



SEPTEMBER 2013 NEWSLETTER

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GOVERNMENT GOINGS-ON

On July 18 the Navajo Tribal Council met to reconsider a revised lease extension through 2044 for the Navajo Generating Station. The lease was due to run out in 2019, a big problem. The session was long and contentious. Votes were cast, rescinded, changed, and cast again. Charges that voting machines were not properly recording correct votes were made and the leading environmental members reportedly disclaimed their votes as errors. Yet the lease extension was approved. The Tribal President signed it. This is a vote that will come back to haunt Tribal Council members, as environmental activism on the Navajo Nation is gathering steam.

The other major challenge to NGS has been from the U.S. Environmental Protection Agency (EPA), which has direct authority over NGS because it sits on Indian land. President Obama has expressed his Administration's determination to move the United States away from coal-fired technology. New emission rules specifying Selective Catalytic Reduction (SCR) as the Best Available Retrofit Technology (BART) were proposed in February 2013 by EPA to increase visibility at the Grand Canyon. Compliance would be required by 2023. The new rules set standards that are the most stringent in the nation for nitrogen oxides. SCR installation for all three units could cost up to \$1.1 billion by 2023, a cost the owners have said would likely force closure of the plant, particularly if only three owners remain. Recall that Los Angeles Power and Water Department and Nevada Energy have already announced their intention to bail before 2019. The final rule is due in early 2014.

As part of the public comment process, a Technical Working Group (TWG) was formed by CAWCD, SRP, Navajo Nation (tribal officials only), GRIC, and various environmental groups. The goal was to come up with a proposal

that would be “better than BART.” On July 25 the TWG presented two alternative proposals. Alternative A is predicated on LAWPD and NVE exiting their ownership status in 2019, and calls for shutting down one of the 750 megawatt generating units at NGS by January 1, 2020. SCR or an equivalent technology would be installed on the remaining two units by 2030. NVE and LAWPD comprise 33% of the ownership of NGS, and their share exactly matches the percentage of power that would be lost by shutting down one unit. The “better than BART” Alternative A proposal would allow the Navajo Nation an option to purchase a portion of the NGS ownership. Alternative B offers annual Implementation Plans to reduce emissions in the event that either LAWPD or NVE do not withdraw or sell their share to a third party. Alternative B is more ambiguous, but includes delaying deployment of the most stringent BART features on the remaining two units until 2030. Both alternatives agree that NGS will cease all coal-fired operations in 2044.

IF EPA accepts Alternative A as the basis for the final rule, the major challenge of the new emissions standards will have been successfully met. However, other challenges lie ahead. Because Federal lands and licensing are involved, the National Environmental Policy Act (NEPA) applies. NEPA procedures will call for a full Environmental Impact Statement with concomitant studies. The NEPA process can be expected to last at least five years; costs will be borne by the owners. Environmental groups do not agree that NGS should continue operating past 2019, as evidenced by the withdrawal of the Sierra Club from the TWG once the degree of compromise became clear. Strong opposition during the NEPA process and litigation after the final decision can be expected from environmental groups both on and off the Navajo Nation; they’re not going to be quiet.

Will NGS keep generating power with coal to move CAP water until 2044, keeping rates reasonable? While two challenges that looked insurmountable just six months ago have been overcome, many others remain. Everyone stay tuned: this power play isn’t over yet.

Alan Dulaney

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MEMORIAL FOR DR. HERMAN BOUWER SET FOR SEPTEMBER 21ST

“What you leave behind is not what is engraved in stone monuments, but what is woven into the lives of others.”

-Pericles

Please join us for a service to celebrate and remember:

Dr. Herman Bouwer

July 11, 1927 - July 28, 2013

Pera Club Pavilion
1 E. Continental Dr., Tempe
Saturday, September 21
10:00 am – Arrival
10:30 am – Service
Lunch following

Please dress comfortably

[Please click here for flyer with map](#)

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AHS 2013 SYMPOSIUM UPDATE



Marla Odom, Symposium Chair

Space is limited at the 2013 symposium, and the event is expected to sell out. Register now to guarantee your spot.

