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WITH ADEQ
DIRECTOR
BENJAMIN
GRUMBLES**

See pg 6

**SPECIAL
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See pg 18

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| Airtech Environmental Laboratores | 23 | Hazard Prevention Institute (HPI) | 13 |
| ARCADIS | 3 | Kary Environmental Services | 5 |
| ASU EHS Seminars | 17 | Liquid Environmental Solutions | 21 |
| ATC Associates | 19 | MP Environmental Services, Inc. | 19 |
| Basin & Range Hydrogeologists | 7 | N. Weiss Associates, Inc. | 13 |
| Belfor | 8 | PSC | 23 |
| Carter Affiliates Inc. | 5 | Red J Environmental | 4 |
| Chemical Transportation, Inc. | 20 | Republic Services | 21 |
| Clear Creek Associates | 2 | Turner Laboratories, Inc. | 21 |
| Conestoga-Rovers and Associates | 23 | Univar | 24 |
| | | Yellow Jacket Drilling Services | 23 |

From the Editor



ADEQ Director Ben Grumbles speaks at length in an exclusive Journal interview (pg 6) on a variety of topics I think will interest you. Our thanks to ADEQ Director Grumbles and ADEQ Communications Director Mark Shaffer for the interview opportunity. I would also like to thank Tom Curry, of CAP, for his assistance in conducting the interview.

Also in this issue is a 3-Part report on an economic forecast survey conducted over the past few weeks by Joe Holmes and myself. You can find Joe's discussion in "Prospecting" on page 18, followed by survey data, and a list of the comments from survey recipients. The survey is not a rigorous scientific study, however, we did carefully select for the survey (as Joe explains in his column) senior level environmental professionals in Arizona at various types of organizations. Read the full report to learn "what 90 senior level environmental professionals have to say" about employment and spending over the next six months.

You may have noticed the Journal format is looking a bit "tighter". The Journal is finding creative ways to get more content (and more value) into less space. The Association Pages section, as an example, has a new, leaner format, with less unused "white space". However, the word-count limit of Association Pages articles was actually increased with the new format. In addition, both feature articles in this issue are longer than usual, with the ADEQ Director's Interview, at 5300 words, the longest, most in-depth, article the Journal has ever printed.

As always, thank you to our readers, advertisers, columnists, and authors for your continued contributions to the Journal!

Sincerely,

Jim Thrush, M.S. Environmental Management
Publisher & Editor



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ARIZONA

October / November 2009

Volume 7 Number 5

Contents

FEATURES AND ARTICLES

- 6 JOURNAL INTERVIEW WITH
ADEQ DIRECTOR BENJAMIN GRUMBLES**
INTERVIEWER: TOM CURRY
- 17 SAEMS P2 SUSTAINABILITY TOOLBOX**
- 18 FORECAST ON EMPLOYMENT AND
ENVIRONMENTAL SPENDING**
JOE C. HOLMES / JOURNAL STAFF

COLUMNS

- 14 SUSTAINABILITY AND SUSTAINABLE
DEVELOPMENT**
EDUCATING OUR YOUTH: TARGETING THEIR FUTURE
NICHOLAS R. HILD, PHD.
- 15 REGULATORY DEVELOPMENTS**
INTERVIEW WITH BIO-DIESEL EXPERT DAN REES
MICHAEL C. FORD, ATTORNEY
- 18 PROSPECTING: FOR ENV. BUSINESS**
FORECAST ON EMPLOYMENT AND
ENVIRONMENTAL SPENDING
JOE C. HOLMES, ATC ASSOCIATES

DEPARTMENTS

- 4 FROM THE EDITOR**
- 16 NEWS BRIEFS**
- 12 ASSOCIATIONS PAGES**



Interview with ADEQ Director Grumbles Pg. 6



SAEMS P2 Sustainability Toolbox Pg. 17



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COVER IMAGE: ADEQ DIRECTOR BENJAMIN GRUMBLES. JOURNAL PHOTO.

Exclusive Journal Interview With:

ADEQ Director Benjamin Grumbles



ADEQ Director
Benjamin Grumbles
addresses the issues that
concern Arizona's
environmental
management community

Interviewer: Thomas Curry

The Journal met recently with Arizona Department of Environmental Quality Director Benjamin Grumbles. Now, having had a few months to settle into his new position and into his new home in Arizona, Director Grumbles speaks out freely in this interview on a wide range of issues including his environmental background, goals for Arizona, and the environmental priorities he sees for our state.

Tom Curry: What is your background applicable to Arizona? I've read a number of your articles, from the water industry side, and [I think, perhaps, there may be] some people out there that think you're "just another politico from back east that doesn't know about southwestern needs in the environment". Dissuade those people from that point of view.

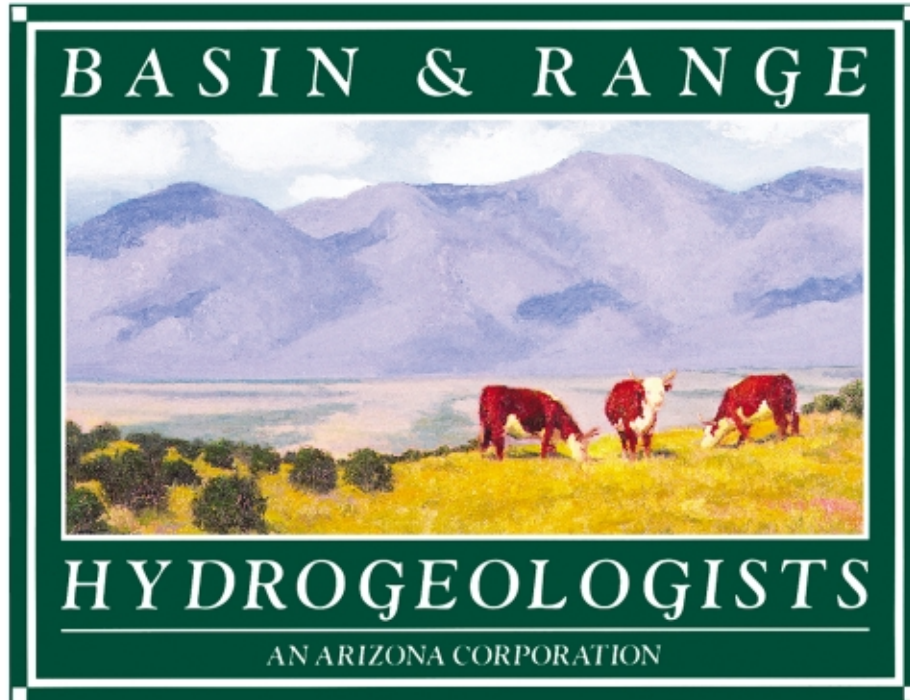
Director Grumbles: Since 1985 I've been working on national environmental policy. In 1985, after graduating from law school, I knew that I did not want to practice law in the traditional sense. I was most interested in public policy and the legislative process. I worked on Capitol Hill in Congress and worked in a committee that had jurisdiction over environmental laws and transportation law. From the mid-80's until 2001, I worked in various capacities on that committee and had a lot of opportunities to travel throughout the country, including Arizona, to work on flood control and environmental restoration projects. My committee oversaw and legislated regarding the Army Corps of Engineers, the Environmental Protection Agency, FEMA, and some other agencies as well, but I got a sense of environmental and water related challenges throughout the country.

I served also in the early 90's on the western water policy water review advisory commission. I had an opportunity to learn a lot about water quality and quantity throughout the West through that effort. I had the joy of being involved in all of the major environmental laws that related to water and hazardous wastes and wetlands over the years and that gave me many opportunities to learn about areas such as Arizona that have environmental challenges. I also worked for the Science Committee in the U.S. Congress. I was deputy chief of staff and environmental counsel. I saw it as an opportunity to really get involved in energy policy, particularly solar, and other forms of renewable energy, and do something different beyond just the water and environmental laws that I had gotten through the transportation and infrastructure committee. After that, I was asked to serve in the Bush administration. [I have] never worked on a political campaign, I've just had a great opportunity to work on a bipartisan basis in congress, and then I got the opportunity to work as a

Continued on page 8

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senior official in the U.S. EPA which was a fantastic opportunity for me, to lead the nation's water programs, water quality and wetlands, and watershed programs for the U.S. EPA. [I] spent a lot of time in that job overseeing a workforce of 2,100 people, [with] about a \$3.7 billion dollar annual budget. A lot of the hot topics [and] controversial issues involved Arizona, but [also] all the other states in the country.

