

JOURNAL OF Environmental Management

PRACTICAL AND CURRENT INFORMATION FOR ENVIRONMENTAL, HEALTH AND SAFETY PROFESSIONALS

ARIZONA

PROPOSED RULE

EXPANDS SCOPE OF WATERS COVERED BY CWA

BY MICHAEL C. FORD, ATTORNEY PG 6

FIGHTING A WILDFIRE

HOW DOES A FIRE RETARDANT HELP?

BY LARRY OLSON, PhD PG 9

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FROM THE EDITOR



If you have not been to the new Journal website in the past few months please check it out! In addition to providing a simple way to sign up for a free subscription to the Journal, or update your contact information, the website lets you easily locate and download past issues, nearly 12 years worth! And don't forget that you can also use Google when searching for Journal authors and past issue

topics -- nearly all past articles and authors have been indexed by Google and are easily available (I'm not sure how Google does this, because the articles are embedded in PDF's, but they do it!).

Thank you to our authors and contributors for sharing your expertise and valuable time with Journal readers! The single most important purpose of the Journal is to provide a forum for sharing information among Arizona's environmental management community -- and this works only because so many of you take the time to share and mentor others through your writings.

I may have mentioned this once (or about 50 times) but if you like the Journal please let our advertisers know that you appreciate their support!

Have a great rest of the summer!

Sincerely,

Jim Thrush, M.S. Environmental Management
Editor & Publisher 480-422-4430 x42

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COVER PHOTOS: (MAIN PHOTO) UNIDENTIFIED DRY STREAM BED IN FOREST. (INSERT PHOTO) FIRE RETARDANT DROP, COURTESY OF USDA FOREST SERVICE, COCONINO NATIONAL FOREST.



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On March 25, 2014, the U.S. Environmental Protection Agency and U.S. Army Corps of Engineers jointly proposed a new rule to clarify the scope of waters subject to the Clean Water Act. The proposed rule redefines the meaning of "waters of the United States," a definition fundamental to determining the applicability of the Clean Water Act requirements. Under the premise of providing more predictability and consistency, the rule categorically defines six types of water bodies as "waters of the United States" and provides for a case-by-case determination of whether "other waters" should be deemed jurisdictional. Specifically, the rule defines "waters of the United States" as:

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters, including interstate wetlands;
3. The territorial seas;
4. All impoundments of waters identified in paragraphs (a)(1) through (3) and (5) of this section;
5. All tributaries of waters identified in paragraphs (a)(1) through (4) of this section;
6. All waters, including wetlands, adjacent to a water identified in paragraphs (a)(1) through (5) of this section; and
7. On a case-specific basis, other waters, including wetlands, provided that those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to a water identified in paragraphs (a)(1) through (3) of this section.

Although some of the categorical determinations are relatively uncontroversial, the agencies would greatly expand their jurisdiction by deeming all tributaries and adjacent waters as "waters of the United States." The breadth of the agencies' reach is revealed in the definitions and interpretations of key terms such as "tributary," "adjacent," "neighboring" and "riparian." The agencies also broadly interpret what it means for a water body to have a "significant nexus" to a water of the United States.

PROPOSED RULE EXPANDS SCOPE OF WATERS COVERED BY CLEAN WATER ACT

by Michael C. Ford

The scientific underpinning of the proposed rule is a draft EPA report entitled "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence." As of the publication of the proposal and the drafting of this article, the Connectivity Report was still undergoing review by the EPA Science Advisory Board. The Board was reportedly prepared to include in its comments a recommendation that the Connectivity Report endorse the idea of various degrees or gradients of connectivity, rather than the "in or out" approach taken by the draft guidance. Stakeholders requesting an extension of the original June 5, 2014 comment deadline pointed out that EPA has put the cart before the horse in releasing a proposed rule based on the draft Connectivity Report.

The definition of "waters of the United States" impacts the scope of various provisions of the Clean Water Act including the following:

1. Section 402 National Pollutant Discharge Elimination (NPDES) permit program
2. Section 404 dredge and fill permit program
3. Section 311 oil spill prevention and response program
4. Section 303 water quality standards and total maximum daily load programs
5. Section 401 water quality certification process

As a result of the proposed rule, real estate and renewable energy developers, miners, forest and timber operators, and a wide variety of manufacturers may be subject to increased regulatory requirements governing waste discharges, storm water management, and spill prevention and control programs. The scope of the proposed rule will have a particularly significant impact in the arid and semi-arid west because the broad definition and interpretation of key terms signals

the agencies' intentions to reach the vast majority of intermittent and ephemeral drainages.