The dates for the 2013 AHS Symposium, "Shifting Boundaries: Recalibrating the Hydrologic Approach" are rapidly approaching! We look forward to joining you at the Doubletree Reid Park Hotel by Hilton in Tucson from September 18-21, 2013, for a week of fun, socializing, and education. The planning committee has been busily putting together technical sessions, workshops, field trips, product exhibition, fun entertainment, and a icebreaker welcome event.

As a result of the economic downturn and its effects on our membership, AHS has decided in recent years to have a "back to basics" approach to our annual symposia. Our goal is to deliver a quality event and networking opportunity at a reasonably reduced price, reflective of the economic times. As such, we have moved to smaller, more intimate venues, more in-line with the original feel of the early symposia of the Society.

Check our website regularly for the most up-to-date information on events.

<http://ahssymposium.org/2013/>

******Please note - All workshops and field trips must meet a minimum attendance or risk cancellation. Early enrollment is crucial to ensure these events will be held, especially in instances where transportation is involved. If you are considering registering for a workshop or field trip, please enroll early.***

Sponsors and Exhibitors - We have 2 standard exhibitor booths remaining for sale. Standard exhibitor booths come with a full complimentary registration. All other categorical sponsorships are sold out, and we encourage anyone still interested in helping to support the Society through sponsorship to consider sponsoring a teacher or student, or making a general donation through our website.

Technical Sessions - ***Our speaker slate is now finalized and available online.*** Technical sessions are subject to revision up to the time of the symposium, but changes will only include speaker cancellations and/or addition of new speakers.

Plenary Sessions - A 2-hour plenary session is planned for both the Thursday and Friday Session dates. ***Thursday (September 19)*** - Grady Gammage Jr. and Gary Woodard will be delivering a joint presentation titled "Assumptions, Extrapolations, and Outliers: Our Dysfunctional Dialogue Over Water, Environment, and the Future", which explores the question "How do we recalibrate our baseline assumptions and change the way we think about the future?"

Friday (September 20) - Kathy Jacobs, the Assistant Director for the Climate Adaptation and Assessment at the White House Office of Science and Technology Policy will present a talk titled "The National Climate Assessment: Preparing the Nation for Change". Her talk will focus on taking the effects of changes in the hydrologic cycle into consideration in the context of cascading effects of decisions.

Tim Thomure, the Water Reuse Practice Lead for HDR Engineering, will present a talk titled "Potable Reuse – A Changing Conversation". His talk will focus on changes in the way potable reuse is discussed in the water industry and in public settings as a result of the migrating use of recycled water from outdoors, to indoors, to potable use.

Thursday Lunch Presentation (September 19) - **Peter Smith**, professor of planetary science at the Lunar and Planetary Laboratory in the University of Arizona Department of Planetary Science, will speak on the origins and fate of water on Venus,

Earth, and Mars.

Thursday Dinner Event (September 19) - The entertainment for the evening will be local Tucson band [The Tryst](#). The Tryst has an energetic, eclectic, sultry sound rooted in jazz and funk. They have written and produced several studio albums and won multiple awards 4 years in a row at the Tucson Area Music Award (TAMMIES). The Tryst took home a record seven best-in-category TAMMIE awards in 2011, including best new album release, best jazz band, best funk/soul band, best female vocalist, best songwriter, best bassist, and best drummer. In 2012, they took home the TAMMIE for best Jazz band.

There are three plated meal options for the Thursday dinner:

Chicken Parmesan: Breaded chicken breast served with herb-buttered angel hair pasta, finished with marinara sauce and mozzarella cheese

Roasted Prime Rib of Beef: 8-ounce cut of beef served with smoked-gouda, Yukon Gold whipped potatoes, finished with au jus and creamy horseradish

Portabella Mushroom Napoleon: Layers of grilled portabella mushrooms, spicy roasted corn salsa, finished with fresh herbs

A cash bar will be available at the dinner for the purchase of alcoholic beverages.

Workshops (September 18) - The workshops listed below are finalized and are available for registration:

Ø **MODFLOW-USG — A New Direction in MODFLOW Groundwater Modeling**

James Rumbaugh, the co-author of Groundwater Vistas software

Our course is designed to introduce users to the newly released MODFLOW-USG code using Groundwater Vistas, a leading pre- and post-processor for the MODFLOW suite of codes. MODFLOW-USG utilizes finite volume discretization, allowing for use of both horizontal and vertical nested grids as well as irregular grid cell geometry. This increased flexibility in grid design allows for better resolution around key model features and boundaries, as well as allowing the user to sub-discretize individual model layers to better represent complex hydrostratigraphic units. Each model layer can have a different nesting structure, effectively allowing sub-layers and discontinuities to be more accurately modeled than previous versions of MODFLOW. The course structure combines lectures and hands-on computer time that allow participants to explore the concepts covered in the lectures.