Internationally, I got the opportunity to travel to Australia to see what [it] was doing in this era of clean energy and climate change, including drought. Australia was for me one of the exciting things I got to do, to focus on, before coming to Arizona and accepting the position that the governor offered me — to head up the Department of Environmental Quality. Through the years from 1985 to 2009, I used my skills in drafting legislation, but also working and collaborating with members of the legislature, and with state and local officials while I was at EPA, and [with] travel officials, to find consensus, to find constructive and sustainable ways to ensure that there was environmental progress, while also maintaining our country's economic competitiveness. A great opportunity. Some of the highlights for me over the years involve working on landmark environmental legislation, bringing diverse parties together to find acceptable and balanced solutions. So, I was right in the thick of enactment of reauthorization of the Clean Water Act, which, I think, continues to be one of the country's most successful environmental statutes, although it's clear to me that the Clean Water Act needs to be updated to reflect a more watershed-based, holistic approach and to adapt in this era of climate change. I was involved in some significant legislative revisions to the U.S. Army Corps of Engineers water resources programs to give them more of an environmental focus.

"The first commitment is to ensure that we're doing our job to carry out clean air and safe water and land protection responsibilities ..."



Director Grumbles (R) with interviewer Tom Curry (L) in his ADEQ office.

Water Sense

While I was at EPA, one of my proudest moments was launching a new national program called Water Sense. It's modeled on Energy Star. It's a voluntary public-private partnership to provide consumers, companies, and communities with information so they can make choices on how to save water, money, and energy, by selecting water efficient products and appliances. I see that as critically important, not just in Arizona but throughout the country, as pressures on water increase.

Yazoo Basin Project Veto

The Water Sense program was one of my highlights. Another one which was far more controversial than that, was my veto of, under the federal Clean Water Act, a water project I found to be environmentally unacceptable. It was a flood control project in the Yazoo [River] Basin in Mississippi. . . . It was the 13th veto in the history of the EPA under the Clean Water Act. The controversial Army Corps of Engineers project would have destroyed or adversely impacted 67,000 acres of bottomland hardwood, a critically important portion of the migratory bird flyway and habitat in Mississippi off [the] Mississippi River. The veto was particularly important to the environmental community and to the nation's taxpayers (saving over \$200 million in federal funds).

EPA's Water and Climate Change Strategy

One of my other highlights at EPA, was launching a water and climate change strategy. [I] worked on it for two years, and we met with a lot of skeptics and cynics along the way, but it was important for me to leave a good national blueprint for a sustainable approach to water and energy and climate change. . . . I'm excited that [the] current administration and the career staff and scientists at the EPA are using that as a roadmap to focus on water programs and authorities to mitigate green house gas emissions, and also to adapt programs and activities to be more responsive and resilient in this era of climate change.

So, to answer the question, while I have lived mostly in the east and the south in terms of my upbringing, and [that was] physically where I hung my hat and worked, I've had the privilege and the opportunity to serve in positions that get me out into the country and see opportunities and challenges and work on environmental policy issues and work with politicians, work with officials, and regulators and policy makers, but look for ways to bring people together through environmental policy. [I] have never been involved in a political campaign or run for office, and the last thing, one of the reasons why I came to this position, it wasn't just the great opportunity to focus in on water and energy which are critical issues in the state of Arizona, and get a chance to be in state government, which I had not previously, it was, in addition to those motivations to take this position, it was also a chance to reunite with my family.

Reuniting With Family in Arizona

My parents, brothers, and sister all live in Arizona. . . . One of my brothers and my sister moved out here 30 years ago, so over the last 30 years each of us in the Grumbles family has been either visiting or moving and relocating

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here. So, it is a great opportunity to reunite with the family and also tackle some pressing environmental challenges and get a great experience working as the head of a state environmental agency.

Tom Curry: Well, welcome to Arizona!

Director Grumbles: Thank you.

Tom Curry: I am also from back east originally . . . I'm from the eastern panhandle, West Virginia . . . and have grown to love Phoenix and Arizona. I think it's going to be hard to get me out of Arizona. Hopefully [if I do move, I] would move further north where it's a little cooler. [I] hope you enjoy the transition!

Director Grumbles: Oh, I'm loving it! Over the years of federal government service I spent a lot of . . . time . . . with state environmental officials, and I spent a fair amount of time with [Former ADEQ Director] Steve Owens, and with his predecessors, and . . . worked with other Arizona Department of Environmental Quality officials over the years on some key issues. But the diversity of the climate, and the geography in the state, is fascinating. It is a beautiful state and I am . . . striving to get out and see as much as I possibly can. And I'm having a blast. . . . Arizona is such a beautiful state and it has so much going for it in terms of the natural resources and the people throughout the state.

Priorities

It also has significant challenges and opportunities--environmental sustainability, . . . clean energy, renewable energy. . . . As I look at priorities, as the director of the Arizona Department of Environmental Quality, the first commitment is to ensure that we're doing our job to carry out our clean air and safe water and land protection responsibilities under the environmental statutes and the delegated programs that Arizona has. . . . I know right now that there are three areas that I'm really focusing in on, because I feel that these are some of the most pressing ones, and ones that I can also make a difference in.

First Priority: Water Sustainability

The first of those three priorities is water sustainability, and that means conservation, and reuse, and recycling. I've called it the 3 R's of water sustainability. The first R is reducing waste and inefficiency. I think Arizona, many places in Arizona, are doing well to increase their water conservation efforts. But there is so much more to do. [We are] working with the Department of Water Resources, and with Arizona Corporation Commission and others to identify ways to increase water conservation and water efficiency. [On] August 28th we announced that, with Governor Brewer's strong support, . . . [Herb Geunther, Kris Mayes, and myself] would co-chair a . . . Blue Ribbon Panel on water sustainability. [We] are working now to identify key experts and stakeholders to develop short term and long term recommendations on what for me is a priority and I know is also a priority for the Governor, and that is water sustainability, conservation, reuse, recycling. A big part of this is going to be looking for ways to promote waste water recycling. I have learned Arizona . . . is one of the leading states in terms of waste water reuse and recycling. California, Texas, and Florida also have some programs that are doing some good work. But still, if you look at the water supply in Arizona, only about 4% of it is from recycled, reclaimed water. What that says to me is that we've got to do more. We need to focus in on wastewater and that's going to be one of the jobs of this Blue Ribbon Panel, . . . looking at possible changes to policies, regulations and legislation, and look[ing] at current and future infrastructure needs. But I can see that 4% growing, and it absolutely needs to grow and it should grow. You can keep a lot more fresh water in streams or underground, if you are reducing, reusing, and recycling. And it's important . . . to ensure that recycled water continues to protect the public health, and is accepted by the public. But as my experiences in Australia and in

other arid regions indicate, we really need to do more, so water sustainability is one of the priorities.

Second Priority: Clean Energy, Climate, and Growth

The second major priority area that I'm focusing in on is clean energy, climate, and growth. Arizona is an active member of the Western Climate Initiative. The Governor believes it is important to continue to stay heavily engaged in that, to work with her colleagues in other states throughout the west on developing practical and proactive approaches to climate change and clean energy. As the head of the Arizona Department of Environmental Quality, I see a growing role for our agency in environmental permitting, and environmental considerations to promote renewable energy. Solar power is certainly one of those and I know from the Governor's perspective Arizona should be the top solar power state in the nation. And we have some catching up to do. We have great opportunities ahead, but it's critically important to use tools such as life cycle analysis and environmental assessments to measure the water footprint and the landscape footprint of various projects. Concentrating solar power in particular is one . . . we need to review carefully. . . . What [are] the water and landscape and habitat footprints . . . of various solar power technologies?

And [there are] other great opportunities. As Thomas Friedman says, this is the era of clean energy and climate change. It's also a climate of opportunity for innovative technologies and green collar jobs. I think Arizona may lead the way for the nation on developing and deploying algae biofuels technology. It's very exciting, some of the work [that] university research and [the] private sector are doing. We are looking closely at that and also, obviously, wind energy. It has great potential throughout the state, but [also] developing practical and pragmatic approaches to mitigate greenhouse gas emissions through cost effective technologies, looking at Cap and Trade, the mechanisms, for that, it's all important and all an important part of my day-to-day job.

Third Priority: Collaboration

The third priority area is collaboration, which is all about process. What I've learned over the years in national and regional environmental policy making is that the key to sustainability and getting environmental results, is collaboration. In developing policies and solutions to complicated problems, that involved multiple jurisdictions and multiple players, interests and stakeholders, the key is reaching out, getting reliable science-based information, building credibility and trust with one another, and then working on solutions. Sustainable solutions transcend political and bureaucratic boundaries. I look at the Colorado River, I see that with all the states involved, with all the different types of solutions, stressors to the quality of the Colorado River, that it's in need of a regional collaboration involving state and federal and tribal and non-governmental interests. So I'm looking for opportunities to work with partners in other states and in other agencies to tackle those difficult challenges. They range from nitrates and sewage from septic systems, and we're working on that — our agency and other agencies, particularly in Bullhead City, Lake Havasu City area — to pharmaceuticals that can adversely impact fish, to ensuring that radioactive materials or toxic chemicals are not leaching into the Colorado, which is such a critical, virtually a lifeline for much of the Southwest, and for the state of Arizona, [a] critical water supply.