Impacted businesses or trade associations should submit comments concerning the proposed rule to the agencies to make the impacts of the proposed rule and any objections to the rule known. Commenting on the proposed rule is essential to encourage the agencies to narrow the scope of the proposed rule. Strategic comments also lay the foundation for any subsequent administrative or judicial contest to the final rule. The original comment deadline has been extended to October 20, 2014.

Meanwhile, bills have surfaced in the Senate and House of Representatives which would prohibit the agencies from implementing the expanded definition of their jurisdiction contemplated by the proposed rule. Several House committees were also holding hearings relating to the proposal. While not this administration's most controversial environmental regulatory proposal, this one faces rough waters ahead, including a storm of litigation if finalized.

Michael C. Ford is an Environmental and Natural Resources Law Attorney with the Phoenix office of Snell & Wilmer L.L.P. His practice is focused primarily on regulatory compliance advice and enforcement defense. He can be reached at 602-382-6288 or by email at mford@swlaw.com. Mike wishes to thank his colleague Maribeth Klein for taking the laboring oar on this article.



Michael C. Ford
Attorney

ASSOCIATIONS PAGES

The Journal of Environmental Management Arizona invites environmental, health and/or safety organizations in Arizona to contribute news articles about their associations. Contact the editor at 480-422-4430 x42.



WWW.SAEMS.ORG

The RCRA seminar was held on Thursday, May 12, 2014 at the Tucson Hilton East. The event was attended by 150 people, including one student scholarship. Net income from this event goes to the SAEMS scholarship fund. Topics included RCRA basics, universal waste, Tier II reporting, a virtual inspection, Pima County rules update, Arizona Department of Environmental Quality Waste Programs and Southern Regional Office Updates, common inspection errors and compliance case study. (See photos on page 15).

The annual luncheon was held in June at Hotel Tucson. We are proud to announce our new executive committee: President, Patrick Harrington; Vice President, Ami Kidder; President Elect, Derek Koller; Treasurer, Barbara Ricca; Secretary, Jean E. Bierwirth; Communications Coordinator, Patricia Hartshorne. We would like to extend a huge thank you to our volunteer of the year Heather Shoemaker.

Come join us for our July luncheon on July 30th to be held at Hotel Tucson. Our speaker will be Matthew Zoll speaking about Pima County Department of Transportation's "Loop".

If you are interested in joining SAEMS or attending an upcoming event please visit our website at www.saems.org.



Dawn Weyer
President



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AZAEP invites you to attend the monthly meeting on July 22 (Tuesday) at Grimaldi's Restaurant in Scottsdale (6 to 8 p.m.). The speaker will be Dr. Connie Stone, President, Governor's Archeology Advisory Commission (GAAC). Dr. Stone will talk about the development and management of the Agua Fria National Monument as well as provide an overview of the GAAC and its current activities. The Board invites you to go to our website azaep.org to register for the July meeting. You can also become a member and learn more about AZAEP through the website!

AZAEP held its biennial election of officers of the Board in June. Congratulations to the newly elected officers, who will be sworn in at the July 22 meeting: Mike Dawson, President; Beth Defend, Vice President; Dorothy Hallock, Treasurer; Eileen Baden, Secretary. AZAEP is the state chapter of the National Association of Environmental Professionals (NAEP).



Patricia
Mariella, Ph.D.
President



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AWMA-GCS.COM

The Air and Waste Management Association-Grand Canyon Section was happy to host an tour of Arizona State University's algae laboratory on June 4. A big thank you to Dr. Milton Sommerfeld, and the rest of the team at the Arizona Center for Algae Technology and Innovation (AzCATI)! During

our tour, we learned about possible uses of algae, which can be used for everything from medical supplements, to biofuels, and potentially as a carbon dioxide emission control. We were also able to tour the lab and see how strains of algae are grown and evaluated.

We have announced our 2014-2015 scholarship program, open to graduate and undergraduate students in the state of Arizona, who are studying an environmentally related field. More details are available on our website under the "Scholarship" tab. Our next scheduled meeting will be a lunch meeting on Thursday, September 18, where Bob Huhn from Maricopa County Air Quality Department will be speaking about the "Don't Let Our Air Go Up in Smoke" campaign from last year, which garnered a National Association of Counties (NACo) 2014 Achievement Award in the category of Civic Education and Public Information. Please join us! For more information about AWMA-GCS, please visit our website at <http://awma-gcs.com> or join our LinkedIn group.



Mike Sonenberg
Chair



The Arizona Chamber of Commerce and Industry and the Arizona Manufacturers Council will hold their annual Environmental and Sustainability Summit on August 14th and 15th at the Prescott Resort in Prescott. This event will include a golf tournament and a full day of presentations on emerging issues in environmental compliance and sustainability. Details can be found on the Arizona Chamber web page at www.azchamber.com.