Ø **Basic Programming and Training on the use of Campbell Scientific Data Acquisition and Remote Data Collection Systems**

Josh Hanks, sales and support representative at Intermountain Environmental, Inc.

FREE TO ATTEND. This course will provide an introduction to programming the Campbell Scientific data acquisition and remote data collection systems. These systems measure multiple types of sensors and record the data on internal memory, at user defined intervals. Training will be provided on the basics of programming and the options for transmitting the data to a remote location for analysis and storage. There are a variety of remote data collection options that will be covered, such as, radio, cellular, Wi-Fi and other Internet communication devices. These systems are used in remote locations and have the ability to use small DC power systems with solar recharge. At the conclusion of the class attendees will be able to write a simple program, understand sensor connections, and know how to setup a communication connection with the datalogging device. If time permits, we will also cover publishing of data on the Internet.

Ø **Writing Strategies for Earth Science & Water Resource Professionals**

Nancy Riccio, Principal, Plateau Technical Communication Services

Most of us in the earth science and water resource fields spend a significant part of our professional lives generating reports, proposals, and other technical documents — despite having received little or no training in how to write effectively. This workshop is a great opportunity to learn some strategies for technical communication from a seasoned writer / editor and former groundwater consultant. We'll analyze real-world examples at the document, paragraph, and sentence levels to identify common pitfalls and explore ways to make your writing clearer and more effective. We'll also learn a few key principles that are guaranteed to make the writing process easier and more enjoyable.

Ø **Intro to Water-Management Modeling with GoldSim Dynamic Simulation Software**

Jason Lilywhite, PE, GoldSim Technology Group

This hands-on morning session is designed for those who have never used GoldSim before. It will introduce participants to dynamic simulation concepts for water-management modeling. You will become comfortable with GoldSim and develop an understanding of its capabilities and its potential application to projects. This class is not intended to introduce you to all aspects of the GoldSim framework; you'll need further training and practice to feel comfortable building complex water models.

Ø **Hands-on Training for Water Management Modeling with GoldSim Software**

Jason Lilywhite, PE, GoldSim Technology Group

Much of the class is hands-on. Following along with the instructor, you will build a basic water management model that you can extend and modify later on. We'll also explore ways to incorporate real-world problems into GoldSim. In addition, you will be

introduced to scenario management and post-processing, which are part of this summer's new software release. This session is for those who have some experience using GoldSim. We'll be discussing new features, so it will be helpful for seasoned users as well.

Ø Characterizing, Designing and Operating Surface Spreading Groundwater Recharge Projects

Wally Wilson (Tucson Water)/Mike Milczarek (GeoSystems Analysis)

The success of a surface-spreading groundwater recharge project depends on geologic conditions, source water quality, and nearby land uses. In this workshop, participants will gain an understanding of the best tools for site evaluation, subsurface characterization, and recharge system design / operation. They will also learn how these tools have been applied to real-life conditions through a spectrum of case studies. The course includes a half-day site visit to CAVSARP, a large operating facility.

Field Trips (September 21) - The field trips listed below are finalized and are available for registration:

Ø Birds of the Sweetwater Recharge Facility

Leaders: Kendall Kroese, Habitats Program Manager for the Tucson Audubon Society and Bruce Prior, a Lead Hydrologist with Tucson Water

FREE TO ATTEND (Please register for accurate count) . The Sweetwater Wetlands is a water treatment facility, an urban wildlife habitat, and an outdoor classroom. As an urban wildlife habitat, this tranquil park allows visitors to view native wildlife in an urban setting. Its water-rich, stream-side, riparian zone supports a huge variety of wildlife including dragonflies, raccoons, hawks, bobcats, and dozens of birds that make the wetlands their full- or part-time home. We'll see waterfowl in the hundreds, regular and visiting warblers, and several exciting species hiding in the reeds. Participants will also learn about the wetland operations that support the avian population.