The focus on collaboration means not just regional collaboration such as the Colorado River or [the] Arizona/Mexico border; it also means a way of doing business, carrying out the people's business by bringing groups together and working together on policy and environmental outcomes upfront. And then, providing compliance assistance, and then looking at enforcement, if the requirements and standards that are developed are not being met. But collaboration is going to be a key priority area for me. I come to Arizona having led U.S. EPA's American Indian Environmental Office, the national program

Continued on next page

on Indian tribes across the country, and I learned in that experience how important it is to work on a sovereign-to-sovereign basis and to respect tribal nations and work closely with their leaders. Indian country is very much a part of . . . Arizona. I [have learned] that the Arizona Department of Environmental Quality and other agencies work closely with tribes, and that's going to be an important part of my collaboration priority. We're reaching out to provide technical assistance, but also to learn from tribes on key issues. There are many controversial and complex issues that are on the table; that makes consultation and collaboration all the more important.

Tom Curry: That is the theme of a lot of the articles that you've written in the past, collaboration. [With your] appointment to the position, what kind of marching orders did you get from Governor Brewer. Did she say, "just go with it" or did she have specific areas where she said, well, "here is what I'm looking at".

Director Grumbles: From day one I was impressed by Governor Brewer and her team of advisors, who have a lot of experience in government and the delivery of services to citizens. The Governor made it clear to me that I would have the opportunity to manage my agency without a lot of intervention or second-guessing on her part. She was focused on environmental results and sustainability. She wanted me to ensure that environmental progress would continue while maintaining our state's economic competitiveness. And she emphasized the importance of solar power, water sustainability, and collaboration. Her team emphasized the need to be transparent and be held accountable, and work closely with the Legislature and with communities, stakeholders, in particular those who are part of the regulated community. So, I didn't get a lot of marching orders, I just got a few very good, solid ones, all emphasizing the importance of maintaining environmental progress while ensuring our state's economic competitiveness and focusing on transparency and collaboration. And it was particularly highlighted to me [to keep] the legislature and the regulated community . . . informed, and reach out to the environmental community and let citizens know what you are doing, so that you and your agency can be held accountable.

Tom Curry: From the [agency] employee aspect, you are now the director of this large organization that has lost a lot of people. Unfortunately, [because of the] economy, you came on board with one albatross around your neck: the money is not there for doing a lot of regulatory activities or even some of the more esoteric, sustainability/recycling type of programs, where you're really going to have to find the funding within the entity. But from the employee standpoint, "what kind of manager are you going to be?" [In] one of your articles, I . . . [found] it interesting, [you] give some of the water related agencies and utilities some management pointers and ask them to use concepts of leadership and leadership modeling. What is your leadership model going to be here, is it going to be, "allow my directors to direct and report back to me," or, "here's what I want them to be doing" and give them more guidance.

Management Style

Director Grumbles: I am a true believer in focusing on environmental results, and ensuring that I have talented and skilled directors who will run the day-to-day operations of the agency and will report to me on their progress towards meeting the environmental goals that we establish. So I would say my management style is one of . . . recognizing the importance of delegating to proven capable leaders, give them the authority to manage their team, and make sure that they establish good environmental goals upfront. And then as a manager my goal is to embrace innovative and collaborative approaches that might be outside-the-box thinking but that will help us get to environmental results more effectively and quickly.

You're absolutely right -- I think it's important to tackle head-on potential concerns over morale or decreasing budgets in terms of what the state taxpayers provide to the agency. And for me it's important to seize on those potential challenges and emphasize partnerships. A perfect example of that is recycling. One of my priorities in this agency is to dramatically increase statewide recycling. I think recycling is a concept that applies not just to solid waste, although that is a critically important part of it, but also to water. I like to say, as others have before, that there is no waste water, just wasted water. And, so you need to look for ways to recycle it.

In the solid waste arena, I have emphasized to my staff at the agency that this is one of the key areas where we need to rely on partnerships and grow the collaboration for recycling of materials statewide. There are some enthusiastic organizations that are absolutely committed to, devoted to, recycling, in the non-governmental sector and in the private sector. I see great opportunities with the regulated community as well, to develop partnerships with them for pollution prevention and environmental management systems. These are programs that are going to rely on state or federal dollars as much as on the commitment towards stewardship. . . . My philosophy, which I believe with every bone of my body, tells me that the way you get sustainable environmental results is not

"We have to be very careful to ensure that our programs are manageable and also that they are affordable"

simply through regulatory command and control programs, you really need to develop other tools and incentives. Sometimes it's financial assistance, but sometimes it's public recognition and the value of being a true partner. We need to develop broader partnerships and I think we can do that because there is a desire for increased stewardship. I see it in the regulated community. I see it in non-governmental groups. And I certainly see that there's a great potential to grow recycling throughout the state. Citizens [and] environmental groups are looking for that.

Sustainable Financing

The other thing I really need to say, when it comes to budgets and management style is that I am a firm believer in sustainable financing. And what that translates into, oftentimes, is fees and innovative financing mechanisms. Over the years I have been at the forefront of pushing for increases in fees. And I continue to believe that a key to sustainability and bedrock principle and sustainable environmental programs is having innovative financing, and also user and beneficiary pay systems. My staff and I are focused on looking at the fee structures that the regulated community pays and seeing and assessing, candidly assessing, "is that the right fee amount?" Because I think the regulated community recognizes that environmental programs need sustainable financing and that permitting and licensing decisions that we make in the agency need to be legally and scientifically defensible. That takes time and money, so I think fees are going to be an important key to the future of the environmental permitting and regulatory programs.

Tom Curry: Do you feel that you are going to need to go back to EPA and get some changes to some of the contracts that we [Arizona] have with



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them with, for, say, the AZPDES program, where we agreed not to charge fees . . . so that you can make these basically pay-for-participation type of permitting? . . . I realize everybody is [thinking], “no more fees”, but, . . . like universal health care, “somebody has to pay for it”.

AZPDES Program

Director Grumbles: [There are] a couple things I want to say on that. First is that I was proud to be involved while at EPA . . . when the state of AZ did finally complete the application process to have the . . . Clean Water Act permitting program delegated to the state of Arizona, the AZPDES program. And I was also involved in the Supreme Court process to reaffirm the delegation to the state. So now, in my role as head of the Arizona Department of Environmental Quality, it's critically important to me that we retain that program so that we can tailor it to meet Arizona's needs, rather than [it be] an EPA led permitting program. I have had good discussions with the EPA team, which I respect, I know a lot of the folks, and they know that Arizona is going to need to develop its own approach to managing and sustaining the permitting program. I think that's one of the key areas, of looking at the potential for fees. The other thing that I would say is that we have to be very careful to ensure that our programs are manageable and also that they are affordable. Now I think that the regulated community is focused on getting good science-based decisions and timely decisions and they want to see that, but . . . also, . . . the idea of imposing fees can be controversial. We can't view these issues in isolation, we have to take into account the economic impact on the builders or on those who are applying for permits. So the key is to bring in the public, bring in the regulated community, and hear them out and find the best solution that sustains the program and doesn't hurt our opportunities to grow the economy and to provide jobs. I think that's going to be a key area down the road — what kind of sustainable financing programs and fee mechanisms will be right for Arizona?

Tom Curry: Well, I hate to say this but we've pretty much run out of time. Is there anything you would like to bring up that we have not asked?

Bringing People Together

Director Grumbles: I take most pride in bringing people together. Over the years, I've had the opportunity and privilege of being in the middle of some very complex and contentious debates, and every person, every stakeholder, has a perspective and it's important to hear those perspectives. I may not always agree, but it is important to have an inclusive, science-based, and transparent process. And I talked about collaboration, a lot of people talk about it, it's hard work, and it takes time, but when you look at the complexity of the issues currently facing Arizona, whether it's regional issues that involved so many different jurisdictions, or it's an issue like multi-sector general permits for stormwater, where there are so many interests or views, the best decisions, the most sustainable solutions, involve a collaborative approach. And I've learned that over the years in dealing with regions, whether it's the Great Lakes, or Chesapeake Bay, or the Gulf of Mexico, or on particular issues like climate change, working with the power industry, or in the Water Sense program working with the plumbing industry and with environmental groups and infrastructure utilities, if you work face to face, if you lay out data, the information, and develop a relationship that will lead to more collaboration and less confrontation. And there will always be litigation, but I think a key is to invest upfront in collaborative processes and transparency and look for sustainable solutions. That's something that I am excited about in Arizona. The air challenges we have in terms of ozone and particulate matter, including dust, . . . the various water challenges for water sustainability. We haven't talked much about the State WQARF program or Federal Superfund, or Underground Storage Tanks, or ephemeral streams . . .