The Arizona Chamber Environment Committee will hold its next breakfast meeting on Wednesday, September 10th at the Phoenix Sheraton Airport Hotel. Breakfast will be served at 7:00 with presentations beginning at 7:30. For more information on either of these events, go to the Arizona Chamber web page or contact Jeff Homer at 480-441-6672.



Jeff Homer
Chairman
Environment
Committee



Most of AHS' chapters are in summer hiatus right now but doesn't mean things aren't happening! AHS proudly sponsors a unique intern scholarship program, which is administered by the Flagstaff, Phoenix, and Tucson Chapters and our interns are hard at work this summer.

The 2014 Leonard Halpenny Intern Scholarship

Award recipient is Hydrology and Water Resources Undergraduate Marlyn Ripalda. Organizations participating in this year's internship include Montgomery & Associates, Clear Creek Associates, Tucson Water, and the United States Geological Survey.

Rae Byars is the winner of the 2014 AHS-Flagstaff Charles C. Avery Intern Scholarship and is currently a junior in the geology program at Northern Arizona University with an emphasis in Hydrology.

Anthony Ferrell is the 2014 Herman Bouwer Intern Scholarship winner and completed his 40 hour OSHA certification and has worked for ADWR and Clear Creek Associates this summer.

And don't forget to join us at the 2014 AIPG/AHS National Conference: Water & Rocks - the Foundation of Life will be September 13-16, 2014, at the Prescott Conference Center and Resort. See our ad and visit <http://aipg.org/Events/2014/AIPG-AHS.html> to register now!

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THE CONNECTION BETWEEN
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Poor community design poses a health threat.

That's what nationally-acclaimed experts on public health told attendees at Arizona Forward's recent Stewardship Summit on building healthy communities. More than a dozen mayors, five legislators and nearly 250 business leaders filled the room to explore ways to improve the built environment to positively affect the health and wellness of Arizona residents.

UCLA Professor and Pediatrician Dr. Richard Jackson, PBS host of Designing Healthy Communities, noted that while many facets drive community design, promoting health is rarely one of them. He indicated that where we live affects our longevity. In short, your zip code directly impacts your lifespan.

The event also featured more than 25 interactive exhibitors showcasing sustainability initiatives around the Grand Canyon State, further demonstrating current work being done to create thriving places that enhance our lifestyles.

Amy Tomczyk of Blue Zones, further revealed that 80 percent of how long we live is based on how we live—our lifestyles, habits and culture—while only 20 percent is based on genetics or access to basic healthcare. She

Continued on page 11



Larry Olson, PhD.



Photo Courtesy Wikimedia.org; Author: Coconino National Forest.

IT'S ALL ABOUT CHEMISTRY

HOW DOES A FIRE RETARDANT HELP FIGHT A WILDFIRE?

At this time of year, we are used to seeing news reports of airplanes, flying low over a raging wildfire, and dropping a red slurry on or near the flames. What is in that fire retardant? How does it help to control the fire? Are there human health concerns for the firefighters or the public who might be exposed to it? What is the impact on aquatic and plant species?

Airplanes have been used in fighting wildfires since 1930, when a Ford Tri-Motor dropped water from a beer keg onto a fire. But to be effective, water must be applied at or near the base of a well established fire and much of the water in an aerial drop evaporates before it reaches this point. So the Forest Service has employed various long term fire retardant chemicals since the 1950s to try to improve the effectiveness of aerial drops.

The active ingredient in long term fire retardants is usually an ammonium phosphate or sulfate salt (although the Forest Service no longer purchases ammonium sulfate based material). Mono and di ammonium phosphate, $\text{NH}_4\text{H}_2\text{PO}_4$ and $(\text{NH}_4)_2\text{HPO}_4$, as well as ammonium polyphosphates are the most common agents, but the exact way in which they function is not precisely clear. Apparently they alter the way in which cellulose burns. Cellulose is a polysaccharide containing potentially thousands of glucose molecules with a generic formula of $(\text{C}_6\text{H}_{10}\text{O}_5)_n$. When cellulose burns, it decomposes to give off volatile gases such as methane or propane, and other flammable oils and tars which are partly responsible for the way in which a massive wildfire can almost explode into neighboring fuels. The ammonium phosphate salts appear to decrease the amount of these flammable decomposition products and increase the amount of char, as long as the salts stays in physical contact with the fuel. Thus, even after the water in the retardant slurry has evaporated, it can mitigate the speed of propagation and decrease the intensity of a fire.

