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December 2014
Vol. 81, No. 12

The APWA Reporter, the official magazine of the American Public Works Association, covers all facets of public works for APWA members including industry news, legislative actions, management issues and emerging technologies.

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On the cover: This photo of the APWA Board of Directors was taken just prior to the Opening General Session at our Toronto Congress on Sunday, August 17. Bottom row (l to r): Edward A. Gottko, PWLF, Past President; Larry Stevens, P.E., PWLF, President; and Brian Usher, PWLF, President-Elect; Second row: Tommy J. Brown, PWLF, Director, Region IV; Cora Jackson-Fossett, PWLF, Director-at-Large, Leadership and Management; and Harry L. Weed II, PWLF, Director, Region II; Third Row: Mary Joyce Ivers, CPP; PWLF, Director-at-Large, Fleet & Facilities Management; and Kathleen B. Davis, Director-at-Large, Transportation; Fourth Row: Ronald J. Calkins, P.E., PWLF, Director, Region VIII; Chuck Williams, PWLF, Director, Region VI; and Richard F. (Rick) Stinson, PWLF, Director, Region I; Fifth row: William E. (Bill) Spearman, III, P.E., Director-at-Large, Environmental Management; Jill M. Mariley, P.E., MPA, PWLF, Director, Region IX; and Maher Hazine, P.E., PWLF, Director, Region VII; Top row: William “Bo” Mills, PWLF, Director, Region III; Richard T. Berning, Director, Region V; and David L. Lawry, P.E., Director-at-Large, Engineering & Technology. (Photo taken by Grant Martin of Grant W. Martin Photography, www.orderphotos.ca)
Taking our responsibilities seriously

Larry Stevens, P.E., PWLF
APWA President

This month’s APWA Reporter features the eight core responsibilities of a public works leader. Let’s think about what responsibility means. Winston Churchill said, “The price of greatness is responsibility.” Churchill, acknowledged as one of the twentieth century’s greatest leaders, understood that leaders often simply take responsibility. What does this mean to a public works leader? It means that we are responsible for our community’s infrastructure and to a great extent the health, safety and welfare of its citizens.

History is full of examples of seemingly regular individuals who when entrusted with responsibility rose to greatness. One example is Joshua Chamberlain’s heroic defense of Little Round Top on the Union Army’s left flank at the battle of Gettysburg. Colonel Chamberlain’s troops were running out of ammunition, so he ordered a bayonet charge that successfully held the position. This action saved the day at the battle of Gettysburg and allowed time for reinforcements to arrive which possibly changed the course of the Civil War.

Gene Kranz was NASA’s lead flight director during the Apollo 13 moon mission. An explosion on the command module jeopardized the lives of the crew when they were part way to the moon. Power, water and fuel quickly became critical. Kranz is credited with gaining input from his team, assessing the severity of the situation, and making fast and accurate decisions that led to the safe return of the astronauts.

The story of the 1914 Ernest Shackleton Antarctic expedition is an example of an individual accepting the responsibility of his position and rising to every challenge encountered. Shackleton’s ship, the Endurance, left Georgia Island off the coast of South America in December 1914 for Vahsel Bay. Ice quickly became a problem, and by January the ship was trapped in the ice off the coast of Antarctica. The ice finally crushed the Endurance and it sank below the ice in November 1915. Shackleton and crew made camp on the ice flow but eventually had to abandon the ice and escape in three lifeboats from the Endurance. They ultimately ended up on Elephant Island, 346 miles from where the Endurance sank. Because of its remote location there was little chance of being rescued. Shackleton decided to take five crew members and sufficient supplies for 28 days and attempt an 800-mile trip in one of the 20-foot lifeboats back to Georgia Island. It was a treacherous crossing but they finally arrived in the whaling port in May 1916. Shackleton then arranged for a rescue ship and returned to Elephant Island almost two years after the expedition began to rescue the 22 crew members that were left there. It is truly remarkable given the severity of that environment and the equipment of the time that all members of the party survived.

Each of these leaders was faced with challenges that required action, often with little time to evaluate options.
They had invested the time and effort to be prepared to act. As a public works official you also have a responsibility to your community, just as Chamberlain did to the Union Army, Kranz did to the Apollo 13 crew, and Shackleton did to the members of his expedition. The difference is that if you take your responsibility seriously in providing and maintaining the critical infrastructure your community needs, you will likely not become an honored figure of history. On the other hand, if you fail in your responsibility you just might be remembered as the person who caused a community tragedy. Our responsibility is to provide the safe water, streets and sanitation critical to the health, safety and welfare of our communities. The difference between us and these icons of history is that we must do it every day, and with little recognition unless we fail. The eight core responsibilities are vital for success and will help prepare you to meet your responsibility.