Tom Curry: . . . Regarding Obama's administration — as soon as they came in, they put a stop to Performance Track, which is a collaborative, which is an incentivisation of companies to “go beyond”. How is that going to affect . . . Performance Track in Arizona?

Performance Track

Director Grumbles: Every administration has the right to put a different perspective on something or give it a different name, or involve some different players. I'm optimistic the new administration will embrace pollution prevention and environmental management systems, and the specific collaborative that we've called Performance Track, I think there's great opportunity in that. I'm looking to increase efforts and expand the partnership of the Performance Track [program]. If the new administration wants to change the name or [go in] some different directions, that is their right to do so, but I am optimistic that they will recognize the value of providing incentives, not just regulatory incentives and disincentives, to go above and beyond and to seek superior environmental performance, even if it's not in a statute or regulation. That's very much a part of my focus on collaboration and bringing in new players or sectors that have not been involved. I think that the more you look the more you will find a sincere interest in stewardship and good corporate citizenship on environmental matters.

Controversial Decisions

On another day we'll talk about some of those controversial decisions involving Santa Cruz River and the Supreme Court decision on Rapanos. I am focused on environmental results and following the law as it is written, and not scoring political points. A lot of those decisions are tough decisions because the law had changed and I think some people wanted environmental decisions based on what they wanted as opposed to what the Supreme Court had laid out. To me, every wetland, every creek or stream has value, but not every one is regulated under the Federal Clean Water Act. You have to recognize that, and you do have to draw a line somewhere. But that doesn't mean you have to abandon them, or write them off.

Importance of Groundwater

The last thing that I'm going to say, is that as one of the state's newest citizens, every day I am impressed by the importance of groundwater throughout the state. [Water] is truly . . . the life-blood of Arizona, it is the state's most precious liquid asset. So much is riding on the protection of groundwater, our aquifers across the state. And the state has some great tools on the books and in the regulations, but I think one of the key areas for us all to be thinking about is, how do we continue to sustain our groundwater supplies. Groundwater mining and pollution are concerns, I know, of people throughout the state. I am sure they will come up in the Blue Ribbon panel discussions, and they certainly come up in our permitting decisions, and it's something that we take very seriously, and as a new citizen of the state of Arizona, [I believe] it's important.

Tom Curry: Thank you, Director Grumbles.

Tom Curry is Supervisor of Environmental Compliance with Central Arizona Project. He holds an MS in Environmental Management from ASU. Tom can be reached at tc Curry@cap-az.com.

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www.eia-az.org



www.azhydrosoc.org

In continuing AHS' mission of providing public understanding, education, and training in the science and technology of hydrology and water resources, the Phoenix chapter was proud to have held a successful Symposium this year in Scottsdale, Aug. 30-Sept. 2. Participants included the sponsors and exhibitors, water professionals from USA and Mexico, university students, and grade-school teachers attending Project WET workshops. We want to thank everyone who supported and participated in the event this year.

Other recent chapter activities included a Tucson chapter presentation on Oct. 13th by Wally Wilson and Dick Thompson, Tucson Water, titled, "Update on progress at the Southern Avra Valley Storage and Recovery Project (SAVSARP)." This talk was followed by a tour of the SAVSARP facilities on Oct. 24th. The Phoenix chapter invited Brian Conway, Arizona Department of Water Resources (ADWR), to talk about the ADWR Land Subsidence Monitoring Program. Earlier this year, members of the Flagstaff chapter assisted Northern Arizona University with their Summer Enrichment Program for Arizona teenagers. The topic this year was "Where did the H₂O go?" Members shared their knowledge of the Grand Canyon, well drilling, Flagstaff's water development, and water quality.

As this calendar year approaches its end, we are already looking forward and seeking nominations of members to be Chapter and Corporate Board officers. Please send election inquiries and nominations to your local chapter's President.

Matthew Beversdorf
Executive Director



American Society of Safety Engineers

At the 9/8/09 Southern Arizona ASSE meeting, we were honored to have ADOSH Assistant Director Mark Norton as our speaker. Norton spoke about the "new" OSHA under the Obama administration. Norton's view is that OSHA regulations probably will be speedier coming out and that the process will be more streamlined (I think that would be a good change).

Nationally, compliance will be more intense. The new administration wants an issue. Arizona's being a state approved plan along with its strength in its Consultation program is a definite benefit to us.

The Voluntary Protection Program in Arizona is still going strong and getting stronger. Norton, along with Director Darrin Perkins, will be meeting with national OSHA leadership to discuss potential improvements to the VPP program.

Shari Di Peso
Secretary



ESH for
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www.seshaonline.org

The local Arizona Chapter of SESH held its Chapter meeting on Sept. 17th. The meeting was held at ASU's MacroTechnology Works located in Tempe. The meeting's presentations covered current topics that we see in the newspaper on a daily basis. "Solar Energy Installation Rebates" were presented by Katharine Kent, the President of The Solar Store. "ASU's Solar Rooftop Projects" were covered by Jason Scott from APS Energy Services. "H1N1 Pandemic Flu Preparation and Response" was discussed by Diane Labban, RN who is a Nurse Practitioner from Banner Occupational Health. Honeywell Analytics sponsored the snacks at our networking break. We had to postpone the presentation, "Is there Safety in Sustainability?" by Dr. James Leemann to the next Chapter meeting scheduled for Q1 in 2010. Dates you can plan on are April 25 to May 2nd, 2010. This is when the annual SESH Symposium is scheduled in Scottsdale, Arizona. This is a great opportunity to get continuing education locally. Meanwhile, warm holiday wishes to you and your families from the AZ-SESHA Chapter!

Christine Pomeroy
President



AHMP
Thunderbird

www.thunderbirdchmm.org

"Introduction to Environmental, Health & Safety Regulations & Compliance" - The T. hunderbird Chapter is offering a 4-day course in Tempe on Nov. 9-12, 2009. The course is split into two 2-day sections for an intensive review of env. laws, regs. and health and safety principles for Env. and Safety professionals with responsibility for Hazardous Materials Management. (See our ad on page 3).

Thunderbird Chapter 2010 Scholarships! Application deadline is Nov. 15, 2009. Contact cpaulausky@cpsafety.net or the scholarship offices at ASU, UofA, or NAU for details.

If you want to be on the Thunderbird email list for event notices, and reg. updates, contact cpaulausky@cpsafety.net. AHMP/EPAZ monthly lunch meetings are held from 11:30 ~ 1:00 on the 2nd Thurs. of each month, at the SRP PERA Club in Tempe. Check your emails for the meeting notice. Meeting details: www.thunderbirdchmm.org or www.epaz.org. AND, don't forget the Thunderbird Happy Hour on first Thurs. 5:30 PM-?? Calendar Items: Nov.-No T-Bird Happy Hour this month; Nov. 9-12- Thunderbird Chapter Course:

"Introduction to EHS Regulations & Compliance"; Nov. 12 - Luncheon Meeting-Practical Aspects of EMS; Dec 3-Holiday Happy Hour, Location TBD.

Chuck Paulausky
Board Member



The year is passing by all too quickly! Our two remaining env. seminars are scheduled in Casa Grande on Oct. 16th and Phoenix Nov. 13th. These seminars are offered as out-reach programs for building owners, general contractors, all trades, schools, homeowners, facilities management, municipality personnel and anyone who has the desire to learn more about asbestos regulations. The Asbestos Regulatory Seminars offer a full day of interesting presentations. The seminars are free and we provide continental breakfast and lunch. EPA has recently published the names of schools in Arizona found to be in non-compliance. The fees are substantial and could have possibly been prevented if knowledge of the EPA AHERA regulations were known, understood and implemented by these local educational agencies.

Please visit our web site or call 602-437-3737 ext. 123 for info. on upcoming events sponsored by EIA-AZ and for membership and sponsor opportunities.

We encourage participation from members and non-members (environmentally concerned community) involvement with our outreach programs.

Vicky Aviles
President



www.AzBAS.net

An outstanding Environmental and Sustainability Summit, co-hosted by the Arizona Chamber of Commerce and AzBAS, was held at the Phoenix Convention Center on Sept. 10th and 11th. AzBAS members and invited speakers discussed how *Sustainability Governance* enhances the performance of their companies and how they use *Sustainability Metrics* to track and improve performance. Hugo Steensma of Sustainable Asset Management USA, Inc., highlighted the importance of understanding current trends (e.g. water, climate change, demographics, etc.) in order to be successful in the future. Megan Bloomer of Xanterra discussed the establishment and success of their env. metrics, while Steven Kooy of Haworth discussed governance, metrics and lessons learned in their journey towards sustainability. Ed Fox chaired the overall Sept. 11th session while Richard Condit of Sundt Construction moderated the lively governance and metric panels.

