THE CONSTRUCTION MANAGER AT RISK PROCESS WORKS FOR KINGMAN

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SKILL GAPS BEING FILLED FOR STATE'S UTILITY INDUSTRIES

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AZ WATER
2013 KACHINA NEWS
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VISION: The AZ Water Association is the recognized advocate for enhancing Arizona’s water and environmental resources.

MISSION: Provide value to our membership and the public through education, training, and public awareness regarding enhancement of Arizona’s water and environmental resources.
### CALENDAR OF EVENTS | January ~ September 2013

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The year 2012 is just behind us, as AZ Water continues on many fronts. The AZ Water Committee Chair Summit on November 2 was an all-day event led by Jim Pembroke. The Summit annually covers a variety of subjects intended to motivate, inspire and also receive Committee Chair input on the state of our organization. This year’s event covered such subject matter as AZ Water’s current Strategic Plan and Branding Statements; a great presentation by Jim Pembroke on “Our Role as Water Industry Professionals”; and a motivating presentation by Fred Kriess on Leadership. The day was capped off with Committee Chair dialogue on Thinking Outside the Box, that is, what can our organization do better, what do we currently excel in, objectives for the next five and ten years and finally, a need to re-visit AZ Water’s Strategic Plan (last updated in 2005).

Committee Chairs play a vital role in keeping their committees moving, motivated and constantly looking for ways to train, inform and share with other water professionals. Many of today’s Committee Chairs will be future Board Members. Their leadership and vision for AZ Water is invaluable.

Another Cooperative Communications session was held recently; organized by Jim Pembroke and Guy Carpenter, and facilitated by John Ruetten of Resource Trends. These sessions are intended to find a common message of the importance of water project funding and maintenance through meaningful water and wastewater rates. You can learn more about this significant message (program) on page 24.

Having been involved with AZ Water for more than a decade, I have met a lot of amazing professionals. Two of these priceless individuals have volunteered many hundreds of hours to our organization and have significantly contributed to AZ Water’s success and growth. Brandy Kelso and Patty Kennedy have served in many roles with AZ Water. My best recollection of Brandy was her enthusiasm chairing the newly formed Young Professionals Committee – this was at least ten years ago, as I recall. Brandy is the incoming AWWA Director and carries that same enthusiasm into the newly formed Young Professionals Committee. Patty played a major role as treasurer for AZ Water. The multicolored financial graphs (developed by Patty) we have grown accustomed to at each Board meeting, have affectionately been termed the “Christmas Tree Graphs”, being red and green; a small testimony to Patty’s legacy, who now is a Vice President on the Board. Both Brandy and Patty exemplify the hundreds of volunteers, whose time AZ Water benefits from year to year. I am proud to be associated with Brandy Kelso and Patty Kennedy.

continued on page 54
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Shortly after the election, in November AWWA offered a free Webinar to offer some comments on what the results will mean. Many of you may have missed it, so this article is intended provide an abbreviated summary of that discussion.

“Election 2012: What Does it Mean for Water?”

Regardless of who had won this election, it has been clear there would be an immediate post-election showdown between the parties concerning the so-called “fiscal cliff.” The fiscal cliff is the product of at least four important developments set to occur almost simultaneously:

1. The tax cuts enacted in 2001 and 2003 under President George W. Bush are set to expire on Dec. 31.
2. The payroll tax cut enacted in 2010 as part of the economic stimulus package is also set to expire on Jan. 1.
3. Unless Congress and the President agree to a fiscal plan sufficient to reduce the federal deficit by at least $1.2 trillion over the coming 10 years, a budget sequestration (that is, automatic cuts) totaling $109 billion in the current fiscal year will go into effect on Jan. 1.
4. Very early in the year, Congress will have to raise the nation’s statutory debt ceiling and authorize more borrowing by the U.S. government, or risk a first-ever U.S. government default.

Some of the scheduled decision dates will have passed by the time you read this article (I’m preparing this in early December), however, most observers expect that Congress and the President will find a way to “kick the can down the road” on tax and budget issues, putting off hard decisions until next spring at the earliest. It is also clear that new federal spending initiatives are going to be very difficult to enact in coming years, and many existing programs are likely to face budget reductions.

Outlook on Drinking Water Issues:

Infrastructure Funding. The sequester is expected to reduce EPA’s budget by about $700 million in the current year, with at least $200 million of that coming from the drinking water and clean water state revolving loan fund programs. Notwithstanding the fiscal cliff, there is significant interest on the Hill in finding ways to support increased infrastructure investment. Funding for the SRFs is expected to continue, though strong efforts will be necessary to maintain funding at current levels. WIFIA is now widely seen as a preferred funding mechanism if there can be increased federal support for water infrastructure.

Waters of the United States. In April 2011, EPA released draft guidance on waters of the United States, largely in response to several court decisions that seemed to limit the authority of EPA and the Corps of Engineers (e.g. Rapanos v. United States). This draft guidance was strongly supported by environmental groups but widely seen by business groups and much of the state and local government community as expanding the reach of the Clean Water Act’s wetlands provisions, a characterization the Administration denies. This guidance has been on hold pending the election. AWWA expects it to be finalized early in Obama’s second term.

Chemical and Cyber Security. The Administration has made clear that it believes chemical facilities – including water plants that store or use certain chemicals – are potential terrorist targets and that more aggressive protective measures should be mandated. More recently the Administration and its allies on the Hill have also been sounding the alarm about the risks to the nation of cyber-attacks on critical infrastructure, and have recommended mandatory requirements for water systems and others. A push from the Administration on these issues is likely in the next Congress.

Drinking Water Standards. AWWA expects the effort to promulgate additional drinking water standards to continue and even escalate in the President’s second term. It is likely that a number of new or revised drinking water standards will be proposed as soon as early 2013. These are likely to include perchlorate, nitrosamines, a group of volatile organic chemicals, and revisions to the Lead and Copper Rule. As in the past, AWWA will support regulations that protect public health at reasonable cost to consumers. AWWA cannot support regulations that impose significant costs on consumers without delivering commensurate health benefits.

Legislating Standards. The Democratic leaders of both the Senate Environment and Public Works Committee and the House Energy and Commerce Committee have supported bills to require EPA to establish a national primary drinking water regulation for perchlorate. With Republicans in charge of the House, bills to mandate particular regulations are unlikely to pass. AWWA continues to believe that standards should be set through the regulatory process, based on the best available science, and not through the political process.
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AWWA, WEF Collaboration Continues

Continuing a signed commitment to explore enhanced collaboration, the American Water Works Association (AWWA) and the Water Environment Federation (WEF) have agreed to work together on promoting value of water among the public and key decision-makers.

The decision follows an analysis of a broad range of models for collaboration, a process that began in June when the organizations signed an agreement to examine how they might work together more closely for the benefit of their members. The Exploratory Committee members are optimistic that the enhanced collaboration between the organizations will lead to more future partnerships, potentially resulting in the integration of additional programs and services.

An Exploratory Committee of AWWA and WEF leaders considered options ranging from efficiencies in some combined business practices and member services to full integration of the two organizations. At a Sept. 30 meeting in New Orleans, the committee selected a “Program Integration Model,” focusing in the near-term on the development of communications and messaging about the value and importance of water.