Ø FROM WATER TO WINE: THE HYDROGEOLOGY OF THE ELGIN WINE DISTRICT

Leaders: Dale Armstrong (Golder Associates) and Marla Odom (Montgomery & Associates)

Join us for a tour of Southern Arizona wine country — named among the top “10 great places for local wines” by [USA Today Travel](#). Take in the beautiful and interesting roadside geology of the Empire mountains and the Cienega Creek valley from the comfort of a chartered bus bound for four wineries of the Sonoita/Elgin area. At each winery, you will have the opportunity to sample exquisite wines in friendly tasting-room settings with friends and colleagues. There will be ample room on the coach to transport purchased cases and bottles of wine back to Tucson.

About the Vineyards:

Lightning Ridge Cellars near Elgin serves classic Italian varietals.

Founded in 2010, **Flying Leap Vineyards** is Arizona's newest vineyard specializing in French, Spanish, and Italian varietals.

Callaghan Vineyards is listed as one of six most interesting wineries / winemakers in the U.S. by Parisian daily newspaper *Le Monde*; served on three separate occasions at the White House. “As I have said so many times in the past, this is one of the most interesting wineries in America.” Robert Parker — *The Wine Advocate*. “Astonishing, concentrated and fruity wines. This pioneer symbolizes the spirit of the wines of the New World.”

Dos Cabezas wines have garnered high scores from Wine Spectator Magazine and by Robert Parker's *The Wine Advocate*. They have been served at the White House on multiple occasions.

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PHOENIX CHAPTER NEWS

Phoenix Chapter Dinner Meeting

There will be no regular chapter dinner meetings in August and September. Please join us in Tucson, September 18-21, for the Annual AHS Symposium! Our next regular dinner meeting will be October 8, 2013 where Kelly Mott Lacroix, with the UA WRRRC will present: **Understanding Environmental Flows: The Arizona Environmental Water Needs Assessment**.

Future Event Calendar (see also calendar on www.azhydrosoc.org)

Ø **Tuesday October 8, 2013**, at the SunUp Brewing Company in Phoenix:

Kelly Mott Lacroix, Water Resources Research Center, College of Agriculture and Life Sciences, University of Arizona will speak to us about **Understanding Environmental Flows: The Arizona Environmental Water Needs Assessment**.

Ø **November 12, 2013**, at Nello's in Tempe; Enrique Vivoni, ASU

Ø **December 10, 2013**, at SunUp Brewing Company; Greg Ghidotti and Heather Gluski, Resolution Copper

Ø **January 13, 2014, Annual Planning Meeting**

We're starting to plan for presentations at meetings starting in **February 2014**. Please contact [Tom Walker](#), Phoenix Chapter Vice President, if you would like to give us a presentation or if you know anyone else who could use an audience.

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3RD ANNUAL AHS WINE TASTING FUNDRAISER WRAP UP

The Phoenix Chapter enjoyed a great evening at the Terroir Wine Pub tasting five fine wines selected by the co-owner of Terroir Wine Pub, Rich Petrus, a long-time AHS member. We were fortunate to have Mrs. Jessie Bouwer joining us and we toasted the memory and lasting impact of Dr. Herman Bouwer. And we raised a total of \$2266 for the **Herman Bouwer Scholarship/Internship!**

We would like to thank our Event Sponsors again for help make is evening a success!



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TUCSON CHAPTER NEWS

There will be no regular chapter dinner meetings in August and September. Please join us in Tucson, September 18-21, for the Annual AHS Symposium! Our next regular dinner meeting will be October 8, 2013.

UPCOMING WRRC SPONSORED EVENTS

Brown Bag Seminar: Western Water Challenges and the Role of Water Transfers

Friday, September 12, 2 - 3:30 p.m.

Location: WRRC Sol Resnick Conference Room

Speaker: Nathan Bracken, Western States Water Council (WSWC)

wrrc.arizona.edu/brownbag

The *Water Transfers in the West: Projects, Trends and Leading Practices in Voluntary Water Trading* report is focused on voluntary, intrastate transfers and recognizes that such transfers are occurring across the West and will likely continue. Read the report [here](#).