AzBAS, along with the Arizona Business Council will co-host their 2nd Annual Climate Conference, *The Economic Tradeoffs of Carbon Controls: How Much Will it Cost and Who Will be Affected* on Dec. 2, 2009 at Black Canyon Conference Center in Phoenix. Speakers include experts on the economic implications of GHG control as well as CEO's from several prominent AZ-based companies that will be impacted by the forthcoming legislation. Ann Kirkpatrick, Rep. for Az. District 1, has been invited to keynote the conference with the latest view on Climate legislation from Washington. Please see our website for information on AzBAS.

Edward Z. Fox
Chair





www.azchamber.com

The Arizona Chamber of Commerce and Industry and the Arizona Manufacturer's Council held its annual Environmental Summit on Sept. 10th and 11th at the Phoenix Convention Center. Speakers included ADEQ Director Benjamin Grumbles, Deputy Director Patrick Cunningham and Division Directors Henry Darwin, Nancy Wrona, Amanda Stone and Michael Fulton. Other topics covered included climate change and sustainability programs in government and industry. The Arizona Chamber of Commerce and Industry and Manufacturer's Council wishes to express appreciation to all those who participated.

The Arizona Chamber's Environment Committee's Oct. breakfast meeting will be held on Wed. Oct. 14th at the Sheraton Phoenix Airport Hotel located at 1600 South 52nd Street in Tempe. Henry Darwin from ADEQ and Dirk Berard from Honeywell will be speaking about the \$6 Million settlement agreement between ADEQ and Honeywell that was entered into last year. For more information visit our website or contact Jeff Homer at 480-441-6672.



Jeff Homer
Co Chairman
Environmental
Committee



www.EPAZ.org

In August, EPAZ had a members-only business meeting for election of officers and attending to other organization matters. Mannie Carpenter, Laura Malone, and Skip Harden were re-elected as President, V. President, and Treasurer, respectively. Karika Bridgers was elected as the new Secretary. In addition, a new EPAZ logo was selected.

Attendees at our Sept. meeting were given an opportunity to learn about some of the permitting challenges and energy opportunities from bio-diesel. Mr. Dan Reese of AZ Biodiesel gave a passionate description to those present. On Oct. 8, Tammy Perkins, Executive Assist. to the Phoenix City Manager, will describe the City of Phoenix sustainability efforts, including an update of the Green Phoenix effort. For the Nov. 12 meeting, Matt Conway of Ping will give a presentation on "Practical Aspects of Environmental Management Systems." The Ping environmental management program has received many honors for their accomplishments over the years.

EPAZ normally holds monthly luncheon meetings

on the 2nd Thurs. of the month from 11:30 am to 1:00 pm at the SRP PERA Club. EPAZ also gathers on the last Wed. of the month for a casual cocktail mixer at various locations throughout the valley. For details see our newly renovated website for info. and meeting registration or contact me at (480) 829-0457.



Mannie
Carpenter
President



www.awma-gcs.com

AWMA kicked off its fall meeting schedule by co-sponsoring a breakfast meeting with the Arizona Chamber of Commerce & Industry and Arizona Manufacturers Council at the Environmental and Sustainability Summit. Mr. Peter Gitlin from Energy Network Operations Center (EnerNOC) gave a presentation on energy conservation through demand response. AWMA also awarded its annual scholarship check for \$1000 to Ms. Tingting Gao, for her paper entitled "Computational Study of the Interactions Between Ionic Liquids and Volatile Organic Compounds." Ms. Gao is currently at ASU in the Dept. of Civil, Env. and Sustainable Engineering.

Our next meeting will be held on Oct. 23, 2009 at ASU's Global Institute of Sustainability. The meeting will include a presentation by Professor Matt Fraser and a tour of the facility. For additional meeting info. and upcoming meeting topics, please check our website. New members are always welcome!



Michelle De Biasi
Chair



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Several Alliance committees have been very active this summer. The Alliance Air Quality Committee has been participating on the Steering Committee for the Maricopa County First Annual Air Quality Conference to be held on October 20, 2009. At the conference, Alliance members will be

moderating and participating in a panel discussion on environmental sustainability.

The Alliance EMS Committee gave a presentation on "EMS and Sustainability" at the SAEMS P2 Seminar in Tucson on September 30th. Next month, at the November 12th EPAZ/AHMP luncheon in Phoenix, the Alliance EMS Committee will discuss the "Practical Aspects of EMS." The committee is available to provide mentoring and education on EMS. Feel free to contact me for more information at Leonard.C.Drago@intel.com or call the Alliance at 480-422-7392.



Len Drago
Chair



www.SAEMS.org

SAEMS held another successful Pollution Prevention Seminar on September 30th in Tucson. I would like to thank not only the committed SAEMS members who volunteered their time to put the seminar together, but also those that attended and sponsored the event. SAEMS meetings are held the last Wednesday of every month at the Manning House in Tucson.

Please mark your calendars and join us for a monthly lunch meeting, we would love to see you there! For more information on our organization, please visit our website or contact me at ssillman@globalsolar.com.



Sarah Sillman
President



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Sustainability and Sustainable Development

Nicholas R. Hild, PhD.

Educating Our Youth: Targeting Their Future

Recently, the U.S. Census Bureau released preliminary demographic statistics from the last census in a report called the “*American Community Survey*.” In doing so, they announced that, instead of conducting a census report every ten years, the Bureau will endeavor to conduct their surveys annually in the future because we have become such a diverse population and we move around so often, the so-called *statistics* they glean are out-of-date as soon as they are published. It’s only taken 6 years to compile this report so it’s not clear why they think they can conduct yearly census updates and publish their findings more quickly, but that’s not so important for us here. What *is* important are some rather illuminating demographic stats that environmental (sustainable development) planners need to think about.

In particular, the preliminary report provided estimates (*only*) for the residential population for cities greater than 65,000 in population, so it was interesting to note that Phoenix had the youngest median age among the nation’s 15 largest cities at 30.9 years of age. That, in spite of the fact that we also have one of the largest retirement-age segments of the population in the nation—*go figure*—but the statistics still show that 29% of Phoenix’s 1,400,000 residents are younger than age 18; that’s a huge revelation!

It strikes me that we can utilize this demographic information in our never ending quest to inculcate sustainability in the minds of the most important target group in Arizona (or anywhere for that matter), that we want to reach—it’s our *youth* who will become the future leaders of our communities!

Stated another way, if 29% of Phoenixians are under the age of 18, that’s almost one third of the city’s population who will soon be employed full-time and looking for permanent residences—(assuming the job market returns in the near future)—most of whom, according to the Survey, will likely be seeking apartments or rental homes. (In that age bracket, home ownership is

financially tough even in the best of job growth times).

But, here’s another statistic that reinforces the old adage that, to maximize your marketing opportunities, you must know *who* your audience is. Almost one-third of our target audience (i.e. the 29% under 18 years old) for sustainability education must be approached in ways we’ve not considered before. The reason: according to the Survey, 51% of Arizona’s population, (not *JUST* in Phoenix but *ALL* Arizona), under the age of 35 are non-white—Hispanics, Native Americans, Blacks, Asians, and other minorities—and we will not reach them with traditional logic like, “...*go ye forth in a sustainable lifestyle for the good of the environment...and your children’s future happiness.*”

Now, couple that with the fact that the Survey found that 40% of all Hispanics and one-third of *all* minority groups in Arizona, don’t have a high school diploma—and 40% of *all* families with children are single parent households—those 29% under 18 who make up those families—and, in the words of ‘60’s activist Godfrey Cambridge, “*we have a lot of work to do, folks...a lot of work!*”

It is obvious that our (combined) efforts to promote the general idea that environmentally sustainable life styles should become a priority if our future generations are going to have a “*quality of life*” legacy we will not be ashamed of. The idea that single parents with little formal education, with English as a second language, working two or more jobs just to make ends meet, can understand sustainability issues, even if they are explained in elementary schools, just doesn’t make it a priority in their daily life when they are struggling to keep food on the table and their kids in school.

So where does that leave us if we want to *move* our youth—this diverse demographic of mixed cultural millennials and ‘tweeners—and motivate them to buy into sustainable lifestyles and *really* walk the walk, we need to provide them more options for how they can integrate their work-lives into the daily pursuit of sustenance?

Even in a down-economy, our most jaded politicians appear to understand that we need to be moving toward an alternative energy future. And, we need to be providing jobs, education, and training for *technician and technical*-level workers in those alternate energy technologies manufacturing facilities—and, for the first time since the cyberspace revolution began, we are looking at a future that will (once again) require hands-on and technically trained/skilled workers who actually know how to make and read schematics and CAD drawings, skilled workers who know how to fabricate and build...and *implement* high-tech solar and wind powered superstructures and build giant as well as small residential installations—and we need to provide the tech schools and trade schools that specialize in training these technician-level workers—today’s youth who will become the next generation that carries us into a sustainable-non-fossil-fuel-based *future*.