AWWA and WEF are already engaged in discussions alongside many other water organizations in exploring how to promote the value of water among the public and key decision-makers. The committee agreed those efforts provide an ideal context for greater AWWA-WEF collaboration to and encourage a unified water community voice.

This near-term option brings the organizations closer together, strengthens working relationships, and is consistent with the 2011 joint resolution between AWWA and WEF, which stated the organizations “resolve to support and lead as necessary an effort to develop a cohesive voice for the water community by encouraging collaboration between our members, coordinating programs and services and developing consensus on major water policy issues.”

The organizations’ presidential officers will meet at least twice a year to discuss opportunities to partner for the benefit of our members.


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I am honored to become the new WEF Delegate to AZ Water. For those that don’t know me, I am AZ Water – and 40 years ago my Dad was too! My Dad was the first superintendent of the Northern Gila County Sanitary District and helped build the water reclamation plant that serves Payson today. I was born and raised in Payson and received degrees from NAU, LSU and ASU. I have been a member of AWPCA, now AZ Water since 1987.

I want to go no further without thanking Paul Kinshella, our past WEF Delegate. Paul has served AZ Water for many years and his service has been truly selfless. We all owe a debt of gratitude to Paul for his commitment to furthering the causes of AZ Water and WEF. One of Paul's tireless crusades was to educate the public on the upcoming crisis in the nation’s water infrastructure – a crusade I hope to continue.

During this past election season, WEF conducted an offshoot of the “WATER’S WORTH IT” campaign. This outreach was called “WATER PUTS AMERICA TO WORK”. This was a rare opportunity for the Water Industry to stand together and support a truly bipartisan cause that affects every American – the desperate need to invest in our nation’s crumbling water infrastructure, which creates jobs and boosts the nation’s economy. With millions of Americans out of work, the timing could not be better to reinvest in our essential infrastructure.

The AZ Water Association and WEF are working to send a strong message to Congress and the President that investing in water is an investment in America. In 20 years, Arizona will have an estimated need of nearly $14 Billion dollars for drinking water and wastewater infrastructure. Some argue that we can’t afford these investments during a time of economic distress. To the contrary, forty years of data shows that investing in water infrastructure creates good-paying jobs to repair, replace and upgrade our aging water systems. This will ensure safe and reliable water to attract and retain business and qualified workers. Water investment is also critical to protect public health and our quality of life, and promotes innovative technologies that can help keep Arizona and America competitive.

During the recent political election, WEF successfully campaigned for both parties to adopt platform language recognizing the economic importance of clean and safe water. Now, we need to make sure that these platform promises don’t collect dust after the election and demand that our elected officials put America back to work by making water infrastructure a top priority.

WEF is encouraging everyone in the water sector to join the growing number of utilities, WEF Member Associations, and other water organizations who are using the “WATER’S WORTH IT” campaign to help raise awareness about the value and importance of water and water infrastructure. Please visit www.waters-worth-it.org for more information.

Let’s take an active role in educating the public and elected officials to the importance of water for our quality of life and the economic vitality of our communities.

I look forward to serving AZ Water and you in the coming years! Please contact me if I can help you or your organization – Together we are AZ Water!

Don MANTHE, WEF Delegate
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http://training.wef.org
Knowledge Center

The Water Environment Federation (WEF) is a not-for-profit association that provides technical education and training for thousands of water quality professionals who clean water and return it safely to the environment. WEF members have proudly protected public health, served their local communities, and supported clean water worldwide since 1928.

WEF has created the Knowledge Center as an alternative way to earn educational credit through comprehensive online training materials for water professionals and students. Choose from a variety of training course options from fundamentals to advanced levels.

Through the integration of technology and expertise, WEF is delivering educational content relevant to the water sector in a cost effective and innovative way. This training option allows individuals to earn Professional Development Hours or Continuing Education Units in addition to providing utilities the opportunity to train multiple employees at one time. Go to https://knowledgecenter.wef.org/About.aspx for further information.

The Knowledge Center allows you:
- To track and store all educational events and credits, even those offered by other organizations,
- To store numerous professional licenses and print certificates per specific state approval requirements,
- To search the Course Catalog, purchase training materials, and start training immediately, and
- To learn at your own pace.

The Knowledge Center provides the transfer of knowledge through:
- **Fundamental Courses**
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- **No-Cost and Archived Webcasts**
  - Led by the experts of the water sector and offered at no-cost to all who are interested in the topic.

**Tools and Resources**
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- Customary to Metric Conversions
- Metric to Customary Conversions
- Constants
- Basic Math Formulas
- Common Wastewater Formulas
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THE CONSTRUCTION MANAGER AT RISK PROCESS WORKS FOR KINGMAN

Kevin FELIX and David GIANNETTO, Felix Construction Company

The City of Kingman has always been alluded to as a “gateway city.” From the old stagecoach routes, to the railroads, to Old Route 66, to the modern-day interstate I-40, the city of Kingman has always welcomed visitors and has served as a hub of activity in Northwestern Arizona. It is no surprise that in 2009 the City decided to utilize the efficient Alternative Delivery Procurement Process known as Construction Manager at Risk, or CMAR, to select a contractor to build the expansion to its Downtown Wastewater Treatment Plant (DTWWTP).

Like many cities in Arizona, Kingman had traditionally used the Design-Bid-Build procurement method for their infrastructure projects. However, faced with a history of problems with this traditional procurement process, combined with a dynamic schedule, demanding site conditions, and the need to keep a tight handle on costs, Kingman leaders chose the DTWWTP Expansion project as their introduction to Alternative Delivery Procurement.

As with any CMAR project, the team consisted of the owner (City of Kingman), a design engineer (Brown and Caldwell) and a construction manager (Felix Construction Company). The City of Kingman’s involvement on this project was unique in that in addition to being the owner and ultimate operator, the City of Kingman also performed all of the Construction Services including day-to-day inspections. As the engineer of record, Brown and Caldwell’s role included development of the design documents (from 0% to 100%), submittal and RFI review, and start-up services. As the CMAR, Felix Construction Company performed pre-construction services during the design phase and then ultimately acted as the General Contractor during the construction phase.

Project History

Kingman’s DTWWTP was originally built in 1972 and consisted of two partially mixed aerated lagoons in series configuration. The plant’s existing treatment process also included disinfection through chlorine gas, a small contact basin and de-chlorination using sulfur dioxide. The plant’s treated effluent was discharged into the Holy Moses Wash Wetlands, a U.S. waterway (USACE 404 and designated by FEMA as “Zone A” - Area of 100 year flood with elevations not defined). The original plant was unable to consistently produce B+ quality effluent as required per Kingman’s AZPDES discharge permit. The inconsistent quality of the effluent was the major contributing factor behind the City’s decision to upgrade and expand the existing plant.

The project’s scope was to construct a new 0.62 MGD WWTP consisting of headworks (flow metering, screening and grit removal), erosion control with soil cement, a six barrel box culvert, biofilter for odor control, ultraviolet light disinfection, aerated sludge holding, bio-solids dewatering utilizing a centrifuge and auxiliary equipment such as stand-by generator, plant water supply, and a 50 kW photovoltaic power generation system.

Pre-Construction Phase

The pre-construction services performed by Felix Construction for the project included: Bidability Review, Cash Flow Projections, Conceptual Estimating, Constructability Review, Cost Modeling, Maintenance of Plant Operations, Permitting Assistance, Scheduling, Site Analysis, Value Engineering, and phased Guaranteed Maximum Price (GMP) development. The team worked diligently to produce complete design documents resulting in accurate pricing, eliminating ambiguity, and setting the stage for a successful construction phase.