Long term fire retardants also contain a coloring agent (usually iron oxide) for better visibility of application patterns from the air. A thickening agent such as gum or clay is used to

increase viscosity which makes for better drop characteristics and fuel adherence. Corrosion inhibitors are present to minimize the effect on ground or aerial equipment. More than 12.2 million gallons of retardants were used by the Forest Service in 2013.

But there are questions about the use of fire retardant chemicals in fighting wildfires. In 2003, a group called Forest Service Employees for Environmental Ethics filed a lawsuit claiming that NEPA required the Forest Service to analyze the effects of the application of fire retardant and to consult with the U.S. Fish and Wildlife Service under the Endangered Species Act. Following a U.S. District Court decision in 2005, the Forest Service issued an Environmental Assessment and a Finding of No Significant Impact (FONSI) for aerial application of retardant. This decision was challenged and was vacated by the same Court in 2010, which ordered the Forest Service to issue a new decision by the end of 2011. A final Record of Decision was released in December 2011 by the Forest Service. This ROD approves continued aerial application of retardants, but with some modifications. These principally include a 300 foot buffer on either side of waterways and to avoid application to some areas with threatened species all together.

More recently, in December 2013, the Forest Service released a Human Health Risk Assessment and an Ecological Risk Assessment of Wildland Fire Fighting Chemicals. These studies found a negligible risk to firefighters from retardant products, although one product posed a risk to air tanker loading personnel in the maximum exposure scenario. The public was likewise not found to be at risk, with the exception of an accidental drenching by one product.

Ecologically, there were more problems. Few studies have been done on terrestrial vegetation, but widespread phytotoxic effects of retardants are not expected. No acute toxic risks to aquatic species were expected from runoff into lakes or streams. However, when a retardant is applied directly across a small stream at normal rates, sensitive aquatic species are put at risk.

Like most things in life, fighting wildfires involves making compromises and trying to minimize risks while gaining the most benefit. Even the composition of fire retardants and their method of application are factors under continuous review. As a native of Arizona, I am eternally grateful for those who put themselves on the front lines to try to save our precious forests and I hope this tool of fire retardants can be made even more effective in the future.

Larry Olson, PhD., Associate Professor, Arizona State University Environmental Technology Management Program. Dr. Olson holds a Ph.D. in Chemistry from the University of Pennsylvania, and is an environmental chemist with interests in remediation technologies and international environmental management. He can be reached at 480-727-1499, or by email at Larry.Olson@asu.edu.

NEWS BRIEFS

EPA APPROVES MARICOPA COUNTY 5% DUST PLAN

❖ The U.S. Environmental Protection Agency (EPA) announced at the end of May that it has approved the air quality plan that has resulted in Maricopa County achieving compliance with the health based standards for dust, or Particulate Matter 10 microns in diameter or less (PM-10).

This plan, also known as the Maricopa Association of Governments (MAG) 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area. The plan demonstrates dust emissions reductions of at least five percent each year between 2007 and 2012, and was prepared through a collaborative effort by the Arizona Department of Environmental Quality (ADEQ), Maricopa County Air Quality Department (MCAQD), Maricopa Association of Governments (MAG), and numerous stakeholders. The plan was submitted to EPA two years ago, and includes many of the most stringent dust control measures in the country.

On Feb. 6 the EPA originally proposed to approve the plan and published it in the Federal Register with a 30-day public comment period. This is the culmination of that process.

“The aggressive measures set forth in this plan are cutting pollution and will allow residents to breathe easier,” EPA’s Regional Administrator for the Pacific Southwest, Jared Blumenfeld said. “We appreciate the continuing efforts of the ADEQ, Maricopa County Air Quality Department, Maricopa Association of Governments, industry and local businesses to reduce dust in Maricopa County.”

Maricopa County had failed to meet the federal standards for dust since the Clean Air Act was amended in 1970. The first Five Percent Plan for PM-10 was submitted to EPA as required Dec. 31, 2007. On Sept. 9, 2010, EPA published a notice of proposed partial approval and disapproval of the plan in the Federal Register.

On Jan. 25, 2011, ADEQ voluntarily withdrew the first Five Percent Plan from EPA’s review to address the approvability issues and include enhanced information and programs. Despite the withdrawal, the measures continued to be implemented to reduce PM-10.