The core responsibilities—Asset Management, Community Involvement/Transparency, Emergency Response, Professionalism, Professional Development, Ethics, Succession Planning, and Sustainability—are all needed for success. I was interviewed for the September issue of the APWA Reporter and one of the questions was, “What do you see as the critical issues today for public works professionals?” My response included: “Infrastructure financing and management … the sustainability of our communities … there are so many competing interests for tax dollars, and it is increasingly difficult to convince the public and our elected officials to adequately fund our infrastructure … the public has become so much more demanding … finding qualified staff … succession planning will be critically important … technology in the workplace.” Looking at my response to that question I touched in some way on six of the eight core responsibilities without thinking of them. I don’t think that was a coincidence. The public expects the services we provide, but perhaps more importantly they need safe water and sanitation for public health. Without safe roads there would be less commerce and economic vitality. Our flood and drainage structures protect people all the time. In emergencies the roads and bridges that we supply are the critical arteries that allow the medical, police and fire professionals, and food and water, to reach our citizens and keep them safe.

When you look at our responsibilities from this point of view it is easy to understand that we need to take our responsibilities seriously. Read the articles in this issue and commit to becoming better prepared to fulfill each of your responsibilities. Then, as Churchill observed, you can achieve greatness. If you fail to meet the core responsibilities perhaps you then need to take this advice from President Teddy Roosevelt: “If you could kick the person in the pants responsible for most of your trouble, you wouldn’t sit for a month.”

AMERICAN PUBLIC WORKS ASSOCIATION

Mission Statement: The American Public Works Association serves its members by promoting professional excellence and public awareness through education, advocacy and the exchange of knowledge.

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The first session of the 114th Congress will begin next month on January 3, 2015. Upon return from a holiday recess, newly elected congressional leaders will confront several policy issues that are related to public works. One of the most pressing issues is passing a long-term surface transportation reauthorization bill. A multi-year, surface transportation authorization that maintains a strong federal role and provides dedicated, reliable funding for state and local governments is strongly supported by APWA.

In July, Congress extended highway funding through the end of May 2015, by passing HR 5021. HR 5021 represents the 28th time in the last six years that Congress has passed a short-term extension or budget measure in lieu of a multi-year surface transportation authorization. Many in Congress were displeased with the bill since it was only a short-term extension, but grudgingly voted for it to avoid Highway Trust Fund insolvency.

The new Congress gives lawmakers a chance to contemplate some new long-term funding solutions for federally-funded transportation projects. The Highway Trust Fund is currently funded by an 18.4 cents per gallon federal gas tax, but it has not been raised in 20 years. Several lawmakers and administration officials believe that a general tax overhaul could generate much-needed funding for transportation projects. Former House Ways and Means Chairman Rep. Dave Camp (R-MI) proposed a tax overhaul plan that would generate an estimated $126.5 billion in revenue from a one-time tax on international corporate profits. This one-time windfall would be used to pay for infrastructure projects. Rep. Paul D. Ryan (R-WI), who will likely succeed Rep. Camp as Ways and Means Chairman, also expressed support for the idea. The Obama Administration is also in favor of using this tax overhaul to invest in transportation. Treasury Secretary Jacob J. Lew has publicly called on Congress to support this policy.

Congress has until May 2015 to pass transportation reauthorization before the current one expires. However, some officials believe that Congress shouldn’t wait until next May. Sen. Barbara Boxer (D-CA), Chairwoman of the Senate Environment and Public Works Committee (EPW), supports the passage of a long-term highway bill and wants Congress to begin work as soon as possible. Senator Boxer has stated that “we cannot afford to wait for action until the deadline, which falls at the beginning of the critical summer construction season, or to kick the can down the road any longer.”

APWA will continue to promote and advocate for a long-term, well-funded, sustainable solution for transportation funding.

“...APWA will continue to promote and advocate for a long-term, well-funded, sustainable solution for transportation funding.”
As Chair of the Leadership and Management Committee, I would like to start off by thanking the members of this group for their hard work and efforts over the past year. This vision-oriented and highly talented group of individuals represents a tremendous cross section of the excellence I see every day in our profession. Our APWA staff liaison, Becky Stein, also needs to be recognized for her hard work in keeping the committee informed, organized and on-track. Before I am finished with the recognitions, I would also like to thank the members of the Knowledge Team who have volunteered to get involved by drafting several articles for the APWA Reporter this year.

While it may appear I am spending a lot of time just thanking people, my underlying subliminal message is that it is going to take a lot of assistance from members who will be willing to help out to accomplish the amount of work we have in front of us. Since most APWA volunteers like me have “daytime jobs” and plenty of things at work to keep us more than busy, the more we can draw off a large base of expertise, the greater the benefits will be for our association. Not only from the aspect of spreading out the workload, but also by drawing off of a diverse “think tank” of professionals who I hope are willing to take some time to share their experience.