Construction Phase

Because the plant’s existing flows could not be diverted during construction, the project was divided into two phases in order to maintain the treatment process:

Phase 1: Decommissioning of the area originally occupied by the northern-most lagoon (Lagoon 1) so that it could be recaptured as the site for the construction of the new DTWWTP. The treatment process was maintained by bypassing Lagoon 1 and then isolating the treatment process in the southern-most lagoon (Lagoon 2).

Phase 2: Once the new plant was operational and treating 100% of flow, Lagoon 2 was decommissioned, drained and all of its existing sludge removed. Because roughly 15% of new plant’s final footprint fell into the area occupied by Lagoon 2, Felix was then able to complete the remaining non-treatment related construction activities.

The site work included over-excavation and backfilling of the existing Lagoon 1, constructing flood protection embankment for the facility (soil cement), site access bridge/box culvert, plant influent piping, yard piping and manholes, grading, paving, perimeter block wall, and fencing.

The Headworks Facility includes influent Parshall flume, stair screen (coarse screen), vortex grit separator, grit washer and grit pumps, two rotary drum screens (fine screens), channel agitation including agitation blowers, a perimeter
wall, sump pump station, concrete, and all appurtenant piping, electrical, instrumentation and controls to operate the system. Also housed in the headworks area is the biofilter odor control system, installed to reduce the odor generated from the wastewater treatment process. The biofilter system includes a foul air fan, biofilter housing and media, media irrigation system, and a series of HDPE and FRP ductwork.

The Membrane Bioreactor (MBR) includes a flow-splitter structure using cut-throat flumes, isolation gates, anoxic basins with submersible mixers, aeration basins, and MBR basins. The equipment includes fabricated aluminum covers, mixed-liquor recycle pumps and sludge wasting pumps, permeate pumps, telescoping valves, sump pumps, and all appurtenant piping, electrical, instrumentation and controls to operate the new MBR process. A separate building houses the cleaning air/air scour blowers and associated stainless steel piping.

The Ultraviolet (UV) disinfection equipment is closed-vessel type, housed in a separate room (attached to the MBR blower building) with appurtenant piping, electrical, instrumentation and controls. The UV room also includes the plant water system.

The new Sludge Dewatering Facility includes a new building with an attached aerated sludge holding tank with coarse bubble diffusers and blowers for sludge mixing. The building houses sludge feed pump to feed the skid-mounted centrifuge, polymer blending unit, cake screw conveyor. Again, it has its own appurtenant piping, electrical, instrumentation and controls to operate the new facility. A separate centrate pump station is located outside the dewatering building to collect and pump the building drain and centrate to the headworks.

There are several auxiliary systems required for the plant’s operation. These systems include a standby diesel generator, plant water system, and a 50kW photovoltaic system. The photovoltaic system includes solar panels, inverter, and all electrical appurtenances to supply the plant with 480 volt AC solar electrical power. The cost of the photovoltaic system was partially offset by funding through the Renewable Energy Credit Purchase Program.

**Post Construction Review**

At the height of construction (early 2012), there were over 40 workers on the site at any given time. Felix Construction self-performed all of the project’s structural concrete, equipment installation, and all of the mechanical and process piping. In addition to Felix Construction’s own crews, there were over a dozen subcontractors. The major subcontractors included trades such as civil, soil cement, solar, masonry, electrical, programming, miscellaneous metals, roofing, paving, specialty coatings, general building trades...
This project presented many unique construction challenges including:

- Modifying the existing treatment process in Lagoon 2 from partially aerated to fully aerated process (including upgrading the existing power supply to accommodate two additional 40 hp floating aerators and five additional 10 hp floating aerators)
- Maintaining the quality of the existing plant’s effluent with less than 1/2 of the original capacity
- Dewatering and removal of approximately 560 metric tons of sludge prior to the start of construction (existing material in Lagoon 1)
- An extremely small site footprint (1.7 acres)
- Keeping the existing plant operational during construction of the new facilities (24/7 bypass for over 18 months)
- Remote site location (security issues)
- Multiple flood events in the adjacent wash during construction
- Extreme weather variables (frequent wind speed in excess of 50 mph)
- Limited local material resources
- Dynamic schedule

The project was completed in 2 years and 10 months (March 2009 to January 2013), of which 1 year was pre-construction services and 1 year 10 months was actual construction activities. The final construction cost for the project was just under $15,000,000, which included both pre-construction and construction services.

The City, Engineer, and Contractor worked together as a successful team. With their combined efforts, the City of Kingman is now the proud owner of a state-of-the-art wastewater treatment plant. Due to the overwhelming success of the Downtown Wastewater Treatment Plant project, the City of Kingman has and will continue to pursue major projects through the CMAR delivery method.

End of Project – November 2012
Please join LEGEND Technical Services in welcoming Britney Dempster as the new Director of Operations for our Phoenix and Tucson locations. She has been with LEGEND for over five years serving as the Department Manager and Technical Director for our Inorganic Chemistry Department. We are excited to have been able to fill the Director of Operations position internally, as Britney is particularly familiar with the specific work flow and dynamics of our operations. She is committed to working closely with each of our project and department managers in continuing the upmost quality in our services.

Ms. Dempster originally came to us with previous laboratory experience and holds a Bachelor of Science degree in Biology with a minor in Chemistry. Some of our clients may have already met her through our PDH information seminars where she has given presentations. Britney is also a new mother who breeds and trains show horses in her spare time.

LEGEND Technical Services Welcomes Cory Lund

LEGEND would like to welcome Cory Lund to our Project Management Team. Cory has five years previous experience in the environmental laboratory business directly related to project management and customer service. He has knowledge in drinking water and waste water compliance requirements working with companies nationwide. Additionally, Cory has experience in the petroleum and air industries.

It’s that time of year where we begin planning our annual motorcycle ride to the AWWA Annual Conference and Expo. This year, it will be held in Denver, Colorado from June 9-13, 2013. With this conference so close to Arizona, plus the opportunity to spend a few days riding through the Rocky Mountains, it’s a great time to do a little riding while supporting Water for People in our effort to raise money and awareness of this wonderful organization. The Water Buffalos, riding under the umbrella of Ride with Purpose, have raised nearly $500,000 in the seven years they have been doing this event.

As a rider, we ask that you get at least $1000 in sponsors for this ride (more is better) and in return you will be provided a denim vest with an Arizona Chapter Water Buffalo patch on the back. The Water Buffalos wear the vests while attending ACE to support all the sponsors for our ride. You can sign up as a rider, or even if you would like to donate to Water for People in support of the Water Buffalos, by going to our website – www.RidewithPurpose.org.

It would be great if we can have a large number of riders from Arizona this year! If you have any questions, please contact me at mstratton@metrowater.com. Join the herd and support Water for People!

WEFTEC 2012 WFP Bike Riders

The Georgia chapter of Water for People held the 5th Annual WEFTEC Bike Ride in New Orleans on Sunday, September 30, 2012. Approximately 75 riders participated and braved the rain that flooded the City all day long. “Although a very soggy experience, I’d definitely participate again,” Lisa said as she tried to dry out her Iphone later that day. Pictured: Lisa Culbert, Layne Water Technologies and John Slider, Layne Heavy Civil.