Along with the measures in the plan, ADEQ, MCAQD and MAG have taken additional actions to reduce concentrations of dust and the threat that dust has to public health by:

- Implementing a dust risk forecast that triggers regulatory requirements to reduce or eliminate emissions of dust before and during high wind or stagnation events.
- Improving the inventory of dust emissions to more accurately describe the current economy.
- Improving partnerships with industries subject to dust control requirements and providing technical assistance and training manuals to promote compliance with dust control laws.
- Increasing outreach and education efforts with government partners on their role to prevent dust problems.
- Implementing a “Rapid Response” program to provide early notification about poor air quality conditions and asking dust generators to further reduce emissions.
- Improving public access to forecasts through email, text messages and through the County’s CleanAirMakeMore.com smartphone application and website.

Collectively, the MAG Five Percent Plan for now includes more than 53 control measures from the state, Maricopa County and local governments.

“Today’s announcement is 43 years in the making,” Maricopa County Board of Supervisors Chairman Denny Barney said. “It’s been exceptionally difficult, but thanks to our partnerships, the dedication to achieving compliance and increased awareness, we have successfully found a solution that meets federal standards and improves our air quality.”

Critical to the approval of the 5 Percent Plan was EPA’s concurrence with 25 high winds event day demonstrations, spanning the three-year period, 2010–2012. These demonstrations show that additional dust controls in Maricopa County would not have prevented exceedances resulting from regional dust storms that frequently occur during the monsoon season. The Exceptional Event demonstrations were the first in the nation to be approved under EPA’s recently revised policy. Based on these concurrences, EPA has excluded dust storms from consideration under the Clean Air Act and has proposed a finding that Maricopa County has attained the federal standard by the required deadline of Dec. 31, 2012.

“We are very pleased that the EPA is approving MAG’s Five Percent Plan, and that it agreed that Maricopa County achieved the health based standard for dust” said MAG Chair Michael LeVault, mayor of Youngtown. “It is the culmination of years of hard work and collaboration by many stakeholders. The collective efforts have resulted in dramatic improvements in the concentration of dust in the valley, improving the quality of life for all of the county’s residents.”

Now that the 5 percent plan has been approved, Governor Jan Brewer will request re-designation to attainment.

ARIZONA STATE UNIVERSITY AWARDED \$5 MILLION IN FEDERAL FUNDS

❖ The U.S. Environmental Protection Agency announced recently a \$5 million research grant to Arizona State University to better understand the impacts of nanomaterials throughout their life cycle—from design, manufacture, use and disposal.

“While nanomaterials have shown great potential in electronics, medicine and other fields, we still know relatively little about their effects on human health and the environment,” said Jared Blumenfeld, EPA’s Regional Administrator for the Pacific Southwest. “ASU’s research will help minimize these risks and enable the design of safer products.”

“Nanomaterials provide clear benefits for many products, but there remains a big knowledge gap about how, or if, nanomaterials are released from consumer products into the environment as they move through their life cycles,” said Paul Westerhoff, Associate Dean of Research for ASU’s Ira A. Fulton Schools of Engineering and Professor in the School of Sustainable Engineering and the Built Environment. “We hope to help industry make sure that the

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kinds of products that engineered nanomaterials enable them to create are safe for the environment”.

Arizona State University's research will evaluate the trade-offs between using nanomaterials to improve the functionality of consumer products and the potential risks to humans and the environment. The research proposed will address the knowledge gaps that prevent the safe development of nano-enabled products, and has the potential to improve design and processes of products with nanomaterials. Nanomaterials by definition are less than approximately 100 nanometers, too small to be seen with the naked eye or even with conventional lab microscopes.

Materials engineered to such a small scale are often referred to as engineered nanomaterials (ENMs), which can take on unique optical, magnetic, electrical, and other properties.

The University of California, Santa Barbara also received \$4.9 million to develop an online tool to evaluate life cycle impacts of chemicals which industry, academia and other decision makers can use to make more informed decisions about chemical and product design.

In September 2012, EPA partnered with the National Science Foundation (NSF) to encourage collaboration in applying principles of sustainability to chemical management issues, including design, manufacture, use, and disposal. In 2013, NSF awarded more than \$16 million in grants to Yale University, University of Kansas, University of Arizona and Colorado State University for research on sustainable molecular design of chemical alternatives. These grant awards further EPA's and NSF's commitment to increase knowledge of chemical life cycles and sustainable chemistry.

STANTEC TO ACQUIRE JBR ENVIRONMENTAL CONSULTANTS, INC.

Stantec announced recently it has signed a letter of intent to acquire JBR Environmental Consultants, a 140-person environmental services firm based in Salt Lake City, Utah, with additional locations in Idaho, Montana, Colorado, Nevada, Oregon, Washington, and Arizona.

Founded in 1985, JBR provides baseline environmental studies, air monitoring and testing, permitting and National Environmental Policy Act (NEPA) assistance, site investigation and remediation services, and environmental compliance support to clients in the manufacturing, oil and gas, mining, and power generation and transmission sectors.