The Leadership and Management Committee has elected to “bite off” a big initiative this year. After much discussion we decided that it would be beneficial to review and revise several chapters of the Public Works Supervision publication. This manual is used as a primary guide for many of the APWA Institute programs. There have been several chapters identified to be rewritten and thus numerous opportunities to get involved in providing assistance. Along with this venture, there will be opportunities to write some articles for the APWA Reporter, assist with the “Recognize Your Leaders” articles, along with other requests.

This past year at one of our committee meetings we had a discussion about how to get more members involved with committee initiatives. The main message that came out was that we need to develop more effective methods to reach out to individual members to volunteer rather than just throwing out “blanket requests” for help. We all know that with our busy lives it is fairly common for someone to assume that “someone else will step up.” While we know it will take more effort on our part to seek out volunteers, in order to accomplish the goals we have developed it is going to take some help. You can make this task easier by offering your assistance and contacting us in lieu of making us beg for help!

The Leadership and Management Committee is not in a unique position with this problem. In an organization that relies heavily on volunteers to accomplish many of its goals, getting the member base engaged and involved is key to our future success. Before watching the “bus pass by” and telling yourself “I’ll catch the next one,” think about the contribution you may be able to make toward our profession and even your respective agency. I once heard a pastor say, “The good news is that we have lots of money, the bad part is that it is still in your pockets.” Our “good news” is that we have lots of experienced and knowledgeable professionals that can contribute, the challenge is getting them to “get on the bus” and volunteer.

As a member if you think you can help out with moving our profession forward, please think about getting involved. You can join our Knowledge Team (volunteer group of contributors), sign up for our APWA Leadership and Management group on LinkedIn or simply shoot us an e-mail and let us know you are interested in getting involved. A good starting point would be to contact our APWA staff liaison Becky Stein at bstein@apwa.net for more information. Thanks to all of you who have volunteered your time in the past and those who will consider it in the future. Together we will make a strong team and take APWA to new places.

Bret Hodne can be reached at (515) 222-3480 or bret.hodne@wdm.iowa.gov.
A lot can happen in the four years between APWA reaccreditation site visits. Standard operating procedures and practices can be added, amended or even eliminated. The time between visits may seem long, but in reality, it goes by quickly, which is why Richmond’s Department of Public Works put a bull’s-eye on its 2013 reaccreditation evaluation not long after its first reaccreditation in 2009.

Clearly it was time well spent, as the department received official notification of its reaccreditation for the years 2013 to 2017 and was recognized, along with other reaccredited agencies, at the 2014 APWA International Public Works Congress & Exposition in Toronto. Given the extensive portfolio of services Richmond DPW provides, which range from solid waste collection to civil engineering, preparing for reaccreditation is a lengthy and arduous, but necessary, task.

Richmond’s 2005 accreditation marked only the second time a municipality in the Commonwealth of Virginia was granted the distinction. The City is among fewer than 90 fully APWA accredited government agencies nationwide.

According to Jacqueline Howie, the department’s reaccreditation manager, “We begin the reaccreditation process immediately following submission of the mid-term report to APWA. From that point to the actual site visit, the process takes two years to complete.”

Ms. Howie estimates it takes longer than a year for each division to review its practices, update them, include supporting documentation and prepare to discuss them with APWA evaluators during the site visit. Of
the 573 recognized practices in the Public Works Management Practices Manual, 364 practices are applicable to Richmond DPW. In the 2009 reaccreditation, evaluators reviewed each practice. For the most recent visit, they looked at 157 practices. Of that number, 156 or 99.3 percent were fully compliant and one, or .6 percent, was substantially compliant.

Richmond Public Works Director, James A. Jackson, says the process is stringent. “That there aren’t more public works departments accredited may suggest something about the rigors of becoming accredited,” he said.

The APWA evaluators who visited Richmond were so impressed by the work being done they planned to recommend two practices, DPW Strategic Plan and Electronic Ethics Training, be utilized as models for other agencies seeking accreditation.

The recognition from APWA speaks volumes about how an accredited department operates. “National accreditation signals to public works agencies across the country that we operate in such a manner that you can take our policies, procedures, organization chart, goals and objectives and plug them into any agency across the country that also is accredited and that agency should be able to continue its mission,” said Jackson.

Ms. Howie, who was instrumental in initiating the initial 2005 accreditation process, said being accredited is as much about those on the receiving end of the services as it is those who provide them. “Reaccreditation inspires DPW employees to continuously improve the quality of services we provide, heightens employee job knowledge, communication and involvement,” she said. Howie indicated that since the initial accreditation in 2005, the department has benefitted greatly and operates more efficiently, as employees are more cognizant of their duties and have a greater understanding that the agency’s success is structured around the implementation of the practices set forth by APWA.