McCarthy Building Companies on the Move

McCarthy Building Companies recently moved to 622 N. 24th Street, Suite 200, Phoenix, AZ 85016-2037. Phone and Fax numbers remain the same.
WATER TREATMENT GRADES 1 AND 2
1. What is the main difference between conventional treatment and direct filtration of surface water?
   A. Conventional treatment includes disinfection, while direct filtration does not.
   B. Direct filtration utilizes membranes in its filtration process while conventional treatment does not.
   C. Direct filtration is designed for high turbidity waters while conventional treatment is not.
   D. Conventional treatment includes sedimentation basins while direct filtration does not.

2. What is the primary hazard of gaseous chlorine?
   A. Corrosiveness
   B. Acidic reactions with water
   C. Toxicity
   D. All the above.

3. What is the chlorine gas feed in pounds per day (ppd) for a water treatment plant producing 16 MGD if the dosage is 3.6 mg/L and the residual is 1.2 mg/L?
   A. 160 ppd
   B. 240 ppd
   C. 320 ppd
   D. 480 ppd

4. How many gallons of sodium hypochlorite are used daily by a water treatment plant if the level in a six foot diameter tank starting at 8.33 feet and ending at 6.48 feet.
   A. 270 gal
   B. 390 gal
   C. 500 gal
   D. 930 gal

5. What is the dosage of Alum in ppm if 250 gallons are used to treat 13.5 Million Gallons per Day? Presume there are 5.36 pounds of Alum per gallon.
   A. 12.0 ppm
   B. 25.0 ppm
   C. 53.6 ppm
   D. 62.1 ppm

WATER TREATMENT GRADES 3 AND 4
1. If a filter measures 18 feet long, 12 feet wide, how many million gallons per day (MGD) may be produced at a flow of 6 gallons per minute per square foot?
   A. 1.9 MGD
   B. 2.5 MGD
   C. 4.3 MGD
   D. 6.0 MGD

2. What is the monthly (30 days) cost of sodium hypochlorite for a surface water treatment plant treating 18.5 MGD and dosing 3.3 mg/L chlorine? Presume there is 1.25 pounds of chlorine per gallon of sodium hypochlorite and it costs $0.88/gal.
   A. $10,210
   B. $15,000
   C. $16,800
   D. $23,900

3. Calculate the total hardness as mg/L CaCO3 for water containing 20 mg/L calcium and 9 mg/L magnesium.
   A. 29 mg/L
   B. 58 mg/L
   C. 87 mg/L
   D. 99 mg/L

4. Which of the following softening processes can remove almost all the calcium and magnesium from water?
   A. Ion exchange softening
   B. Chemical precipitation softening
   C. Split treatment softening
   D. All the above.

5. Which of the following organic compounds is not considered a THM?
   A. bromoform
   B. chloroform
   C. dichlorobromomethane
   D. trinitrotoluene

WATER DISTRIBUTION GRADES 1 & 2
1. How much water may be contained in a reservoir that measures 45 feet in diameter and 22.5 feet tall?
   A. 35,800
   B. 143,000
   C. 268,000
   D. 300,000

2. Which of the following is the best type of pipe for residential service lines?
   A. Lead
   B. Copper
   C. Steel
   D. Polybutylene

3. What is the pressure on a fire hydrant in pounds per square inch (psi) if the water level is 230 feet above it?
   A. 44 psi
   B. 81 psi
   C. 100 psi
   D. 240 psi

WATER DISTRIBUTION GRADES 3 & 4
1. What is the Maximum Contaminant Level for Arsenic in distribution systems?
   A. 0.010 mg/L
   B. 0.050 mg/L
   C. 0.10 mg/L
   D. 0.50 mg/L

2. How many gallons are contained in a 96 inch pipe that is 8 miles long?
   A. 31,130 gals
   B. 960,110 gals
   C. 1,620,000 gals
   D. 15,900,000 gals

3. How much Hydrofluorosilicic Acid (HFS) in milliliters per minute (ml/min) must be added to a flow of 3.5 MGD to make a dose of 0.6 mg/L Fluoride? Presume your HFS contains 1.83 pounds of Fluoride per gallon.
   A. 25 ml/min
   B. 60 ml/min
   C. 183 ml/min
   D. 999 ml/min
4. If, during an emergency water break, yellow lines are painted in the dig area, what type of facilities may be underground there?
   A. Water
   B. Wastewater
   C. Electric
   D. Natural Gas

5. How many Acre-Feet (AF) of water are pumped from a well in one month (30 days) if the well operates an average of 8 hours per day and pumps 2400 gallons per minute?
   A. 108 AF
   B. 134 AF
   C. 240 AF
   D. 1,200 AF

WASTEWATER COLLECTION GRADES 1 & 2
1. How much wastewater is pumped from a lift station that runs 10 hours per day and pumps 400 gallons per minute?
   A. 4000 gals
   B. 6,000 gals
   C. 36,000 gals
   D. 240,000 gals

2. One of the dangerous gases that may build up in sewers is:
   A. Helium
   B. Hydrogen Sulfide
   C. Oxygen
   D. Nitrous Oxide

3. A sewer wet well measures 6 feet in diameter and has an operating range of 12 feet. How many gallons is that?
   A. 1000 gals
   B. 1763 gals
   C. 2537 gals
   D. 8500 gals

4. Shoring of trenches is required by OSHA whenever the trench is deeper than:
   A. 3 feet
   B. 4 feet
   C. 5 feet
   D. 8 feet

5. Infiltration is the seepage of groundwater into a wastewater collection system from:
   A. Commercial cooling water discharges
   B. Pipe joints
   C. Roof drains
   D. Yard drains

WASTEWATER COLLECTION GRADES 3 & 4
1. The greater the velocity of flow in pipes, the smaller the friction losses.
   A. True
   B. False

2. A wastewater collection wet well is 4.5 feet in diameter. How many gallons per minute are pumped if the influent is 27 gpm and it takes 3 minutes to pump it down 5 feet?
   A. 523 gpm
   B. 675 gpm
   C. 750 gpm
   D. 895 gpm

3. An advantage of driving a pump with belts is that:
   A. Alignment of pump and motor sheaves is not critical.
   B. If one belt breaks only that belt needs replacement.
   C. Almost any speed is available
   D. Little sheaves can handle a big pull.

4. A 12 inch force main has 1650 gallons per minute flowing through it. What is the velocity in feet per second (fps) of wastewater flowing through it?
   A. 1.0 fps
   B. 3.2 fps
   C. 4.7 fps
   D. 6.6 fps

5. Smoke testing is used to:
   A. Identify sources of inflow and illegal connections.
   B. Locate main line stoppages.
   C. Locate manholes that with bad covers.
   D. Measure groundwater infiltration.

WASTEWATER TREATMENT GRADES 1 & 2
1. Parshall flumes are reliable and accurate influent flow measuring device.
   A. True
   B. False

2. Which of the following terms describes the organic loading of a wastewater?
   A. Biochemical Oxygen Demand
   B. Suspended Solids
   C. Mixed Liquor
   D. Anaerobic Decomposition

3. The basic laboratory measurements used to determine clarifier efficiency includes:
   A. Settleable solids and suspended solids
   B. BOD
   C. Total solids
   D. All the above.