JBR has extensive experience with federal land management agencies, the US Environmental Protection Agency (EPA), and various state regulatory agencies, and will enhance our services in the western United States. Stantec maintains a website at www.stantec.com.

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ASSOCIATION PAGES

CONTINUED FROM PAGE 8

shared characteristics of “Blue Zones” – longevity hot-spots around the world where people commonly live active lives past the age of 100.

Arizona currently ranks 19th in the nation when it comes to citizens being physically, emotionally and mentally healthy. We have a way to go and it will require everyone working together collaboratively to make a difference.

Diane Brossart
President



Summer is now upon us and we hope all of you are finding inventive ways to beat the heat this year! In June we enjoyed hosting Mark Hajduk from APS and his update regarding the EPA's required retrofit technology for the Four Corners Coal Fired Power Plant. We will not host a luncheon meeting during July.

Upcoming Events:

August 14, 2014 luncheon will feature a presentation by Kirk Craig from GeoSyntec regarding an **Emerging Remediation Technology** that is sure to impact many of our projects.

September 11, 2014 luncheon will feature a presentation by Mike Ford & Maribeth Klein from Snell & Wilmer with an update on the **Waters of the US Determinations**.

October 9, 2014 luncheon will feature a presentation by Patrick Goodfellow, PE & Julie Chivington-Buck from CDM Smith. They will share CDM Smith's **Sustainable Water Reuse** experience helping Frito-Lay with the Design-Build-Delivery of a Water Recovery and Reuse Facility.

EPAZ hosts monthly luncheon meetings on the second Thursday of the month from 11:30 AM to 1:00 PM at the SRP PERA Club. For the most up to date information, event details and reservations please visit our website at www.epaz.org.

Lisa Culbert
Association
Manager



AZ.ASSE.ORG

As I prepare to turn over the reins to our incoming president Mr. Wayne Carroll, I look back on all the involvement our chapter membership has had, and it has allowed us to grow and improve the membership experience exponentially. I can't say enough about how this experience has enhanced my personal profession, my friendships, and overall appreciation for the ASSE. I hope that you have found value this year and that we encouraged you to stay involved and use all the resources that the ASSE has to offer. It truly has been a great year and I want to thank you all for your support, and I look forward to the upcoming chapter year and all it will offer.

Ryan
Oughterson
President



WWW.AZALLIANCE.ORG

ARIZONA ENVIRONMENTAL STRATEGIC ALLIANCE

The Maricopa County Department of Air Quality and the Alliance Co-Sponsored an Air Quality Permit Compliance Assistance Seminar on June 25th to a sell-out registration of 50 environmental professionals at the University Club of Phoenix. This seminar was a Maricopa County follow-up to the successful Pinal County seminar held in January in Casa Grande. The agenda included presentations on Permitting (Li Sa Kon), Compliance Inspections (Albert Leo), and Enforcement Procedures (Rebecca Dyer), Lunch Keynote (Amanda Reeve), PING's Permit Compliance Experience (Matt Conway), Honeywell Aerospace, Practical Steps to Implementation of an EMS (Greg Bopp), and How to Get and Keep the Attention of Regulators (Mitch Klein).

Neal Brown
Chair



SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT



Nicholas R. Hild, PhD.

WQAA: WE HAVE COME FULL CIRCLE

“...this new (WQAA) rule would ...grant EPA more power over private property and its use than all three branches of government combined.”

Stefanie Smallhouse, rancher in Southern Arizona, My Turn, AZ Republic (5May14)

My first job after graduate school was in Phoenix as the first degreed Environmental Engineer hired for a small environmental department inside the (then) largest semiconductor manufacturing company in the world. On my first day, my boss handed me a one inch thick copy of the new Water Quality Act Amendments of 1972 and said, “*your job for the first few weeks here, is to tour the plant(s) and learn about all the operations that potentially impact the environment...while studying the new WQAA to see how it impacts our corporations worldwide...*” It seems they were trying to find an ‘environmental’ attorney to hire, but in the meantime, they wanted the newly minted environmental engineer to fill the gap!

In graduate school at Iowa, I had taken a handful of courses from the Law School which were, at that time, the closest to “environmental” law that could be found in the early 1970s. So my boss assumed that those courses qualified me to fill in before we actually found an attorney to advise all our facilities about what the then, ‘new’ EPA’s intent would be for all the industrial facilities that were likely going to be more tightly regulated in the coming years.