The report does not make value judgments about whether transfers are good or bad, and is intended to provide states with information to consider as they work to mitigate or avoid adverse impacts to agricultural and environmental values.

For the purposes of the report, the WSWC defined the term "water transfer" as: "...a voluntary agreement that results in a temporary or permanent change in the type, time, or place of use of water and/or a water right. Water transfers can be local or distant; they can be a sale, lease, or donation; and they can move water among agricultural, municipal, industrial, energy, and environmental uses."

One of the key messages is that states play the primary role in managing water transfers. The report also notes that water transfers can play a role in water supply planning. Given the uniqueness of each state's transfer system, the report does not attempt to prescribe solutions for any state to follow, providing instead a "toolbox" of options that states can pick and choose from. Furthermore, the report includes a detailed appendix with examples and an analysis of the types of transfer arrangements taking place in the West as well as summaries of how each state regulates transfers.

From the report: "Water transfers are already a key part of resource management in most western states. As demand for water grows in basins that are already at or near full allocation, states can use this report to consider how transfers figure into their state's water future. With the leadership of the Governors, western states will continue to find means to provide water for new users with provisions that properly value the importance of traditional uses of water."

Nathan Bracken is the Legal Counsel for the Western States Water Council, where he works with state water administrators and other experts appointed by 18 western governors to develop policy solutions for water challenges in the West. He has published and presented on a variety of water-related topics, including water transfers, drought, water reuse, domestic wells, Indian water rights, and other issues. He is also the Editor of Western States Water, a nationally circulated weekly newsletter focused on water policy. He received his Juris Doctorate from the University of Utah, and received a Bachelors degree in English with a minor in political science from Brigham Young University.

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FLAGSTAFF CHAPTER NEWS

There is no September meeting currently planned; however, we are actively soliciting suggestions from AHS members for plenary or keynote speakers for the 2014 Symposium. If you have any suggestions, please send them to Margo Truini (mtruini@usgs.gov).

Please contact Mike Tomlinson (tomlinson86@q.com) for addition information regarding upcoming Flagstaff events.

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HYDRO-NEWS

2013 MASTER WATERSHED STEWARD COURSE IN PHOENIX

The University of Arizona Cooperative Extension, Maricopa County is seeking motivated applicants to participate in the next Master Watershed Steward course. This intensive 40-hour course, which includes classroom and field training lead by university faculty and local experts, will be held October 17th –December 12th in Phoenix. Graduates receive a certificate of completion and the opportunity conduct 40-hours of volunteer activities (following the course) in order to become Master Watershed Stewards. Don't miss out on this opportunity to become engaged with water in your community! **Application Deadline September 27th.**

Where: 4341 East Broadway Road, Phoenix, AZ 85040

When: Thursdays from 8:30 a.m. to 12:30 p.m. October 17th –December 12th with two Saturday field trips (November 2nd & December 7th). Holidays excluded.

Cost: The cost is \$125.00 and includes The Arizona Watershed Stewardship Guide, additional course materials, transportation to and from field sites, and light snacks. Partial scholarships are available.

For more information

Contact Summer Waters:

Phone: (602) 827-8249 Fax: (602) 827-8292

E-mail: swaters@cals.arizona.edu

Visit our website to download an application: Extension.arizona.edu/maricopa/master-watershed-steward-program

Keep updated on Facebook: [Facebook.com/MasterWatershedSteward](https://www.facebook.com/MasterWatershedSteward)

For additional information on the Master Watershed Steward program please visit ...

- <http://www.bizjournals.com/phoenix/news/2012/09/30/maricopa-county-watershed-program-wins.html>
- <https://wrrc.arizona.edu/steward-program>
- <http://ag.arizona.edu/spotlight/maricopa-county-watershed-program-wins-top-valley-forward-environmental-excellence-award>

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SRP MAY CUT OUTPUT AT COAL PLANT

Offer made in response to EPA's emission demands

By Brandon Loomis
The Republic | azcentral.com
Fri Jul 26, 2013 7:22 AM

Operators of the West's largest coal-fired power plant, a major economic engine for Arizona, propose closing one of its three 750-megawatt generators by 2020 to satisfy federal regulators and clear haze over the Grand Canyon and other national parks.