4. How much wastewater may be held by a sedimentation tank that measures 35 feet in diameter and is an average of 14 feet deep?
   A. 13,500 gals
   B. 56,400 gals
   C. 100,000 gals
   D. 252,000 gals

5. What is the hydraulic surface loading to a wastewater treatment facility having 2 circular primary clarifiers measuring 40 feet in diameter with an influent flow of 3.2 million gallons per day?
   A. 800 GPD/sq ft
   B. 1274 GPD/sq ft
   C. 1650 GPD/sq ft
   D. 2110 GPD/sq ft

WASTEWATER TREATMENT GRADES 3 & 4
1. The best solids loading for an aerator is determined by experimentation and careful measurement of loading guidelines and effluent quality.
   A. True
   B. False

2. What is the organic loading in pounds per day (ppd) to a wastewater treatment plant with a BOD of 275 mg/L and influent of 6.4 MGD?
   A. 1,030 ppd
   B. 1,470 ppd
   C. 1,905 ppd
   D. 2,800 ppd

3. What is the efficiency of a wastewater treatment facility with an influent BOD of 267 mg/L and an effluent BOD of 20 mg/L?
   A. 87.5 %
   B. 90 %
   C. 92.5 %
   D. 95 %

4. What is the pounds of solids under aeration of a tank that contains 323,000 gallons and the Mixed Liquor Suspended Solids is measured at 2,400 mg/L:
   A. 2400 lbs
   B. 3230 lbs
   C. 5000 lbs
   D. 6465 lbs

5. Calculate the settleable solids with the following information: The settled level in the graduated cylinder is 180 ml, and the amount of sample was 2 liters.
   A. 9.0 %
   B. 18.0 %
   C. 27.0 %
   D. 36.0 %
It's no surprise that critical infrastructure industries across the nation are beginning to deal with their own “fiscal cliff,” with the potential lack of a prepared and skilled workforce ready to take the reins from the a retiring workforce bubble, specifically in public utilities. Arizona shares in that looming plight, plus the concern of our own states resuming and inevitable growing population.

In January 2012, Estrella Mountain Community College (EMCC) launched an energy skills program, inspired by the Get Into Energy Career Pathways (GIECP), originally funded by the Bill and Melinda Gates Foundation. The goal of EMCC's Get Into Energy (GIE) initiative was to address a growing workforce attrition rate and skills gap need specific to its energy partners APS, APS-Palo Verde Nuclear Generating Station, and SRP.

Students completing the GIE program from EMCC earn both the National Career Readiness and Energy Industry Employability Skills certificates, along with the Energy Industry Fundamentals credential developed by the national Center for Energy Workforce Development (CEWD), part of the Edison Electric Institute.

Based on this successful model, EMCC was encouraged by the CEWD to apply for a federal Trade Adjustment Assistance Community College and Career Training (TAACCT) grant and lead an Arizona consortium to further develop the college’s Get Into Energy program and implement it statewide. And so the story begins.

During the summer, five Arizona community colleges formed the Arizona Sun Corridor Get Into Energy Consortium (ASC-GIEC), representing a diverse and complimentary set of educational settings. As lead institution, EMCC was joined by educational partners Chandler-Gilbert Community College, Northland Pioneer College in northeast Arizona, Pima Community College in Tucson, and Yavapai Community College in Prescott. Vital to the consortium’s overall mission and purpose of workforce development, are Arizona industry partners Arizona Public Service (APS), APS-Palo Verde Nuclear Generating Station, Salt River Project (SRP), Tucson Electric Power, Arizona’s Generation and Transmission Cooperative’s, ASARCO, and Freeport McMoRan Copper and Gold.

In September 2012, the ASC-GIEC was awarded a $13.5 million TAACCT grant from the U.S. Department of Labor to develop a comprehensive program to fulfill the state's energy industry workforce needs. The grant was part of the $500 million federal initiative intended for the development and expansion of innovative training programs at community colleges and universities nationwide.

The primary focus of GIE is to build education pathways for current and future employees, preparing them for energy jobs or other occupations requiring similar skill sets, such as technicians, line workers, plant operators, skilled craftsmen, and engineers. With input by industry partners, the educational group will develop a common curriculum, credit certificates and degrees to allow seamless transferability to accommodate the needs of students and industries participating in the Sun Corridor Get Into Energy programs. Each college will offer and support a unique curriculum that is specific to its regional industry partners.

“These programs are being developed so that enrolled students can transfer seamlessly among the five colleges, based on their skill area of interest coupled by the needs of our industry partners,” said Dr. Clay Goodman, vice president of Occupational Education at EMCC. “The credentials are stackable and portable to provide mobility for the students and employers.”

The Southwest Skill Center (SWSC), located on the campus of EMCC, plays a key part in the GIE program as the educational portal for developing and delivering the curriculum for the GIE program.

According to Mark Haines, Program Manager for Industrial Skills Training, development of the Industrial Electronic Technology (IET) program has closely paralleled development of the GIE program with both addressing the growing workforce skill gaps in technical industries statewide. With the GIE program focused on the energy sector, Haines has concentrated on developing the IET program to provide students with skills necessary to succeed and progress in an industrial maintenance environment.

In developing the IET program content, a large part of the curriculum was devoted to the troubleshooting and repair of electrical/electronic equipment found in manufacturing, and other industrial facilities such as water treatment and water reclamation facilities. “The IET program is a relevant pathway for students interested in transitioning into GIE for a more technical and enhanced career,” said Haines.
Regardless of the industry, technical skill gaps continue to grow in many sectors across Arizona, and are often interconnected and relevant to one another. Such as, the connection between public utilities became critically apparent in November 2012 when two Phoenix area cities, Goodyear and Litchfield Park, experienced a water outage and needed to issue contamination warnings. The outage was reportedly due to an electrical equipment failure at the utility’s reservoir that stopped the water from pumping.

"Training a skilled maintenance workforce to react and handle situations such as this are what the IET program is all about," said Haines. "We must address and provide solutions in ALL skill gap areas if we are to maintain the infrastructures that keep our state economy thriving and robust. And that’s exactly why we continue to develop these and other essential training programs."

Estrella Mountain Community College offers transfer-ready academic courses and job-specific occupational training to approximately 15,000 students annually. The flagship campus is located on Thomas and Dysart Roads in Avondale and is home to the SouthWest Skill Center. The satellite campus, EMCC’s Buckeye Educational Center, is located in downtown Buckeye. Estrella Mountain is one of ten colleges in the Maricopa County Community College District, one of the largest community college districts in the nation, and in the 2012-13 academic year, celebrates 50 years of providing accessible and affordable higher education. www.estrellamountain.edu or www.maricopa.edu.
AZ WATER ASSOCIATION NEWS

Call for 2013 AZ Water Association
Board Member Nominations

The Nomination Committee is accepting qualified and willing members to fill the positions of Vice President, and two Director positions within the leadership of the AZ Water Association for 2013. Nominees will be listed in the spring 2013 newsletter and voted on during the Annual Business meeting on May 2, 2013 at the AZ Water’s 86th Annual Conference & Exhibition in Glendale, Arizona.