Three months later, I was introduced to our new ‘environmental’ attorney and told that I should teach him everything I had learned about the impact of the ‘72 WQAA on all our semiconductor manufacturing operations across the US. Holy Cow! *Me*, the non-lawyer-engineer, teaching the lawyer?? But, that was a fun assignment and it instilled in me something that has been basic in all my career as a teacher and mentor to environmental professionals: the notion that every EH&S professional needs to have a working knowledge of regulations and a thorough understanding of the ‘process’ by which laws and regulations go through, to be promulgated.

In the real world of EH&S, you can not wait on the company attorney for most of the day to day decisions that need to be made at the working level; you need to know what minimum legal operational requirements are and be able to anticipate future regulatory obligations. To do that, you need to constantly review legislation at all levels which might affect operations. That legal ‘process’ knowledge becomes an essential tool for every EH&S specialist, whether s/he works in the public or private

sector: it is as fundamental as any other managerial tool in your toolbox.

As you can imagine, in the early ‘70s, industry was being dragged kicking and screaming into compliance with everything EH&S (water/wastewater, air, solid/hazardous waste management), as well as the then, new (1970) OSHA worker safety dictates. It was a time when it wasn’t easy to sell public or private corporation directors and CEOs on diverting resources into environmental/ health measures that negatively impacted the bottom line. So, EH&S specialists everywhere soon learned what the power of regulatory compliance edicts could do to help sell compliance programs and training needs throughout industries.

Fast forward to the first 6 months of 2014: we seem to have come full circle and the EPA is proposing to change and ‘strengthen’ the WQAA by broadening the definition of what constitutes ‘navigable waters’ and it has released a furor in the regulated community. The EPA, on its website at epa.gov, defends its proposal by explaining that they don’t intend to regulate private ranch and farm lands and all the tributaries to what are already defined as ‘navigable waters’ but the regulated community isn’t convinced. Hundreds of environmental specialists who’ve read the proposal see it much differently (as noted in the Stephanie Smallhouse quote above, and elsewhere in this Journal, see Mike Ford’s excellent synopsis of the proposed amendment to the WQAA for clarity). Once again, this real world regulatory process shows why it is absolutely essential that EH&S specialists are educated about the ‘processes’ by which regulations are structured and promulgated!

Which brings us to the critical point of discussing this subject here: while we have come full circle in the WQAA---(i.e. back to redefining the whole basis for the Act’s being---regulating waters of the US via a definition of what waters are ‘navigable’ and when)---it is also clear that we have come full circle in the world of college programs that focus on ‘environmental, health and safety’ and it isn’t good. While we have seen a plethora of new environmental ‘sustainability’ programs across the nation’s colleges and universities, the programs that provide the environmental and health regulatory emphasis which is blended with good science, engineering, mathematics, and technology (STEM), have mostly been dropped in favor of emphasizing ‘social’ sustainability.

Today, in 2014, we are ‘educating’ students in college programs across the US, about the ‘social’ impact of our industrial operations through all these new programs. Most of these programs claim to provide students with knowledge about how sustainability policies can be implemented in the real world. What they don’t emphasize is an understanding that the real world needs solutions that are technical in nature, scientifically sound and only ‘social’ in the broad context of how pollution impacts the environment. Degrees in “**Social**” environmental management won’t provide the tools (unless the student majors or minors in a STEM-specific area), to be able to submit comments on pending legislation that are based on good science (i.e. think: the above WQAA Navigable Waters Proposal).

So, dear Journal readers: if you are a practicing EH&S professional, a lawyer or mid-level business manager concerned with properly managing EH&S activities of any kind, you already know how important the regulations are to you and your employer---whether you are on the consulting side working for regulated entities or working for an NGO or public municipality, or in an industry where your manufacturing processes are regulated--- it is vitally important that you mentor those EH&S specialists who work with you, about the importance of using the regulatory ‘process’ together with sound science, to lessen our global environmental footprint.

And, most important, you also have an obligation to pass that along to anyone you know that is seeking a college education in the great career field of EH&S; we recognize here that we are preaching to the choir so YOU need to be spreading the regulatory/technical gospel. If we don’t properly educate our future EH&S managers, how will we ever defend what we have *not* done, to our children’s, children’s, children?

Nicholas R. Hild, PhD., is an Emeritus Professor and Sustainability Scientist in the College of Technology and Innovation and the founder of the Environmental Technology Management program at Arizona State University. Dr. Hild has extensive industrial environmental engineering and management experience as well as continuing to be a consulting environmental engineer for the past 40+ years. Reach him at www.worldsleadingexpert.com or email at drnick@asu.edu.