Now, with 2014 coming to a close, Howie has already put the wheels in motion in preparation for the 2017 reaccreditation site visit.

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Present and future workforce: recruitment and succession

Catherine Schoenenberger
President, Stay Safe Traffic Products, Inc.
Westford, Massachusetts
Chair, APWA Diversity Committee

Current workforce trends cannot be ignored. Workforce trends now include a decreasing labor force, a more diversified workforce, and an aging population. Over the next decade (2015-2025) the labor force “growth” is projected to be just .2%. Our current generations of workers (the Gen-Xers and Millennials) are more racially and ethnically diverse than any other generation before. By 2020, almost 20% of the U.S. population will be 65 years old or older. Succession planning cannot be left on the back burner.

So, bring on the Young Professionals (YPs). The average age for entry level into public works is 40 years old, and 50% of our public works professionals are 46-50 years old. The importance of partnerships with our high schools, community colleges, pre-apprenticeship and apprenticeship programs is crucial. We need to take advantage of the opportunities for hiring when presented, but this will not happen on its own. Agencies must be proactive in recruitment practices. Fill that pipeline constantly. It’s never too early to get people curious and excited about our industry.

How? Where? Who? Here are some examples...

**Trade and equipment shows** are not just about sales any longer. Many of the events are now tying in an “educational” component for the attendees. The organizers are also extending the invitations beyond those who are currently working in public works. The local high schools, community colleges and universities are key partners in this effort. The local high schools, Career Technical Education (CTE) centers and other post-high school programs are being asked to attend as well. This is a sure-fire way to expose a new generation to public works and all that it encompasses.

**Internships** allow for the “hands-on” which is the best way to learn and to gain experience. Other programs such as Construction Career Days**, AASHTO TRAC, Project Lead the Way, STEM and NCCER curriculums are also great venues and resources for recruiting and retaining a new crop of workers.

In September, **New Hampshire Construction Career Days** (www.nhccd.weebly.com) hosted nearly 1,000 high school students from across the granite state. The 70 exhibits included everything from excavator and grader operations, to bridge building and robotic technology. CCDs across the country introduce students to professions they may never have considered, simply because they were never exposed to them.
The deemed “non-traditional” professions for the female students (13% in attendance for 2014), for instance, have had the greatest impact. The girls are able to see themselves as bridge builders, as operators, as welders or carpenters. Why? Because they were able actually do the jobs at the hands-on exhibits. The students are also able to speak with secondary educational institutions and alternative post-high school educational programs (apprenticeships, internships).

Did it get them excited? Start a conversation? Absolutely! Now we must keep the conversation going.

These events also serve as a morale boost to those already in the profession. Workshops and “shop talk” outside of their workplace highlights the importance and far-reaching effects of their work. Aside from just recruiting, now it’s a matter of retention, too! If your workers are involved in events that allow for them to transfer their professional knowledge/expertise to someone else, this is truly a win-win situation. They are staying engaged by engaging others. There’s a value-added component here which is exactly “priceless.”

Recruiting a diverse workforce on its surface may seem like a daunting task, but if you look at who is on your payroll now, you’ll recognize all the diversity that lies within. Keep in mind that the demographics of your workforce should also reflect your service area. As witnessed with current events, if an agency is not demographically reflective of the community it serves, it can erupt into a serious and dangerous situation. Is your community racially, ethnically, religiously diverse? If so, then so should your employment roster. Appreciate that reflection.

Diversity is not a compromise. It is a step forward. It welcomes everyone to the workplace and commits to a level playing field—a field where talents are recognized, opportunities are available and promotions depend on performance. Diversity allows for inclusiveness and, yes, better business practices. As Mark Riley (Supervisor, City of Dublin, Ohio) wrote in the September issue of the APWA Reporter, “Employers should be mindful... that diversity can strengthen an organization as a whole.”

For more information about Construction Career Days or resources for this article, please contact: Catherine Schoenenberger, (978) 692-2114 or staysafetraffic@aol.com.

Special Reminder: Please make sure you update your personal membership profile, including answering the optional questions 13-16 (see page 10, November 2013 Reporter). Please refer to APWA’s 2013 Diversity Resource Guide 2nd Edition and the Diversity Toolbox for more ideas in celebrating the diversity in your chapter.
Since 2011, the APWA Donald C. Stone Center has seen many “firsts”—first graduates; first PWM; first PWE. This year at the Congress in Toronto came another “first”: First female PWE. Deborah Leistner joined the small but growing rank of public works professionals with Public Works Executive certification.