Submittals should include nominee contact information and an explanation why this person should be considered for a leadership position within AZ Water. Please submit your nomination in writing by March 1, 2013 to the chair of the Nomination Committee:

Paul Kinshella
15959 W. La Paloma Drive
Surprise, AZ  85374
602-391-8898 (cell)
pkinshel@gmail.com

Director Duties

Directors are expected to attend all AZ Water Board Meetings (six per year) and other meetings as designated by the President. All director positions oversee assigned AZ Water committees. Directors must be members in good standing of the WEF, AWWA, and AZ Water. Terms are for one year, with an understanding that a three-year commitment is involved. Each year’s term is subject to re-election. If you have the energy, drive, and commitment to serve the AZ Water, please consider placing your name or the name of a colleague in nomination for a Board seat.

Vice President Duties

The Vice President serves within the structure of the Arizona Water Environment Association, Arizona Section of the AWWA, and the AZ Water Association. This position oversees the activities of various committees during June 2013 - June 2014. The Vice President shall assist the President and President Elect and shall be the presiding officer of the Association in the absence of both the President and President Elect.

Current AZ Water Board Members

Lisa Culbert, Frank Tantone, Teresa Smith-DeHesus, Tom Galewieski, Sandra Rolston (WEF National Visiting Rep.), Paul Kinshella, Alan Forrest, John Bannen, Chris Hill, Chuck Graf, Kevin Conway, Jacqueline Shaw, Brandy Kelso, Dave Redman, Patty Kennedy (not shown, Mark Martinez).

Severn Trent Services understands Arizona’s water and wastewater utilities. That’s why we’ve served communities in the state since 1983. Today, six Arizona communities rely on us to deliver cost savings, safety and efficiency.

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AZ Water Association  Winter 2013
SOME UNCONVENTIONAL SAFETY WISDOM

By John W. BANNEN, Western Region Health & Safety Manager
Severn Trent Environmental Services, Inc.
& AZ Water Association Board Member

Since the creation of the Occupational Health and Safety Administration (OSHA) in 1970, employers, supervisors, and managers have been challenged to create and keep a safe workplace for their employees. Since that year, we have been successful in reducing the number of fatalities in the workplace by 65%; and we have reduced the number of workplace injuries by 67%. These accomplishments should be celebrated but tempered with the fact that nearly 4 million workers are still injured each year in the U.S.

So why is it that some workplaces still struggle with reducing incidents to zero? Look at your own office, workplace, or company and the majority of you will likely come to the conclusion that we follow the OSHA requirements, we have safety meetings, and no one has been injured here lately and surmise that where you work is safe. For this article, we will not discuss the incidents based upon severity of the injury and just accept them as an event in which an employee was injured. The challenges faced with safety issues are usually similar or related in some way to other performance areas that you are no doubt familiar with: quality of work (operations, compliance or maintenance) and communications.

As stated above, we have spent 42 years regulating safety and have achieved a plateau of fatality and injury reduction. The annual reductions in both of these categories are now minimal and for each new regulation we get a diminished return for the cost that each industry or workplace must incur. Evaluation of this information alone says there must be something more that needs to be done to be effective in continuing to reduce incidents in the workplace. This leads to the argument that incident causes can be grouped into two main categories: equipment and human error. The numbers between studies vary slightly but typically human error is attributed to 90-95% of incidents, and only 5-10% is attributed to equipment. So why do we focus so heavily on the “OSHA says,” or “the manufacturer says,” type compliance activities?

The answer to the question above in many cases is black and white, achievable, measurable, and will show immediate tangible results for dollars and hours put into improving the safety program. Tackling the challenge of the human error side of incidents is one that many supervisors and managers are not trained or equipped to handle. Or are they? Earlier we discussed that safety challenges may be similar to operation or communication challenges in your organization. This is where the human error element potentially should not be labeled as a safety issue but in fact is an organizational issue related to overall performance. Here is an example: I have always personally and professionally had a problem when organizations or people use the phrase “safety is a priority here.” The reason is priorities may change and shift in time. As we gain experience in the workplace, our personal approach to safety changes and in the workplace due to operations or compliance some will challenge the limits of safe work practices due to a current operations or compliance need. When safety is more of a value to the supervisors and management, it is a positive influence on the decisions and actions of the organization. We must remember norms are behaviors of a group and values are individual choices that can change culture.

The performance of employees is always directly attributed to the leadership and guidance of their supervisors. I will pose another challenge to the commonly used phrase, “Who is responsible for safety in the workplace?” and the answer is “everyone,” and I would agree but let’s look at this different way. “Who can have the greatest influence over safety in the workplace?” And the answer is “the supervisor.” Here is an example: An employee is constantly challenging their supervisor by not wearing their personal protective equipment (PPE). Is this a safety issue, yes, but do we evaluate this employee’s performance beyond their personal decision to not wear the PPE? Is this the same employee that has performance issues in other areas? Would this same employee be one to take short cuts in maintenance or to marginally perform operational tasks in the plant? If this is the case, we have less of a safety issue and more of a management deficient, then potentially the communication is negatively impacted. The four areas of communication are: the message, the sender, the receiver, and feedback. If we allow the supervisors to author the safety message and deliver the message, they are then accountable for up to 50% of the success of that message. Do supervisors have the knowledge base of safety to craft the message, are they a skilled communicator? Or do they deliver new policies, procedures or safety communications as a “read this and sign this, you have been informed of the policy” type communicator. As you can see, this can apply not only to safety communications but important information about HR, finance, or even critical operations and compliance.

There is no universal approach to address safety in every workplace and that can easily be attributed to the importance of the human factor where safe work performance is concerned. Equally important is the character and performance of our employees and supervisors in the workplace. Operations, compliance, and safety are all pillars that support an organization that strives for the highest quality performance. Imagine them each as a leg of a 3-leg stool. If one is shorter than the others or broken the stool will tilt and fall. If operations and compliance are better than, or longer legs, than safety, then the stool will tilt and fall. If supervisors deliver new policies, procedures, or safety communications as a “read this and sign this,” you have been informed of the policy” type communicator. As you can see, this can apply not only to safety communications but important information about HR, finance, or even critical operations and compliance.

If you are interested in joining the AZ Water Association Safety Committee, please contact me at 480.316.2448 or jbannen@stes.com.
AZ WATER ASSOCIATION
COOPERATIVE COMMUNICATION PROGRAM

By John RUETTEN, Resource Trends, Inc.
Guy CARPENTER, Carollo Engineers
Jim PEMBROKE, HDR Engineering, Inc.

The AZ Water Association is embarking on a cooperative communication program for the long term. The ultimate goal of the program is to encourage appropriate investment in water resources, public health, and needed infrastructure. The keys to success are: developing sound and consistent messaging, engaging in focused relationship building, and having industry advocates of all ages and disciplines committed to the program for the long term.

Securing Support for Water Investments

Utility managers and water industry professionals often lament the fact that people are uninformed about municipal water and wastewater services. The hope is that if they know more they will be more supportive of water investments. Given the increased acrimony over rate increases and the current investment climate at the state and federal level, the timing is right to improve how the water industry secures support for needed funding and rates.

It is important to be clear what is meant by investment and the relationship between utilities and their community members. Because utilities are typically government monopolies, community members are both customers and owners/investors. Appropriate investment, or sustainable finances, arises from fully funding the capital, operating, and reserve needs of the utility. These funding needs are typically met by the rates and fees that the utility charges for its services.