Salt River Project and its partners in the Navajo Generating Station near Page — including the U.S. Interior Department and the Central Arizona Project — would also stop burning “conventional” coal by 2044, though new “clean coal” technology could allow continued use of the fuel beyond that date.

The plan, the result of months of private negotiations, is intended to counter an Environmental Protection Agency proposal to mandate the use of costly nitrogen oxide-reducing catalytic converters to cut emissions at the plant, which helps power much of the Southwest and pumps Colorado River water to metro Phoenix and Tucson.

The Navajo Nation, Gila River Indian Community, Western Resource Advocates and Environmental Defense Fund signed on to the proposal.

Now, all that's needed is EPA approval. Regional EPA officials said they had not seen the proposal and could not comment other than to say they had encouraged the plant operators to come forward with their own ideas to address the environmental issues.

Read more at <http://www.azcentral.com/news/arizona/articles/20130725srp-may-cut-output-coal-plant.html>

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SRP FINDS INVASIVE MUSSELS IN CANAL SYSTEM

By Ryan Randazzo

The Republic | azcentral.com

Thu Aug 1, 2013 5:22 PM

Salt River Project found mature, invasive quagga mussels growing in its canal system for the first time, the utility said Thursday, signaling what could become an expensive maintenance problem for metro Phoenix.

The tiny mussels can proliferate and clog water pipes, and can be difficult to remove from the workings of water treatment plants, power plants and other facilities that draw water from the canals that deliver water to 10 municipalities.

For now, SRP found two small colonies of the creatures. But if they spread, it could be a problem.

“It was definitely a disappointment,” said Brian Moorhead, a senior environmental scientist for SRP who found the mussels in July during regular inspections.

“We have anticipated them for a long time,” he said. “When they actually show up, it's a lot more work for us in the future. A lot more headaches.”

Read more at <http://www.azcentral.com/business/consumer/articles/20130801srp-finds-invasive-mussels-canal-system.html>

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CALIF. PANEL LAUNCHES PROBE INTO OFFSHORE FRACKING



Quagga mussels can clog water intakes at power plants and canals, requiring costly removal methods like manual scraping and power-washing.

Rob Schumacher/The Republic



On April 12, 2005, oil platform Gildea is seen in federal waters in the Santa Barbara Channel off Ventura, Calif.
AP

By Alicia Chang

Associated Press

Fri Aug 16, 2013 9:18 AM

LOS ANGELES — California regulators have launched an investigation into offshore hydraulic fracturing after revelations that the practice had quietly occurred off the coast for the past two decades.

The California Coastal Commission promised to look into the extent of so-called fracking in federal and state waters and any potential risks.

“We take our obligation to protect the marine environment very seriously and we’re going to be looking at this very carefully,” executive director Charles Lester said Thursday during the commission meeting.

As a first step, the coastal panel planned to ask oil companies proposing new offshore drilling jobs if they will be using fracking and require them to submit an environmental review. It will determine further action after completing its fact-finding mission.

A recent report by The Associated Press documented at least a dozen instances of fracking since the late 1990s in the Santa Barbara Channel, site of a disastrous 1969 oil platform blowout that spurred the modern environmental movement. Earlier this year, federal regulators approved a new project, but work has not yet begun.

Fracking involves pumping huge quantities of water, sand and a mixture of chemicals at high pressures to break up rock formations to recover oil and gas. Offshore fracking typically uses less water compared with fracking on land, where the practice has led to various efforts to ban or curtail it.

The Coastal Commission, which is charged with protecting the shoreline and marine resources, was not aware until recently that fracking was occurring, mainly because of the complicated web of agencies involved,

said Alison Dettmer, a deputy director.

Read more at <http://www.azcentral.com/business/consumer/articles/20130815calif-panel-launches-probe-into-offshore-fracking.html>

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GOSAR, KIRKPATRICK A BIPARTISAN BOOST FOR MINE

Backers of controversial project near Superior hail Gosar-Kirkpatrick alliance

By Rebekah L. Sanders

The Republic | azcentral.com

Wed Aug 21, 2013 10:51 PM

A controversial mine proposal that could bring thousands of jobs to Arizona appears closer to reality, and some are crediting a rare bipartisan alliance between U.S. Reps. Ann Kirkpatrick and Paul Gosar for bolstering the mine’s chances.