It is *that* diverse (youth) population identified in the Survey statistics that we really need to be training and educating today, for the sustainable future we all want to see tomorrow for our children’s, children’s, children.

Nicholas R. Hild, PhD., Professor, Environmental Technology Management, Arizona State University College of Technology and Innovation, has extensive experience in Environmental Management in the southwestern U.S. Dr. Hild can be reached at 480-727-1309 and by email at DrNick@asu.edu.



Michael C. Ford, Attorney

Regulatory Developments

Interview with Biodiesel Expert: Dan Rees

I recently sat down with Dan Rees, Phoenix's own biodiesel expert, to learn more about this fascinating fuel source....

Q Dan, so what exactly is biodiesel?

A Biodiesel is a complete substitute for diesel fuel, and can be made from any vegetable oil or animal fat. It is the Fatty Acid Methyl-Ester (FAME) that is in animal fats and vegetable oil, which we separate from the glycerin.

Q Are there different kinds of biodiesel?

A Yes. Right now, we make exclusively waste vegetable oil biodiesel. We collect oil and purchase oil from the local collection companies that pick up from the restaurants and other places. Then, we bring it into our plant, pre-filter it, heat it to 150°F, use a chemical called methoxide that separates the fatty acid methyl-ester and the byproduct is glycerin. Glycerin is used locally for dust abatement, which also benefits our air quality. Nothing goes to waste. Soybean biodiesel is currently the most common produced form of biodiesel nationally; however that gets into the "food vs fuel" controversy which is most evident from the ethanol industry and the negative effects of overproducing corn which creates many negative environmental and other issues. Soybean biodiesel also produces less BTU's and has lower cetane (the octane of diesel fuel), which means slightly less power and mileage than using waste oil to produce biodiesel. With 15 million gallons of waste oil being produced in Maricopa County annually, we don't see the need to have farmers growing soybeans for fuel until all other available resources are exhausted.

Q What are the environmental benefits and issues associated with biodiesel?

A Biodiesel, when it's made from a waste product, is claimed by the EPA to be the single greatest environmental impact fuel, with an overall emissions reduction in excess of 80 percent. Any diesel motor, whether it be construction equipment or your on-road vehicle, can run on biodiesel without modifications. It is an absolute substitute for diesel fuel. It is also pure lubrication so it's better for the motor, and is a natural solvent so it also cleans the fuel system while it runs, lowering your maintenance costs by cleaning the fuel injectors and fuel pumps as it runs.

Q So why haven't we heard much about biodiesel?

A Biodiesel is new to this country. It's been in Europe now for about 20 years. This country has been very slow on developing the biodiesel industry and a lot of it is due to regulations that had to be established for it to be a recognized fuel. Opening a new type of facility such as a biodiesel plant presents its own set of regulatory challenges at the federal, state, county, and city level.

Q So what's the potential future for biodiesel as you see it?

A Biodiesel, the industry, has kind of adopted a motto that's "Change your fuel, change the world," and that is the absolute truth about the potential of biodiesel in this country. In Europe, 70% of the vehicles on the road are diesel-powered vehicles and this goes back prior to even biodiesel because they get 50-100% better fuel mileage than a comparable gasoline engine. Now that they're clean burning and with the addition of biodiesel almost eliminating any emissions, the potential for biodiesel is that it's the only available alternative fuel that in the very near future, with the advance of algae production to use as oil to produce biodiesel, we can take an area the size of 25% of the Sonoran desert and raise enough algae to replace every gallon of fuel used in this country. No other alternative fuel can even come close to biodiesel's ability or potential as an alternative fuel.

Q Thanks Dan. Where can we go to learn more?

A Check out our website: azbiodiesel.com.



Dan Rees
AZ BioDiesel, Performance Biofuels LLC

Michael C. Ford is an Attorney with the Phoenix office of Bryan Cave, LLP, practicing environmental and occupational safety law. His practice is focused primarily on regulatory compliance advice and enforcement defense. He can be reached at 602-364-7417, or by email at mcford@bryancave.com.

News Briefs

ADEQ Director Grumbles on EPA's Decision to Require GHS Monitoring & Reporting

❖ Arizona Department of Environmental Quality Director Benjamin H. Grumbles recently issued the following statement after the U.S. Environmental Protection Agency announced that it will begin requiring big companies to monitor and report greenhouse gas emissions: "The final greenhouse gas reporting rule issued today by EPA provides a uniform, nationwide reporting system that will cover the sources of 85 percent of U.S. emissions that contribute to climate change, and it will permit Arizona sources to take credit for reductions they are undertaking. Reasonable reporting requirements can help reduce emissions, reward stewardship, and inform future policy and this rule is a solid step forward."

"EPA made a number of changes to the rules corresponding to improvements in flexibility that the Western Climate Initiative (WCI), including Arizona, had made to its own Essential Reporting Requirements that increase the level of flexibility for covered sources. In particular, EPA made changes similar to the WCI changes which allowed sources to stop reporting once their emissions fall below the reporting threshold, and allowed the use of best available monitoring methods in lieu of the required monitoring methods for January to March 2010 with the possibility of an extension to the end of 2010.

"ADEQ is also pleased that EPA made changes to the lime industry reporting requirements by allowing emissions to be reported by facility, as opposed to by kiln, a change which Arizona and WCI had worked very hard on with the lime industry in Arizona. EPA also made changes to the federal rule reducing the number of covered source categories and the record retention requirements, and allowing exemption of research and development activities. This last change is a particularly welcome addition that will give sources the time they need to install, test and begin operating monitoring equipment required by the rule.

"ADEQ applauds the establishment of this comprehensive, yet flexible, program for collecting the data needed to address climate change, and to provide Arizona business and industry with a mechanism to obtain the credit they deserve for reducing greenhouse gases."

ADEQ Deputy Dir. Patrick Cunningham Receives Env. Leader of Year Honor

❖ ADEQ recently announced that Deputy Director Patrick Cunningham was honored as Environmental Leader of the Year in Public Policy by the *Arizona Capitol Times*. Cunningham received a plaque during a noon luncheon at the Wyndham Phoenix downtown hotel. The award goes to individuals who positively impact the state and the lives of Arizonans.

"Patrick is one of the smartest, hardest-working public servants in America," ADEQ Director Benjamin H. Grumbles said. "He has encyclopedic knowledge of Arizona state government and has done an outstanding job managing operations at ADEQ and looking out for the best interests of the state's citizens and environmental resources."

Cunningham served as Acting Director of ADEQ from January 2009 until June 2009 after serving six years during a previous stint as deputy director of the agency. Prior to coming to ADEQ, Cunningham worked for 12 years in the Arizona Attorney General's Office, where he served as chief counsel for the Environmental Enforcement Section and the Criminal Division, directed legislative affairs, and served as a special litigation counsel

and chief counsel of the Civil Rights Litigation Section. Before joining the Attorney General's Office, Cunningham served as an assistant U.S. Attorney in the Organized Crime and Drug Enforcement Task Force in Arizona and as a captain in the U.S. Army's Judge Advocate General's Corps. Cunningham is from Kingman, Arizona, and received his bachelor's degree in 1976 from the University of Michigan where he graduated cum laude. He earned his law degree from Arizona State University in 1979.

Heritage Environmental Services of Coolidge to Pay \$125,000 Penalty

❖ ADEQ recently announced that Heritage Environmental Services, a Coolidge area hazardous waste facility, will pay \$125,000 under a consent judgment with the Arizona Department of Environmental Quality for violations incurred when eight pallets of waste nitrocellulose film burned in 2006.

The consent judgment includes a \$75,000 civil penalty and \$50,000 to fund a Supplemental Environmental Project in which Heritage will perform chemical cleanup work in schools in the area. The fire occurred on Aug. 5, 2006 when the pallets of film and film canisters ignited after being exposed to the sun. Four nearby homes were evacuated but no one was injured. ADEQ issued a Notice of Violation to the company for storage of hazardous waste in a non-permitted area of the facility; failure to take precautions to prevent accidental ignition and minimize the possibility of fire, explosion, or release of hazardous waste; and misidentification of hazardous waste on a shipping manifest.

"Their chemical fire put residents at risk so the penalty is steep but the company is stepping up to improve operations and help community efforts to reduce chemical exposure in schools," said ADEQ Director Benjamin H. Grumbles. "This was a serious incident requiring a serious response," said Arizona Attorney General Terry Goddard. "Companies handling hazardous wastes must know that Arizona will hold them to the law so that the public is protected." The consent judgment is subject to court approval.