So if the focus is on investment and rates increases, then cooperative efforts to increase support for investment must address the politics of water-rate increases. For the most part, rate-increase decisions are made by the policy makers of regional and local water utilities or agencies. For municipal water departments these decisions are made by city councils. Since rates are ultimately decided by policy makers and not the general public, it makes sense to focus on giving policy makers the confidence and support they need to make the best decision for the community. There are several challenges associated with providing this support or “cover.” A major challenge is that the water industry is fragmented, which means that individual utilities have limited financial resource for communicating with the public. Furthermore, because utilities have traditionally been the silent service and don’t have competitors, senior managers lack the training to efficiently build a reputation or brand that is designed to support needed investments and rates.

Given the fragmentation, limited financial resources, and the need for improved practices and common messages, it seems clear that cooperation between utilities could improve the conditions noted above. Sponsored by the AZ Water Association and facilitated by Resource Trends, Inc., utility leaders in Arizona have been collaborating about key issues related to investment, rate increases, what people need to know, and who needs to know. The group has come to the following conclusions related to the need for a cooperative communications effort.

CONCLUSIONS FROM AZ WATER ASSOCIATION UTILITY WORKSHOPS

Reaching the General Public is a Dubious Goal - One might think that a cooperative communication program should focus on cooperative advertising. The problem is that people are busy and it is very difficult and expensive to implement an advertising program that is sustainable, actually reaches people, and generates results. Furthermore, given that water rates are determined by policy makers, it’s fair to question whether reaching the general public should be a top priority (especially if our relationships with community leaders are not well developed).

Focusing on Specific Relationships – What would it be worth if we had even 50-100 relationships with state or community leaders that we do not have today? Furthermore, what would it be worth to have 3 or 4 high-level water champions who are not water professionals but influential due to their business or political ties? Given the billions of dollars in water investments and the critical role of water to our economy and quality of life, having these relationships and champions would be extremely valuable. Furthermore, forging these relationships is doable and very cost effective. So, who are these people? In general, they are people in a position to influence policy makers or policy decisions about water, and include people in the following categories:

- State and local elected officials, and staff
- Ethnic groups
- Health and environmental groups
- Engaged public, especially known opponents or gadflies
- Restaurant associations
- Business groups
- Chambers of commerce
- Developers
- All elements of the media – Print, TV, Internet....
- Advisory boards, commissions

The AZ Water association utility group is developing a list of individuals in these categories.

continued on page 26
The mechanical vertical bar screen Screentec can be installed in many applications including Headworks, Lift/Pump Stations, Deep Wells and Manholes. Due to its vertical design, Screentec can retrofit any kind of structure with minimal or no changes. **Aqualitec: Keep it simple.**

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Selling Water Reliability – Because of current water-rate structures, purchasing water for homes or businesses can look like buying a commodity, where the price per gallon is all that matters. However, this is misleading. A significant portion of the cost of water comes from ensuring that water service at the tap is reliable from both a water resources and infrastructure standpoint. Furthermore, when customers think of water as a commodity, then conserving and ending up with a higher water rate or possibly a larger bill makes no sense. However, this scenario makes more sense if the product is “cost-effective water reliability” and conservation is an efficient reliability investment and part of the reliability plan. Clarity about reliability is critical for helping people appreciate the investment challenges facing the water industry.

Planning and Investment Well Ahead of Need – The concept of planning well ahead of the need can be a tough sell in our reactive society, but the consequences of deferred investment are negative impacts on our economy and quality of life. Furthermore, with population growth, the need to preserve water for the environment, and increasing climate variability, the risks of proactive water resources and infrastructure planning have never been greater.

Municipal Water is a Manufactured Product – We don’t have water-service reliability simply because water exists in nature. We enjoy water reliability because we have invested in transporting, storing, and purifying the water. Reliable service demands consistent water quality, and water is safe to drink because of the ethics, activities, and investment of water utilities: not because of the water’s source. This simple truth communicates that utilities are the “source of quality” which is an important message for creating tap water and recycled-water confidence.

Water Storage is a Key to Reliability in the Southwest – This is an important message because it shines a light on critical storage assets: reservoirs and groundwater basins.

The Cost of Insufficient or Deferred Investment – Waiting for water shortages, allowing infrastructure to fail, and degradation of the environment negatively impact our economy and quality of life, and is ultimately more costly than proactive planning and investment.

The Challenge of Local Utilities – Cooperative messaging should outline what people should expect from local utilities, including clearly communicating the investment challenges, demonstrating efficient operations, and providing the appropriate transparency with respect to planning and finances.

With the right message and activities that provide benefits to those who can influence policy decisions, the water industry in Arizona can build valuable relationships and increase support for investment in water resources and infrastructure.
AZ Water Association’s
Monthly Luncheon Event

Tuesday, January 8, 2013
Topic: What it takes to own your career
Presented By: Guy Carpenter, Carollo Engineers
Register By: Friday, January 4, 2013
Sponsored By: HDR and Carollo

Tuesday, February 12, 2013
Topic: Superoxygenation – Odor Control
Presented By: Teresa Valentine, Valentine Environmental Engineers
Register By: Friday, February 8, 2013

Tuesday, March 12, 2013
Topic: The Global Harmonized System
Presented By: Bob Brown, Workplace Safety Specialists
Register By: Friday, March 8, 2013
Sponsored By: Montgomery and Associates

Tuesday, April 9, 2013
Topic: Progress and Challenges of Algae-Based Biofuels and Wastewater Bioremediation
Presented By: Dr. Qiang Hu, Arizona State University
Register By: Friday, April 5, 2013
Sponsored By: Carboline and Coldter Associates

Time: 11:30 am starts registration | Noon - Lunch
Location: SRP Pera Club | 1 East Continental Drive | Tempe, AZ 85281
Cost: $20/person for members | $25/ person for non-members
Contact: Theresa Muller | TMuller@brwncaid.com | 602.567.3865

PDH Certificates are available for attendance at these meetings.
Due to space limitations, reservations are required. No-shows will be billed.
The U.S. Environmental Protection Agency recently awarded the Water Infrastructure Finance Authority of Arizona (WIFA) nearly $28 million dollars for drinking water and wastewater projects designed to ensure safe, reliable drinking water and proper wastewater treatment. WIFA will use the funds to provide low-cost loans for a wide variety of drinking water, wastewater and wastewater reclamation projects. Green projects, or projects for sustainable construction efforts such as water efficiency, energy efficiency, green stormwater infrastructure or other environmentally innovative activities, are encouraged. WIFA also offers funding for projects like nonpoint source pollution control, watershed protection or restoration, and stormwater infrastructure improvements.

WIFA has a very large pot of funding to offer. Because WIFA has bonding authority and is able to leverage its funding, the funds received from EPA are just a portion of its financial portfolio. WIFA borrows money at the best rates available due to its Triple A rating and passes those savings on to its customers in the form of below-market interest rates.

WIFA is an excellent source of funding for the state’s larger cities and towns as well as small rural areas. The smallest loan amount to date was less than $3,000 and the largest almost $90 million. WIFA also financed a very large $346 million phased project through multiple loans. This year alone, WIFA approved 16 new loans and provided more than $37 million in financial assistance to cities, towns, water companies and districts. More than $15 million was provided to communities serving fewer than 50,000 people.

