will be discussed.                                                                    |
| 1:45 pm – 2:45 pm   | <b>TBD</b><br><b>Speaker:</b> TBD<br><b>Seminar Summary:</b> TBD                                                                                                                                                                                                                                                                           |
| 3:00 pm – 4:00 pm   | <b>TBD</b><br><b>Speaker:</b> TBD<br><b>Seminar Summary:</b> TBD                                                                                                                                                                                                                                                                           |
| 8:30 am – 10:00 am  | <b><u>Saturday, February 9, 2019</u></b><br>Mountain States Groundwater Board Meeting                                                                                                                                                                                                                                                      |

# Registration Form

Mountain States Ground Water Expo - February 7 - 8, 2019  
Aquarius Casino Resort in Laughlin, Nevada

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**MEMBERS - Please check all that apply:**

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|--------------------------------------------------------------|-----------------------------------------------------------------|
| <input type="checkbox"/> Arizona Water Well Association      | <input type="checkbox"/> Colorado Water Well Contractors Assoc. |
| <input type="checkbox"/> New Mexico Ground Water Association | <input type="checkbox"/> Utah Ground Water Association          |
| <input type="checkbox"/> Nevada Ground Water Association     | <input type="checkbox"/> Other _____                            |

*Register and pay online at [www.mountainstatesgroundwater.com](http://www.mountainstatesgroundwater.com)*

**Registration Fee includes Thursday and Friday morning continental breakfasts, Friday lunch, Thursday evening Exhibitor's Reception, admission to all seminars and Exhibit Hall:**

|                                                                  | <i>Before or on<br/>January 31, 2019</i> | <i>After<br/>January 31, 2019</i> |          |
|------------------------------------------------------------------|------------------------------------------|-----------------------------------|----------|
| Contractor .....                                                 | \$ 80                                    | \$ 100                            | \$ _____ |
| Spouse/Employee [List Name(s) below]... \$                       | 65                                       | 85                                | \$ _____ |
| Thurs. evening ONLY pass for registered attendee<br>guests ..... | \$ 30                                    | \$ 40                             | \$ _____ |
| Friday Lunch only.....                                           | \$ 15                                    | \$ 15                             | \$ _____ |
| Student .....                                                    | \$ 50                                    | \$ 70                             | \$ _____ |
| Scholarship Recipient.....                                       | \$ No Charge                             | \$                                | - 0 -    |
| Technical .....                                                  | \$ 80                                    | \$ 100                            | \$ _____ |
| Non-Exhibiting Manufacturer/Supplier ...                         | \$140                                    | \$ 180                            | \$ _____ |
| Donation to Buck Lively Scholarship Fund                         |                                          |                                   | \$ _____ |

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**TOTAL ENCLOSED:** \$ \_\_\_\_\_

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*NOTE: All companies and individuals making donations will be acknowledged as their items are auctioned or raffled off unless requested otherwise. All income generated for the Buck Lively Scholarship Fund is evenly distributed among the scholarship programs of the 5 state associations hosting the Expo.*