Southwest Fiberglass LLC Resolves Reporting Violations with \$4,340 Settlement with US EPA

❖ The U.S. Environmental Protection Agency announced recently it has reached a \$4,340 settlement with Southwest Fiberglass LLC of Tucson, Ariz., for allegedly filing late toxic chemical reports, a violation of the Emergency Planning and Community Right-to-Know Act.

Southwest Fiberglass LLC, located at 4798 South Julian Avenue, failed to timely file reports for styrene used at its facility during calendar years 2004, 2005, and 2006. EPA inspectors discovered the violations during a routine inspection.

"Southwest Fiberglass LLC and other companies that use toxic chemicals such as styrene must follow our reporting rules so that area residents are informed of possible chemical hazards in the local environment," said Enrique Manzanilla, Communities and Ecosystems Division director for EPA's Pacific Southwest region. "This penalty should remind others that we are maintaining a close watch over chemical reporting practices and are serious about enforcing community right-to-know laws."

Federal community right-to-know laws require facilities processing more than 25,000 lbs. of styrene to report releases of these chemicals on an annual basis to EPA and the state. Although Southwest Fiberglass LLC exceeded these thresholds in 2004, 2005, and 2006, it failed to file on-time release reports to EPA for any of these years.

Southwest Fiberglass LLC processes styrene in connection with its fiberglass manufacturing operations. Exposure to this chemical can irritate the skin, eyes, and

respiratory system. Severe exposure can affect kidney function.

Each year EPA compiles the information submitted to it from the previous year regarding toxic chemical releases and maintains a national Toxics Release Inventory database for public availability. This TRI database includes detailed information on more than 650 chemicals used by over 23,000 industrial and federal facilities.

For more information on the TRI program, please visit: <http://www.epa.gov/tri>. The U.S. EPA's environmental databases, including the TRI data, can be accessed at: <http://www.epa.gov/enviro>.

Maricopa County Announces Air Quality Permit Amnesty Program

❖ Maricopa County Air Quality Department has announced a Permit Amnesty Program. Until December 15, businesses that need an air quality permit, but are currently operating without one, may apply for a permit without facing the prospect of a penalty. The three month long permit amnesty provides a unique opportunity for businesses that avoided obtaining a permit for fear they would face large fines should they come forward. The Permit Amnesty Program gives local businesses with operations in Maricopa County the opportunity to come into immediate compliance with air quality regulations without the threat of costly enforcement penalties. Maricopa County's Permit Amnesty Program will be in effect through December 15th, 2009.

Amnesty Limitations: 1. The amnesty initiative will not extend to facilities that would be regulated under Title V (major sources) or to facilities regulated under Rule 310 (dust generating operations). 2. The amnesty is for operating without a permit. For more information, visit: www.maricopa.gov/aq on the News page, or call (602) 506-1813, or email: dickersond@mail.maricopa.gov.



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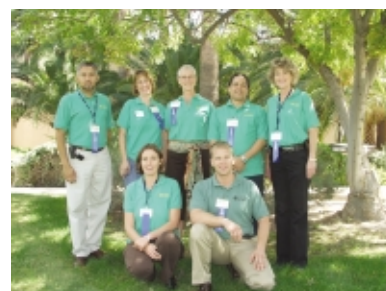
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SAEMS Hosts Sustainability Tool box



SAEMS hosted the "Pollution Prevention Seminar 2009 Sustainability Toolkit" on September 30th. The well-attended event, held at the Manning House in Tucson, included presentations on Sustainability Basics; Employee & Leadership Engagement; Measuring

Success; Urban Heat Island and Landscape; How EMS Can Help You Be Green; Energy Conservation & Alternative Energy; Sustainable Manufacturing; and FMI Sustainable Development. According to SAEMS, "Understanding how waste is generated and how it can be minimized is the first step to eliminating waste, increasing efficiency, and developing sustainable production methods." Visit the SAEMS website at www.saems.org.



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Note From the Editor:

There is a lot of information as well as speculation on the economy available in the media at the national level. But, for those of us in environmental management related occupations in Arizona, what can we expect to see over the next six months? Will business levels continue to slide as they have for many of us over the past year? Seeking answers, Joe Holmes and I surveyed 90 senior level environmental professionals in Arizona regarding their immediate (six month) plans regarding employment, spending on contract, waste disposal and laboratory services, and their professional forecast for our industry. This installment of "Prospecting" reports on our findings.

Jim Thrush, Editor

When Journal Editor Jim Thrush approached me with the idea for a survey of industry leaders about how they expect the economic condition of our industry to evolve over the next six months, we both agreed it might work well as a special edition of "Prospecting". I'm going to let the survey results speak for themselves, for the most part. But I will summarize them and provide my opinion.

Who did we survey?

To get the most meaningful results we targeted senior-level environmental professionals (based on job title) assumed to have a pulse on the direction of their organization and knowledge of short-term plans. We then added people who's title may not reflect it, but we know they have access to management and are involved with business planning in some way.

Selection of Survey Questions

When deciding on survey content we balanced our desire for detailed, in-depth information with the responders' need to "keep it quick". We settled on three questions; employment expectations, projected

expenditures for contracted services (consultants, etc) and expected waste disposal and laboratory services expenditures.

Survey Procedure

232 specially selected senior level environmental professionals were invited to participate. Each was provided a link to the survey on a private webpage. Participation was anonymous to ensure that responders could answer freely the questions relating to sensitive business information, such as an impending reduction or increase in the number of employees.

The survey received a 37% response, which we considered excellent, and about 85% of that within 24 hours! This says a great deal about the people in our industry and we extend a hearty thank you to those who participated.

Tone of the Responses

Some of the responses were optimistic and some less so. The commentary that accompanied many was very interesting and provided a unique opportunity to see how business leaders around our industry view their circumstances. See a full list of the comments on pages 21-22.

My Take

The actual survey results are reported on the following two pages. Please take a few minutes to read through them to draw your own conclusion.

What I perceive is this: Public sector clients, especially federal government, are playing a key role for companies that are doing well in these times. Stimulus money has impacted some firms, but has not had a widespread influence. Diversity in a client base and services is also important. Companies seem to be operating as lean as possible, and staff cuts that need to be made have been made and companies have found balance between available work and available staff for the time being.

Once business begins to recover, staff levels are unlikely to return to where they once were and when they *do* grow, it will be under a more conservative philosophy. Most companies will come out of this experience healthier, leaner and more productive and able to contribute more to their bottom line once things turn around.

Now, about the economy turning around: although the comments from the survey were generally optimistic, my opinion is different. My experience tells me that when general media reports start to surface about the economy turning around, that we've hit bottom, or even that the recession is over times are going to get tougher for the environmental community. Many aspects of our industry trail the general economy by six months or a year so as things start to improve overall, we've got some time left. As you probably have seen, there has been rumbling in the media about spotty economic improvement so it might be awhile yet before we see any kind of significant improvement.

I know it's not the most optimistic opinion, but it is how I have seen it in my years working in the industry. I completely understand that this recession has acted quite different from others and there are unique characteristics that could cause a very different outcome. I would be glad to be proven wrong.

Thank you to all that responded to our survey and provided comments. It is appreciated!

Joe Holmes is the Regional Manager of Business Development at ATC Associates. He can be reached at joe.holmes@atcassociates.com

Joe C. Holmes



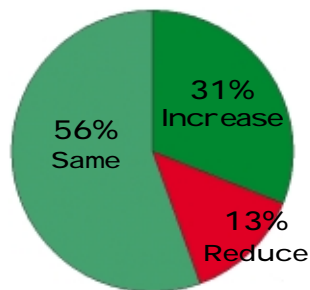
Putting it into Perspective:

THE ECONOMIC SURVEY RESULTS

90 Senior Level
Environmental
Professionals

FORECAST

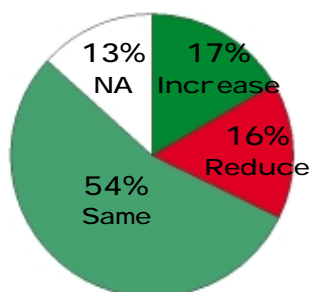
Employment & Environmental Spending



Employment

Over the next six months, do you expect your organization will:

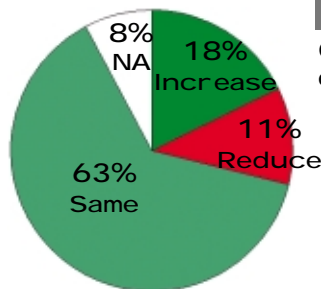
- A. Hire more employees or increase employee hours
- B. Reduce the number of employees or decrease employee hours
- C. Stay about the same
- D. Not Applicable



Contracted Services

Over the next six months, do you expect your organization will:

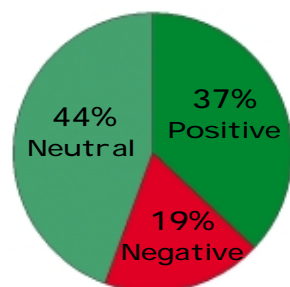
- A. Increase spending on contract environmental services compared to the previous 6 months
- B. Decrease spending on contract services compared to the previous 6 months
- C. Stay about the same
- D. Not Applicable



Waste Disposal / Lab

Over the next six months, do you expect your organization will:

- A. Increase spending on waste disposal or laboratory services compared to the previous 6 months
- B. Decrease spending on waste disposal or laboratory services compared to the previous 6 months
- C. Stay about the same
- D. Not Applicable



Predictions/ Comments

Survey respondents were given an opportunity to add an optional comment and/or prediction. The comments were rated as:
Generally Neutral
Generally Positive
Generally Negative
View all comments on pgs 21-22.