“One of the best things about WIFA is our ability to help communities throughout Arizona with their water infrastructure needs. Not only are we able to award very low-interest rate loans, we also offer incentives for green projects and even further financial incentives for disadvantaged communities. In many cases, WIFA represents the best funding option to take care of critical water and wastewater needs in Arizona communities,” said Sandy Sutton, WIFA Executive Director.

WIFA is committed to providing resources to communities or water systems with the greatest needs. Among WIFA’s top priorities are projects which result in maintaining or achieving compliance. For communities with exceptional needs, WIFA is able to offer additional assistance. In 2012 alone, WIFA provided a total of $2,550,000 in forgivable principal to disadvantaged communities.

Just like a regular bank, WIFA is able to provide financing year-round and has no application deadlines. Unlike a bank, however, WIFA does not charge application fees or closing costs. Better yet, an applicant can go from completing an online application to closing on a loan in just a few months!

Please contact WIFA at (602) 364-1310 if you have a project idea. WIFA’s friendly and helpful staff will work with you from project initiation through the successful completion of your community’s water quality project.

For WIFA’s wastewater projects, a wastewater facility must be publicly-owned, by an entity such as a city, town, district or tribal entity. Funding for drinking water projects is available to public systems and to private systems that are regulated by the Arizona Corporation Commission.
WATER INFRASTRUCTURE FINANCE AUTHORITY
REQUEST FOR GRANT APPLICATIONS: PLANNING AND DESIGN ASSISTANCE GRANTS

Contact: Melanie Ford  Phone: (602) 364-1321  E-mail: mford@azwifa.gov

Applications must be received by 3 p.m. MST, Thursday, February 28, 2013.

WIFA is seeking applications for water infrastructure planning or design projects that will help prepare facilities for project construction. Funding for drinking water projects, up to $35,000, is available to public water systems owned by districts, local governments and private, ACC-regulated companies. Recipients are required to contribute a local match unless the project qualifies as “green.” Green projects, or projects for sustainable construction efforts such as water efficiency, energy efficiency or other environmentally innovative activities, may qualify for a waiver of the local match funding requirement. Total funding available will be approximately $150,000. WIFA will announce grant awards on April 17, 2013.

Please see WIFA’s Applicant’s Guide at www.azwifa.gov (click on Grant Programs under the Main Menu) for more information on eligible projects, evaluation criteria, and grant terms and conditions. Apply using WIFA’s e-application system.
LEADERSHIP

By Fred KRIESS, Severn Trent Environmental Services

KEEPING YOUR CAREER ON THE RIGHT TRACK – PART 2

In our last discussion, I had started to share some of what I referred to as my top ten list of events that may happen which can derail a promising career. The first three things to be aware of were:

➢ Wanting to be liked by everyone
➢ Letting the job go to your head
➢ Failing to (always) tell 100% the truth

I would like to continue our journey together by sharing three more lessons with you and then talking about the importance of goal setting, positive thinking and how critical it is to spend time literally seeing the vision or outcome of the goals that we set.

Here are a couple more potential traps:

➢ “Setting low expectations because you don’t think that your employees (or those that you work with can do any better)”

Did you ever find yourself complaining about poor work performance or productivity of others? Well, more often than not, we, ourselves, can be the cause of that.

It is a natural tendency as human beings to have empathy and care about each other. We are constantly evaluating others based on their behavior. It is easy for us all (and I really can speak from the voice of experience) to retreat into a comfort zone. During my years of leading others, I can recall very distinctly those occasions where I was working with teams who were capable of so much more, had I only been more diligent in clearly setting forth higher standards. And, I found myself complaining about their performance.

With the benefit of hindsight, I now can see that those that we lead will meet whatever standards, that we as leaders, choose to set. If we set low standards, our teams will meet that standard and nothing more. Organizations and teams will elevate themselves to whatever standards are established. This scenario is something called the “Rosenthal Effect” which says (and many studies have confirmed) on the other hand, if we choose to set high standards, just the opposite will occur and our teams will elevate themselves to those higher standards.

Another way of looking at this is **What you expect you get**. If we expect and are willing to accept mediocrity, that is exactly what will happen. To keep your career on track, really step back for a moment and ask yourself “Why can’t (or shouldn’t) we be the best” and truly challenge yourself and others to excel.

➢ “Failing to reach out and ask for help for fear that it will be seen as a sign of weakness”

We get promoted because we were good and competent at what we do. Once we move into our new positions, we really do want to prove to our manager that we are capable of doing the job (on our own). It is normal to encounter situations where we have limited knowledge and experience and may feel as if we are in it on our own. In the interest of making a good impression, we may fail to seek out assistance and help from others who have experience and wisdom.

I had a real life experience which taught me a lesson that has lasted a lifetime.

I was a member of a large team that was working on a proposal and was given a specific assignment. Each team member had their respective strengths and was gifted in certain areas. My assignment meant that I had to venture a bit out of my comfort zone and work on drafting a detailed operations plan. I had every opportunity to use other resources, but instead chose to “go it alone” in the interest of proving to my bosses that I could do the job and was a capable employee.

I waited too long, realized that I was in trouble and finally out of desperation asked for help. As a result, I jeopardized the work of the entire team.

The thing is that asking for help and assistance is actually a sign of strength, not weakness. There is much that could be said about the value of a team effort, but in this instance, suffice it to say that **The Whole is Greater Than the Sum of Individual Parts**. This means that in every instance, the end product of working together will always exceed the output of individuals working separately. That said, however, each individual part (person) is critical to the team’s success and it is extremely important to have goal setting that supports the team’s objectives.

Finally, as we finish our discussion together, I wanted to talk a bit about how important it is not only to set goals, but to actually see or visualize what it is that you would like to see happen. I have played golf now for nearly 40 years and like many of us, I struggle mightily with the game. I think it was Jack Nicklaus who said “Think Wrong, Swing Wrong.” I thought about this for awhile and realized how many times I have stood over the ball, thinking about the worst things that can happen (out of bounds, errant shot into the water, etc.). Instead of focusing on the positive, my mind instead only saw the negative things that could happen. For self improvement, I now fill my mind with positive thoughts in my pre shot routine and I can tell you first hand that it really does make a big difference in the outcome. I suspect that as you are reading this, that like me, you have made some resolutions for the New Year. Typically, we get a month or two in the year, and these things fall by the wayside. I think that our chances of keeping on track is to constantly have a vision of the end result of our goals.

A good friend of mine recently sent me an article written by Harvey Mackay. If you haven’t read any of his books (and he also has a column that appears in the Arizona Republic) I would highly recommend that you add any one of them to your reading list. In the article, Mr. Mackay (who became a highly successful business person selling envelopes) talks about performances of world class athletes and the huge difference that positive mental outlook and goal setting can have on performance. All things considered equal, having a vision and seeing the end result of what we want to achieve can have a huge difference on the outcome. I will share more about goal setting and the power of positive thinking with you sometime down the road.

As I close, I would leave you with some words of others regarding leadership and life – Dwight D. Eisenhower said “Leadership is the art of getting someone else to do something you want done because he (or she) wants to do it.” Bill Bradley said “Leadership is unlocking people’s potential to become better.” Finally, from my personal library of thoughts – “Positive People with a Plan will Produce Positive Results” and truly make a positive and lasting difference in the world.

It is a privilege for me to continue sharing more lessons of life and leadership. Please feel free to contact me at fkiess@stes.com if you have any questions or feedback. Have a super fantastic day and make it the best one ever!