Deborah is the Public Works Planning Manager for the City of Gainesville, Florida. She has been in public works for over a decade, and prior to joining the DCS Public Works Executive program, she obtained a BS in Architecture, an MA in Urban Planning and Regional Planning, and an MS in Transportation.

In recent conversations with Deborah and her mentor, Dennis Randolph (Director of Public Works, City of Grandview, Missouri), we discussed her accomplishments, goals and experiences; and gained insight into their respective views of the DCS credentialing process and its value to the public works profession as a whole.

Both Dennis and Deborah were drawn to the DCS program by its promise of continuing education and development.

In addition to his philosophy of helping and mentoring future public works leaders, Dennis pointed out that the PWLF program is a way for leaders who have been in the field of public works for a long time to remain current and keep their knowledge fresh and relevant. He says it “tells you where you stand.” Dennis further believes that mentoring requires the mentor to push his mentees out of their comfort zones, and support them in their quest for professional betterment. He thinks mentoring is—and should be—a collaborative, synergistic process. As he says, “They don’t owe us because we’re older and wiser. We have an obligation to pass our knowledge on to them, and let them take what they want.”

Deborah saw the PWE program as a unique opportunity to continue her education and enhance “soft
When asked about her experiences with Dennis, and how they affected her goals and professional development, Deborah couldn’t say enough good things.

Dennis, she says, is a caring, open-minded individual who treated her as a peer rather than a student. She greatly appreciated his generosity with his time, his willingness to share his knowledge, and his genuine interest in her professional growth. Dennis’s supportiveness and commitment to her success encouraged her to write and publish technical articles in professional journals and to consider seeking future opportunities for involvement in APWA.

In fact, Deborah’s experience in going through the PWE program with Dennis has so affected her viewpoint that she now sees herself as a future mentor—something which would never have crossed her mind before. She holds Dennis and his example in such high esteem that she aspires to do for others as he has done for her.

As far as Deborah’s experience with the program itself, she said one of the most valuable aspects for her was meeting and interacting with other PWE candidates. The opportunity to network with peers from other parts of the country presented her with a chance to gain insight and exchange ideas. She went on to suggest that since the Donald C. Stone Center now has alumni, future alumni-oriented activities would be a beneficial addition to the program.

Responding to questions regarding the value of the Donald C. Stone Center and its credentialing programs to the public works industry as a whole, both Deborah and Dennis agreed they play an important role.

Dennis commented that in general, because of the rigorous entry requirements and constant scrutiny throughout the program, a credential from the DCS—particularly at the PWE level—shows that candidates really are as good as their résumés. It shows that they’re both dedicated and knowledgeable, and supports a level of professionalism and ethics that Dennis feels has sometimes been lacking in the past history of public works as a whole.

Speaking specifically about her own credentials, Deborah said that it demonstrates her commitment to public works and to continuing to uphold high standards of productivity and performance.

One of the most important aspects of the PWE process is the Capstone project. For her project, Deborah collaborated with the University of Florida in evaluating the efficiency of pedestrian countdown signal devices (where a countdown timer was added during the “walk” and “flashing don’t walk” intervals) by comparing pedestrian behavior before and after installation of the devices. The study documented an improvement in pedestrian compliance and a positive effect on safety, and the results culminated in the approval by the Florida Department of Transportation for the use of the countdown pedestrian signals throughout the city.

At the PWE level, candidates must perform an oral defense of their project. When asked about this, Deborah admitted at first she found the idea a little intimidating due to the proposed format and level of scrutiny, but she was confident in her knowledge of the materials and the presentation flowed well. The review committee showed a high level of professionalism and their interest and attention helped boost her confidence.

When asked if their relationship is likely to continue now that Deborah has graduated, both she and Dennis enthusiastically agreed it will.

In addition to defending and publishing her Capstone project, Deborah collaborated with Dennis on an article published in the June 2014 issue of the APWA Reporter, and they are working together on a second paper to be submitted to the Transportation Research Board in August of next year. Both papers concern the promotion of active transportation (walking and bicycling) in urban environments; the latter involves a cross-country collaboration with Dennis’s colleagues in Missouri and Deborah’s colleagues in Florida.

The publication of technical papers aside, Deborah and Dennis continue to communicate on a regular basis via phone and e-mail, and both feel they’ve built a lasting relationship based on mutual respect and shared interests—a relationship which would likely not have existed without their mutual participation in the APWA Donald C. Stone Center credentialing program. Dennis has gained a collaborator and colleague whose current accomplishments and future successes make him proud, and Deborah has acquired skills, confidence, and an expanded outlook—one which includes honoring Dennis by eventually becoming a mentor herself.
In the early 1960s an incredible public works project was created on two little-used islands in the St. Lawrence River just south of the main island of Montreal, Québec, Canada. At the time the ambitious decision to create a public works project that literally changed the surface of the two islands, as well as impacting the island of Montreal and the adjacent southern shoreline, was credited to Port of Montreal Director Guy Beaudet and Montreal Mayor Jean Drapeau. In fact the project was the brainchild of a myriad of individuals dating back to the late 1950s that actually became possible as a result of the Soviet Union withdrawing in 1962 from their commitment to host a World Exposition in 1967.