**CANCELLATION POLICY:** 50% if notified by January 31, 2019; No refunds after that date.

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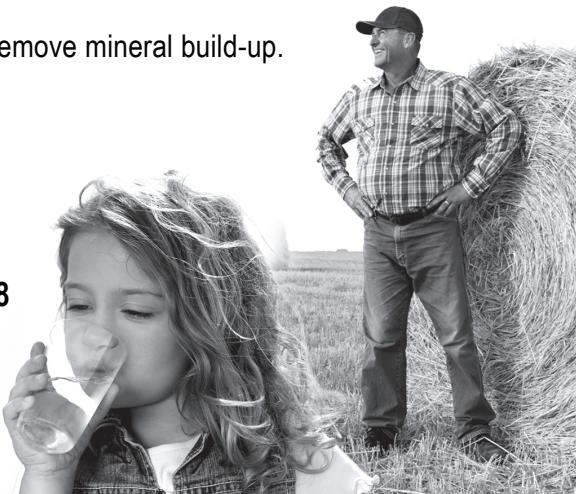
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| <b>Legislator</b>                               | <b>District</b> | <b>Party</b> | <b>Email @azleg.gov</b> | <b>Phone</b>   |
|-------------------------------------------------|-----------------|--------------|-------------------------|----------------|
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| Richard C. Andrade                              | 29              | D            | RANDRADE                | (602) 926-3130 |
| Nancy Barto                                     | 15              | R            | NBARTO                  |                |
| Leo Biasiucci                                   | 5               | R            | LBIASIUCCI              |                |
| Walter Blackman                                 | 6               | R            | WBLACKMAN               |                |
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| Reginald Bolding, Jr. -- Minority Whip          | 27              | D            | RBOLDING                | (602) 926-3132 |
| Shawnna Bolick                                  | 20              | R            | SBLICK                  |                |
| Russell "Rusty" Bowers -- Speaker               | 25              | R            | RBOWERS                 | (602) 926-3128 |
| Kelli Butler                                    | 28              | D            | KBUTLER                 | (602) 926-5156 |
| Noel Campbell                                   | 1               | R            | NCAMPBELL               | (602) 926-3124 |
| Andres Cano                                     | 3               | D            | ACANO                   |                |
| Frank Carroll                                   | 22              | R            | FCARROLL                |                |
| César Chávez                                    | 29              | D            | CCHAVEZ                 | (602) 926-4862 |
| Regina E. Cobb                                  | 5               | R            | RCOBB                   | (602) 926-3126 |
| David L. Cook                                   | 8               | R            | DCOOK                   | (602) 926-5162 |
| Domingo DeGrazia                                | 10              | D            | DDEGRAZIA               |                |
| Timothy M. Dunn                                 | 13              | R            | TDUNN                   | (602) 926-4139 |
| Kirsten Engel                                   | 10              | D            | KENGEL                  | (602) 926-5178 |
| Mitzi Epstein                                   | 18              | D            | MEPSTEIN                | (602) 926-4870 |
| Diego Espinoza                                  | 19              | D            | DESPINOZA               | (602) 926-3134 |
| Charlene R. Fernandez -- Minority Leader        | 4               | D            | CFERNANDEZ              | (602) 926-3098 |
| John Fillmore                                   | 16              | R            | JFILLMORE               |                |
| Mark Finchem                                    | 11              | R            | MFINCHEM                | (602) 926-3122 |
| Randall Friese -- Assistant Minority Leader     | 9               | D            | RFRIESE                 | (602) 926-3138 |
| Rosanna Gabaldón                                | 2               | D            | RGABALDON               | (602) 926-3424 |
| Travis W. Grantham                              | 12              | R            | TGRANTHAM               | (602) 926-4868 |
| Gail Griffin                                    | 14              | R            | GGRiffin                |                |
| Alma Hernandez                                  | 3               | D            | AHERNANDEZ              |                |
| Daniel Hernandez, Jr.                           | 2               | D            | DHERNANDEZ              | (602) 926-4840 |
| Jennifer Jermaine                               | 18              | D            | JJERMAINE               |                |
| John Kavanagh                                   | 23              | R            | JKAVANAGH               |                |
| Anthony T. Kern                                 | 20              | R            | AKERN                   | (602) 926-3102 |
| Jay Lawrence                                    | 23              | R            | JLAWRENCE               | (602) 926-3095 |
| Aaron Lieberman                                 | 28              | D            | ALIEBERMAN              |                |
| Jennifer Longdon                                | 24              | D            | JLONGDON                |                |
| Robert Meza                                     | 30              | D            | RMEZA                   |                |
| Becky A. Nutt -- Majority Whip                  | 14              | R            | BNUTT                   | (602) 926-4852 |
| Joanne Osborne                                  | 13              | R            | JOSBORNE                |                |
| Jennifer Pawlik                                 | 17              | D            | JPAWLIK                 |                |
| Kevin Payne                                     | 21              | R            | KPAYNE                  | (602) 926-4854 |
| Gerae Peten                                     | 4               | D            | GPETEN                  | (602) 926-4842 |
| Warren Petersen -- Majority Leader              | 12              | R            | WPETERSEN               |                |
| Pamela Powers Hannley                           | 9               | D            | PPOWERSHANNLEY          | (602) 926-4848 |
| Tony Rivero                                     | 21              | R            | TRIVERO                 | (602) 926-3104 |
| Bret Roberts                                    | 11              | R            | BROBERTS                |                |
| Diego Rodriguez                                 | 27              | D            | DRODRIGUEZ              |                |
| Athena Salman -- Minority Whip                  | 26              | D            | ASALMAN                 | (602) 926-4858 |
| Amish Shah                                      | 24              | D            | ASHAH                   |                |
| Thomas "T.J." Shope, Jr. -- Speaker Pro Tempore | 8               | R            | TSHOPE                  | (602) 926-3012 |
| Lorenzo Sierra                                  | 19              | D            | LSIERRA                 |                |
| David Stringer                                  | 1               | R            | DSTRINGER               | (602) 926-4838 |
| Arlando Teller                                  | 7               | D            | ATELLER                 |                |
| Raquel Terán                                    | 30              | D            | RTERAN                  |                |
| Bob Thorpe                                      | 6               | R            | BTHORPE                 | (602) 926-5219 |
| Ben Toma                                        | 22              | R            | BTOMA                   | (602) 926-3298 |
| Kelly Townsend                                  | 16              | R            | KTOWNSEND               | (602) 926-4467 |
| Myron Tsosie                                    | 7               | D            | MTSOSIE                 |                |
| Michelle Udall                                  | 25              | R            | MUDALL                  | (602) 926-4856 |
| Jeff Weninger                                   | 17              | R            | JWENINGER               | (602) 926-3092 |