2014 SAEMS ANNUAL RCRA SEMINAR

The SAEMS 2014 Annual RCRA Seminar was held on May 15th in Tucson, Arizona at the Hilton Tucson East. (See President Dawn Weyer's SAEMS article on page 8). This annual educational seminar was well-attended, as always, attracting 150 attendees this year. Congratulations to SAEMS and the RCRA Committee for its success and all the hard work put into this event! For more information on SAEMS visit www.saems.org. **PHOTO AT RIGHT:** RCRA seminar committee names (left to right): Barb Ricca, Dawn Weyer, Ken Asch, Heather Shoemaker, Frank Bonillas, Heather Spitzer, Derek Koller, Cathy Kay, Lisa Cuestas.





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MIKE MCGOVERN TAKES ON ROLE OF PRESIDENT AT TURNER LABORATORIES, INC.

Michael (Mike) McGovern, Turner Laboratories, Inc., has recently taken on the role of President. As President, Mike is responsible for all administrative functions and corporate direction of Turner Laboratories, Inc. Mike can be reached at 520-882-5880, or by email at mmcgovern@turnerlabs.com.

Nancy Turner, past president, will assume the role of Director of Sales. Nancy said, "Mike will make a great leader and I'm happy that Turner Laboratories will continue to provide services. I have had the pleasure and honor of providing jobs and service to southern Arizona for the past 30 years." Nancy can be reached at 520-882-5880, or by email at nturner@turnerlabs.com.



Nancy Turner
Director of Sales

Turner Laboratories, Inc. is an advanced, full service environmental testing laboratory with over 30 years of experience. Located in Tucson, Arizona, Turner Laboratories maintains a website at www.turnerlabs.com.

LEADERSHIP CHANGE

AT MARICOPA COUNTY AIR QUALITY DEPARTMENT

by Bob Huhn

On May 29, Maricopa County Manager Tom Manos announced a personnel change affecting two county departments. Following the resignation of the director of the Maricopa County Flood Control District (FCD), Maricopa County Air Quality Department (MCAQD) Director and Deputy Director, William (Bill) Wiley and Ken Proksa, were reassigned to take over the reins at Flood Control. Bill

has assumed the position of Chief Engineer and General Manager at FCD. Having previously worked as the Deputy Director of Public Works, Ken will be a vital asset and will immediately assist Bill with this new assignment. Both moves were effective immediately.

With Wiley and Proksa's move to Flood Control, Dennis Dickerson, who served as MCAQD's Manager for Compliance and Enforcement since 2011, became the



William (Bill) Wiley

interim Director. Dennis will be assisted, on a part-time basis, by Daren Frank, Executive Director of the Stadium District, who will help fill the gap created by Ken's departure.

Under the leadership of Wiley and Proksa the Air Quality Department blossomed into one of the top air quality departments in the country. Since




Ken Proksa


the duo joined the department, in 2010, the department has significantly improved its operations and has had a pronounced effect in cleaning our air and serving the residents of Maricopa County.

Some of their accomplishments include:

- The Environmental Protection Agency's (US EPA) approval of Maricopa County's 5 percent Plan.
- The highly successful 2013 No Burn Campaign, which helped the county stay in attainment




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- for PM 2.5 (very small particles).
- A streamlined dust permit (42 pages to 7), online subcontractor registrations and payments, assistance to more than 900 small businesses.
- Improved efficiency while maintaining quality in all of the department's programs; for example, reducing dust permitting times to less than a day on average (three years ago it took more than 12 days), establishing geographic zones for inspections.
- Enhanced customer service across the board including, providing the public the opportunity to submit their Dust Control Application and fees online, with a credit or debit card.
- Created a Rapid Response capability to determine the cause of high levels of particulate at air quality monitors allowing action to intervene - this program received recognition from US EPA and the National Association of Counties.
- Renewed a small business program to help businesses achieve compliance.
- Brought dust training in-house to improve content and ensure consistency.



Dennis Dickerson

Bill and Ken have left a valuable legacy, an agency whose engine is firing on all cylinders, with a dedicated team committed to the vision they imparted. The employees at MCAQD include some of the most experienced and knowledgeable air quality experts in the country. Thanks to Bill and Ken's

• In partnership with the Arizona Rock Products Association (ARPA), developed a compliance handbook for meeting rule requirements in the rock products industry – this effort received an award from the National Association of Counties in 2013.

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stewardship, they are well prepared to respond to future challenges – be it responding to fine particulates or EPA's expected tightening of the ozone standard. Clean Air Matters.

Bob Huhn is Public Information Officer with Maricopa County Air Quality Department. Bob can be reached at: 602.506.6713. Visit the website at: CleanAirMakeMore.com.

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