Canadian federal, provincial and municipal officials rushed to fill the void and a massive public works project was undertaken—resulting in four years later Montreal hosting one of the most well-attended world expositions of the twentieth century (which also was timely held in the centennial year of Canadian Confederation).

Construction on the project was overseen by engineer Colonel Edward Churchill and began on June 30, 1964. Churchill employed the newly-developed critical path project management method and the severe time constraints were addressed. The most daunting task was to increase the size of the two islands. The largest island, Ile Ste. Helene, was doubled in size and Ile Notre Dame was created out of the existing mud flats. The builders employed 28 million metric tons for the landfill project. Backfill material was taken primarily from the existing river beds, the St. Lawrence Seaway project and the fortuitous timing of the construction of the Montreal metro system (which provided the majority of the backfill material).

Over 6,000 workers were involved in the construction project at its height. There were 847 buildings, 27 bridges, 82 kilometers of roadways and sidewalks and 37 kilometers of sewers built. Over 150 kilometers of water, gas, power and light mains were laid, parking spaces for 24,484 vehicles.
were created, and 15,000 trees and 900,000 shrubs were planted.

Construction also resulted in a large amount of secondary construction projects included a revamping of the existing roads and bridges in the area to accommodate the construction work and subsequent influx of visitors to the area. Two large bridges over two thousand feet long were constructed in a year-and-a-half span linking the newly-revamped islands to each other and the mainland.

Expo ’67 was a remarkable public works project that was achieved in a highly compressed timeline that changed the physical landscape of the Montreal region. The project changed the consciousness of politicians and local residents; and the success of the project, as well as the success of Expo ’67 itself, ushered in an era of prosperity for the region that was soon followed by the birth of a professional baseball team in 1969 (the Montreal Expos), as well as Montreal in 1970 being awarded the 1976 Olympic Games.

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Bibliography


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National Film Board of Canada: https://www.nfb.ca/

The theme of the Exposition—“Man and his World”—featured 62 participating countries from all over the world, and the Expo was attended by 50 million visitors. The 847 pavilions and buildings created for the Expo were designed primarily by architects and designers from the participating countries (making the rapid design and build process even more impressive). Many of the buildings were temporary constructions but the national pavilions were built as permanent structures (for example, the United States Pavilion is still used today as a Biosphere).
Bloomfield Township holds open house

Tom Trice, PWLF
Director of Public Works
Bloomfield Township, Bloomfield Hills, Michigan
APWA Past President

The Bloomfield Township, Michigan, open house has been a community event for well over ten years. It includes the Police Department, Fire Department and the Department of Public Works as the anchors of the event. All other departments including Engineering/Environmental Services, Building, Code Enforcement, Clerks Office, Assessing Department and the Senior Center participate.

Our campus is in one location so residents can begin at the Police Department, walk through a complete display of DPW maintenance equipment, and end up at the Fire Department. Along the way there are tents with each Department showing off what they do. Our Water Division had a hands-on display showing how “flushable wipes, plug the pipes.”

Teresa McWilliams and Tom Trice, APWA Past President, stand with P.W. Paws during the open house on October 12.
DPW has a photo booth for the kids to dress up in hard hats and vests and get their picture taken. They can get in the road grader and go for a ride in a plow truck, as well as in a patrol car. There are hot dogs, pizza, popcorn, tacos, balloons, apples and APWA coloring books. Our Grounds and Environmental Divisions give away a tree for planting, and if folks correctly guess the weight of the pumpkins they can take them home.

This is one of the most popular events we put together during the year. This year’s event drew approximately 1,200 people. Parking is at the Senior Center and folks are shuttled on the senior buses to the start locations. We started at noon on Sunday, October 12, and closed down at 4:00 p.m. Our Department has about 20 employees available to help residents with any questions they may have from water usage, tree planting, and refuse collection, to road maintenance. It’s a fun day to show off what you know and help inform residents of what they don’t know.