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Economic Forecast: Survey Data Tables

Continued From Pg 19

Total number surveys completed: 90

| SURVEY QUESTION | NUMBER | PERCENT |
|-----------------|--------|---------|
|-----------------|--------|---------|

EMPLOYMENT Over the next 6 months, do you expect your organization will:

| | | |
|---|----|-----|
| Hire more employees or increase employee hours | 28 | 31% |
| Reduce the number of employees or decrease employee hours | 12 | 13% |
| Stay about the same | 50 | 56% |
| Not Applicable | 0 | 0% |

CONTRACTED SERVICES (consultants, etc.) Over the next 6 months, do

| | | |
|---|----|-----|
| you expect your organization will: | | |
| Increase spending compared to previous 6 months | 15 | 17% |
| Decrease spending compared to previous 6 months | 14 | 16% |
| Stay about the same | 49 | 54% |
| Not applicable | 12 | 13% |

WASTE DISPOSAL and/or LABORATORY SERVICES

Over the next 6 months, do you expect your organization will:

| | | |
|---|----|-----|
| Increase spending compared to the previous 6 months | 16 | 18% |
| Decrease spending compared to the previous 6 months | 10 | 11% |
| Stay about the same | 57 | 63% |
| Not applicable | 7 | 8% |

OPTIONAL COMMENTS:

Number of comments submitted: 27. Comments were rated as generally Positive, Negative, or Neutral

| | | |
|---------------------|----|-------|
| Generally Positive: | 10 | 37.0% |
| Generally Negative: | 5 | 18.5% |
| Generally Neutral: | 12 | 44.4% |

SURVEY RECIPIENT TITLES

232 senior Arizona environmental professionals were invited to participate. The table below shows the breakdown, by title, of survey recipients. The titles of the actual 90 individuals who responded to the survey cannot be known because the completed survey forms were kept anonymous.

| SURVEY RECIPIENT TITLE | NUMBER | PERCENT |
|--|--------|---------|
| Manager, EH&S, or Environmental, or Compliance, or Other | 97 | 42% |
| Director | 35 | 15% |
| President or CEO or Owner | 35 | 15% |
| Principal or Partner or Vice President | 20 | 9% |
| EH&S, unspecified or other Environmental | 17 | 7% |
| Manager, General, or Facilities, or Operations, or Chief | 17 | 7% |
| Engineer, Environmental or Hydrogeologist | 11 | 5% |

Economic Survey: Comments

In addition to the answering the three survey questions, 27 of the senior environmental professionals elected to include comments on their circumstances and predictions for the Arizona environmental management communities economic future. All 27 are shown below. Comments containing personally identifying information were edited to ensure anonymity.

"After several extremely slow months in 1Q09 and 2Q09, we are seeing many more proposal opportunities, but competition in pricing is the worst I have seen in 20 years. I expect things to level out in 3Q09 and 4Q09. We need to keep the work with local businesses as much as possible to get Arizona back on track."

"Although a slight increase in employee hours and subcontracted spending is anticipated, this is primarily due to a slight rebound in work compared to the last six months, which were the worst six months I've experienced in the industry!"

"As an environmental contractor we are slightly ahead of budget from last year which was an excellent year. We have seen fewer planned remedial projects this year. Other segments of disposal, emergency response, and site investigations are about the same. We generally anticipate a flat year regarding revenues which is not necessarily a bad thing considering."

"As Sustainability practices become more mainstream, spending for traditional Environmental Services such as Waste Disposal will and should decrease. Contracted services supporting clean/renewable energy, alternative fuels, and green building efforts will increase."

"We have reduced staff by 50% through attrition. I don't think the staff will ever return to previous levels. We have a ... project that is ramping up in November ..."

"Compliance is not something many medium to large size companies are willing to sacrifice during budget cuts. I expect little changed at my company in this area. Since we have a lean staff as it is, head cuts would be very unlikely."

"Demand for services will continued to be reduced over the next 12 months as companies carefully control spending. EPA revisions to SWPPP rules and eventual ADEQ issue of final AZPDES SWPPP permit program rules along with SPCC 11/2010 deadline should provide work for consultants."

"Fortunately during 'down' economic times environmental services are still needed and often times required by law. Although some of our services have suffered others have flourished. With fewer new-build projects the need and/or desire to remodel or demolish a structure and property transactions and acquisitions is greater. So projects requiring building materials and/or site evaluation (asbestos/lead/UST's/ESA's, etc.) have taken the lead. The feel of the industry over the next six-months is very positive."

"I am a one-man shop, so the questions are not particularly applicable. I see business conditions in the environmental field slowly improving. But, I don't think we will return to the levels of 2004-2007 for several years. The oversupply of houses is a big drag on Arizona's economy. It is going to take until 2012 or later to absorb them."

"I believe more organizations are skipping on environmental personnel when because of fiscal liabilities they should be focusing more on retaining environmental staff. [In some organizations] inexperienced people doing environmental tasks."

"I believe the growth forecast for our firm is aberrational in today's and tomorrow's AZ enviro industry. Our growth forecast is solely related to recent award of large federal contracts not previously held by our firm. These are not stimulus-fund related contracts, but nonetheless are the sole drivers behind our significant growth expectations in the coming

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year. In short - if it wasn't for new federal contract support requirements, our firm would be in as bad a shape as most other companies in the Arizona enviro industry.

"I expect a long slow decline until either the regulatory structure increases enforcement or the return on the commercial real estate market. I expect the market for the operating facilities to shrink as more are expected to get by with lower spending."

"I have not seen it yet, but have anticipated slower responses from agencies such as ADEQ due to lay-offs and smaller budgets."

"In general, we will most likely see an upswing of work over the next 6-8 months related to end of fiscal year spending by the Federal Government."

"Fortunately, we are well positioned with existing Federal contracts. The only negative on this is that in the past few years Federal spending has been limited to only the end of the fiscal year (July - Sept 30). It makes it hard to plan around a 60-90 day window for proposal prep and task order award. State, local, and municipal work has been very slow on any projects that are non-essential to critical infrastructure. We do not anticipate a change in the local market for some time."

"Increases in work load for regulatory compliance as the result of new permit issuance is expected."

"Infrastructure projects should increase with time as lenders/bonding capacity has returned to pre-recession times. Northern Arizona will be the same or slower. Central and Southern Arizona should increase with releasing of delayed projects and stimulus money."

"It is likely to follow the general pattern in the economy and developments in various sectors. It appears that there will be a slow recovery."

"Our company is experiencing the worst market conditions we have seen in over 30 years."

"Over the last year we have cut cost where ever possible and if we can we will still save on services that we use, however at this point I don't see where we can cut costs any further."

"The decreases in spending contemplated for my company are based on resolution of permitting issues and are not necessarily related to our economic health."

"The scrutiny on greenhouse gas contributions from all industries (including chemical GHG's, e.g., HC 134A, R-14) will rise. A focus on energy (and overall utility) efficiencies will become a focus in the industrial base as the very real possibility of GHG emissions becoming regulated under the Clean Air Act moves forward."

"Things are going to be very slow in the area of environmental spending over the next six to 12 months as companies continue to watch budgets. Other than compliance related activities, and mandatory upgrades, \$'s spent on environmental related activities will be flat."

"We are increasingly looking for new ways to eliminate waste streams (i.e., on site recycling) and improve management of our existing waste streams to control our costs related to waste disposal."

"We have seen some influx of stimulus monies in Arizona going to Federal agencies potentially increasing our workload."

"We plan on dropping contract environmental employees from the payroll even though the level of environmental business will remain the same. ISO certification associated with green house gas/climate initiatives is planned and will most likely be handled in house."

"While I do not have a crystal ball and the year has been tumultuous I see good times ahead. We have had to scramble harder this year but are on track for another year of growth."

"Within the aerospace manufacturing industry the environmental management function is staying the same. Even though our production lines have decreased our environmental activities remain the same."



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