## AZWWA 4<sup>th</sup> Quarter Meeting

October 13, 2018

Our 4<sup>th</sup> Quarter meeting was held October 13, 2018 at Coco's Restaurant in Phoenix. Due to incredible winds and rain on I-10, our President, David Williams, couldn't make it so Marvin Glotfelter presided over the meeting in his place.

Jeremy Kuhn with Roscoe Moss was our Guest Speaker and gave an excellent presentation on "Louvered vs il-Slot Pipe" which also included wire-wrap and other topics which generated some interesting discussions.

During our meeting, Gary Hix announced that he was chosen by the Groundwater Foundation/NGWA to be their McEllhiney Distinguished Lecturer for 2019 and as of this meeting, already had a lot of presentations scheduled for next year. He also provided current information on the Silver vs Pueblo case involving the San Pedro River.

We look forward to seeing you at our next meeting on Jan 19 in Phoenix ! (See front cover for more details)



### AZWWA Scholarship Funds are Available!

The AZWWA offers educational scholarships in the amount of \$1,000 per semester for the children and/or grandchildren of contractors who have been members of our Association for a minimum of 2 years or employees of said contractor who has a reasonable relationship with the Association.

Other qualifications of the applicant are:

- Has the support of his/her family. If the applicant is a child or grandchild of an employee of a contractor, the owner/manager must also support the applicant.
- Acceptance by aforementioned Arizona institution. The Committee will take into consideration any requests or attendance at schools outside of Arizona.
- Full time enrollment. The Committee will also take into consideration requests for less than a full schedule.
- Maintain a 2.5 grade point average.

The above qualifications are in reference to university or junior college enrollment. However, the Committee will consider requests for trade school or other participation at reduced levels of financial support if such education is deemed beneficial to the family's business effort.

A completed Scholarship Application, including a resume, a letter of endorsement from the applicant's parents or employer and a transcript from the last educational institution attended are required.

The sum will be paid upon applicant's submittal of proof of registration at an Arizona or other pre-approved institution.

For more information or to request a Scholarship Application, please contact our current Scholarship Chair or the AZWWA office as listed below:

**Scholarship Chair**  
Fred Tregaskes  
[fregaskes1@gmail.com](mailto:fregaskes1@gmail.com)  
PH: 480-404-2788



**AZWWA Office**  
Debbie Hanson Tripp  
[admin@azwwa.org](mailto:admin@azwwa.org)  
PH: 480-609-3999

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## Events Calendar

**January 19, 2019**

AzWWA Membership Meeting  
Coco's Restaurant  
2026 N. 7th St., Phoenix  
Meet and Greet : 8:30am  
Speaker : 9:00am  
Rita Maguire, Esq.  
(See front cover for more details)

**February 7 & 8 , 2019**

Mountain States Ground Water Expo  
Aquarius Casino Resort  
Laughlin, NV  
For more information go to [www.mountainstatesgroundwater.com](http://www.mountainstatesgroundwater.com)

**April 2019**

AzWWA Membership Meeting  
Location and speaker : TBD