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The 2014 APWA Fall Conference and Stormwater Expo was a huge success. It was held in the heart of Salt Lake City with over 400 attendees! Chapter President Dennis Pay, P.E., expressed gratitude as he addressed participants in the closing session; he referred to those immersed in the public works arena as superheroes, plain and simple. In his words:

“This has inspired me to describe what we do as, ‘Saving the World, one project at a time.’ This might seem grandiose, but really, it’s what we do. By providing clean water and sanitary sewer services we improve public health. When it snows we clear roads allowing drivers to arrive home safely… the list goes on and on. Add it all up and you can see that we Save the World.” – Dennis Pay, P.E., Utah Chapter President 2014

The fall conference had many highlights; the opening keynote speaker was Mark Eaton, former Utah Jazz player, NBA All-star and businessman. His high-energy presentation of “The Four Commitments of a Winning Team” inspired all as he led attendees through the importance of teamwork, both personally and within our organizations. Over 70 sessions were conducted with topics such as Safety and Emergency Management, Transportation, Construction, and Stormwater topics, to name a few. Vendors lined the halls; they showcased innovative products and new technology. The closing keynote speaker was Larry Stevens, P.E., PWLF, APWA National President. The Utah Chapter was honored to have him in attendance and enjoyed hearing about his background; his personal belief in helping others succeed, and the reward that comes from serving.
our communities. The conference concluded with vendor recognition, officer elections and prize drawings.

“This year’s Utah APWA Fall Conference and Stormwater Expo was by far the best in the west! Over the last 15 years Utah APWA has continued to deliver exceptional educational opportunities for the public works industry.” – Angela Richey, Chapter Secretary and Logistics Chair

The Utah Chapter has grown exponentially during the past 10 years. The chapter’s strong membership mirrors commitment to education and advocacy, public outreach, community involvement, and professional development. Chapter members come from an extensive array of professions integrated in public works and related service industries. Tena Campbell was introduced as the current President-Elect for the APWA Utah Chapter and will take over for Dennis Pay as President in January 2015. Tena is the first woman elected to be President of the Utah Chapter. Ed Rufener will succeed her as APWA President-Elect (2017).

The APWA Planning Committee appreciates its members and facilitators for making the conference a huge success. The committee strives to meet the needs and interests of conference participants and is looking forward to planning next year’s conference, which is sure to be even better!

Maria Devereux can be reached at (801) 412-3232 or mdevereux@southsaltlakecity.com.

“Attached are a couple photos from the Utah Fall Conference, recently held in Sandy, Utah. Mark Eaton was the opening session speaker on Tuesday, September 30. He was a 12-year veteran of the Utah Jazz, All-star center, defensive player of the year, and had his jersey retired a couple years after retiring in 1992. He gave a very powerful message during which he stressed the values of determining what you do best, do what you’re asked to do, make people look good, and protect others. These are values of great team builders. He quoted John Wooden, who said, ‘A player who makes a team great is more valuable than a great player.’ He exemplified that statement. His personal story was one of failure at basketball and hatred for the game to one of outstanding success at it. At 7’4”, he was considered a freak and he considered his height to be a great disadvantage until he found out how to use it to his advantage. He didn’t play a game of basketball until he was 21 and after he had gone to trade school to be a mechanic. His story is very moving.”

– contributed by Larry Stevens, P.E., PWLF, APWA President

This photo is “one Mark had taken with me, and he signed and sent to me recently,” says President Larry Stevens.
Recognize Your Leaders
City of Tacoma Division Manager leads solid waste utility through transitions

Subject: Gary Kato, Environmental Services Division Manager, City of Tacoma, Washington
Submitted by: Solid Waste Utility Management Team, Environmental Services Department, City of Tacoma, Washington

Over 20-plus years with the City of Tacoma, Gary Kato has demonstrated leadership and a commitment to environmental sustainability.

As a team player, Gary has incorporated regular communication, connection, and coordination in the daily practice of the utility. He has implemented monthly meetings where supervisors can raise issues and ideas to be vetted and heard by the management team. This has helped foster a culture of trust in the utility. He trusts employees to do their job, and employees trust Gary to be supportive. Gary encourages committee approaches to challenges, such as implementing the transition for 54,000 residential households from weekly to every-other-week garbage collection. This project provided over $1 million in annual savings and significantly reduced environmental impacts. Gary allowed implementation decisions to be made by the committee while providing support and guidance.

Leading by example is another theme in Gary’s career. He demonstrates cooperation and coordination through serving on a regional SWANA board and other local committees. He also demonstrates the importance of continuing education by enthusiastically being part of a current select group of City employees involved in a prestigious leadership development course.

Through teamwork, trust, and leading by example, Gary has led Tacoma’s solid waste utility through many additional changes including the transition to alternative fuel collection vehicles, residential food waste collection program, construction of a new LEED Recovery & Transfer Center, closure of the City landfill, major reorganizations focused on increased efficiencies, and other projects that increase customer service and sustainability.
EDUCATION AT YOUR DESKTOP

For more information about these programs or to register online, visit www.apwa.net/Education.
Program information will be updated as it becomes available. Questions? Call the Professional Development Department at 1-800-848-APWA.