At a joint town hall held by the Arizona representatives on Tuesday, supporters of the project said that in today’s polarized climate, the partnership of Kirkpatrick, a Democrat, and Gosar, a Republican, will be instrumental to gaining House approval of the mine project and to building momentum for a tougher fight in the Democratic-controlled Senate. A House vote on the bill is expected this fall.

“I’m more optimistic,” said David Martin, president of the Arizona chapter of the Associated General Contractors, which supports the mine because it would employ many of its members. “When you see folks reaching across the aisle to work on a project that’s good for Arizona, that’s a positive sign.”

But several dozen protesters at the meeting signaled that dissension over the project remains.

Environmentalists, rock climbers and members of the San Carlos Apache Tribe at the event in Superior, about 49 miles east of Mesa, held signs criticizing Kirkpatrick and raised concerns ranging from water pollution to destruction of a campground and Indian site to disposal of mine tailings.

Read more at <http://www.azcentral.com/news/politics/articles/20130821gosar-kirkpatrick-bipartisan-boost-arizona-mine.html>

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RADIOACTIVE GROUNDWATER AT FUKUSHIMA NEARS PACIFIC

August 23, 2013 7:42 am • Associated Press



Deep beneath Fukushima's crippled nuclear power station, a massive underground reservoir of contaminated water that began spilling from the plant's reactors after the 2011 earthquake and tsunami has been creeping slowly toward the Pacific.

Now, 2 1/2 years later, experts fear it is about to reach the ocean and greatly worsen what is fast becoming a new crisis at Fukushima: the inability to contain vast quantities of radioactive water.

The looming crisis is potentially far greater than the discovery earlier this week of a leak from a tank that stores contaminated water used to cool the reactor cores. That 300-ton (80,000-gallon) leak is the fifth and most serious from a tank since the March 2011 disaster, when three of the plant's reactors melted down after a huge earthquake and tsunami knocked out the plant's power and cooling functions.

But experts believe the underground seepage from the reactor and turbine building area is much bigger and possibly more radioactive, confronting the plant's operator, Tokyo Electric Power Co., with an invisible, chronic problem and few viable solutions. Many also believe it is another example

of how TEPCO has repeatedly failed to acknowledge problems that it could almost certainly have foreseen and taken action to mitigate before they got out of control.

Read more at http://azstarnet.com/news/world/radioactive-groundwater-at-fukushima-nears-pacific/article_ae3f3ca2-4f1e-5923-a53d-2dbbac958a66.html

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TINY OKLA. TOWN TRIES TO RID WATER SUPPLY OF WORMS

August 29, 2013 8:54 am • Associated Press

Residents of an Oklahoma town are being asked to avoid drinking tap water until the local utility is sure that it has gotten rid of tiny red worms that wriggled into the water system.

Worms ranging from a half-inch to an inch long showed up this week in the water supply in Colcord, a small town near the Arkansas border about 80 miles east of Tulsa. Taking showers with the invertebrates is apparently OK.

City councilman Terry Wood said city water was turned back on Wednesday morning after workers cleaned, drained and re-cleaned the water tower. No worms were found in the tower, he said.

"We are still looking into this problem. I mean we need to get to the bottom of it and we will continue to investigate and do pretty much what we need to do to find out what happened here," Wood said.

Read more at http://azstarnet.com/news/weird-news/tiny-okla-town-tries-to-rid-water-supply-of-worms/article_eebb1caa-eafb-5032-ad83-efd5ef85469b.html

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JOB POSTINGS

Advertise your company's open positions here and on the AHS web page! Contact Christie O'Day at azhydrosoc.dir@gmail.com. Click on one of the positions below for additional details.

- [Chemist/Regulation Compliance Specialist - Cardno ATC](#)
- [Hydrologist - Valles Caldera Trust](#)

ADDITIONAL INFORMATION

For more information about the Arizona Hydrological Society, please visit our regularly updated web site at:

<http://www.azhydrosoc.org/>

Membership may be renewed by credit or debit card through the AHS website or by mailing a check to the Arizona Hydrological Society, P.O. Box 1882, Higley, AZ 85236. Dues remain at \$45.00 a calendar year for regular membership and \$15.00 for students. And remember that your 2014 membership will be included in the 2013 Symposium registration fee!