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= Click, Listen, & Learn program (Free to Members)
= Live Conference (Paid Registration)
= Certification Exam
= Web-based training

APWA members may access past Click, Listen, & Learn programs from the Members’ Library at no cost. Programs can be streamed to your computer via the link found in the library.
If you have expertise that you would like to share, please use the online Call for Presentations form to describe your expertise and perspective on the topic. www.apwa.net/callforpresentations/
For many of us, a day full of sunshine is a joy, a lure to get outside and maybe skip work or school. We have a visceral appreciation that our lives depend on the sun, and this local star features prominently in the folklore of many cultures.

Even on a cloudy day, however, and almost anywhere in the world, the sun streams enough energy onto the Earth’s surface to fulfill all of humanity’s current and foreseeable demands. Most of this energy reflects or radiates back into space; some of it warms the planet; plants convert some of it into new growth that may become food or fuel for other species that lack the chlorophyll to work this magic. If we could efficiently capture and store more of the sun’s energy, many people dream, we could give up the burning of coal, oil, natural gas, and wood and stop the environmental damage they entail.

Recent discoveries may move the dream closer to reality.

For example, scientists in France and Germany recently announced that three years of research paid off: they have devised a new way of making silicon-based solar cells that can convert nearly 45% of the solar energy they receive into electricity. Their achievement broke the conversion-efficiency record previously held by the U.S. National Renewable Energy Laboratory in Colorado, and moves the science toward the goal of greater than 50% efficiency. The latest advance relies in part on using a new fabrication procedure that produces a cell able to capture energy across the solar light spectrum, from ultraviolet to infrared. Average efficiency of conventional silicon-based photovoltaic cells currently is about 15%.

Silicon is abundant—sand at most beaches is largely silicon dioxide—but the processing needed to turn it into solar cells (and computer chips) is complicated and expensive. Scientists at Stanford University and the University of Wisconsin, among other institutions, have been working to develop carbon-based photovoltaic cells. The technology employs recently-discovered forms of carbon—nanotubes and buckminsterfullerene (so called because the carbon atoms join to form hollow balls that resemble the geodesic domes championed by Buckminster Fuller)—in multi-layered films. So far, conversion efficiencies are low, only about 1%, but the researchers are optimistic that stacking the thin films and novel cell geometries will increase the numbers.

Converting sunlight to electricity is only part of the dream, of course... making hay while the sun shines, so to speak. Researchers are also working
on efficient and low-cost ways to store the electricity for when it is to be used. Fuel cells, which came to prominence in the NASA space program, are still expensive compared to batteries, but the technology is advancing. Unlike a battery, a fuel cell uses a chemical reaction of a fuel such as methane and oxygen to produce electricity. As costs of fuel cells decline, the prospect of generating all of a home’s or larger building’s electricity onsite has started to appear practical. Solar power enters the picture as a means for producing the fuel—hydrogen from electrolysis of water, for example—that drives the fuel cell.

Researchers at the University of Maryland developed a solid state fuel cell that uses ceramic materials and operates at temperatures of 650° C, substantially lower than the 900° C typical of currently available products, to produce more electricity from smaller devices. They project that the technology can produce electricity for $1 per watt, well below the $8 per watt of today’s commercially available fuel cells and competitive with conventional power generation. The researchers are involved in a startup venture to produce a 25-kilowatt model.

Enhancing energy-supply efficiency will help too. Another startup company is working on a thermoelectric generator that employs tetrahedrite, an ore of copper and other metals, to convert waste heat directly to electricity. The company envisions that initial applications would use waste heat from industrial plants or even a vehicle exhaust.

Photovoltaics, fuel cells, and thermoelectric generation could team up to free transportation management systems, public works maintenance facilities, and offices and homes from today’s electric grid and dramatically enhance sustainability. The dream is starting to look more solid than the clouds drifting by on a sunny day.

Andrew Lemer, Ph.D., is currently a Senior Program Officer with the National Academy of Sciences of the United States of America. In addition to technical papers and occasional articles for the Reporter, he writes on civil infrastructure and human settlement at www.andrewlemmer.com.
Using current technology for communicating

Paul Klajbor, MBA
Administrative Services Manager
City of Milwaukee, Wisconsin

In public works, as with any government organization, one of the most vital aspects is communication. As members of a public works organization, we must communicate to various groups and stakeholders, from elected officials, to other departments, from fellow employees, to citizens. Communication is at the very core of what we do.

As a public works leader, you communicate various messages to a variety of groups. I have observed that departments do some sort of annual report to update elected officials and the community on what the department has done over the past year. A number of departments do education outreach to inform the community about public works and its impact to the community. This can also be a form of branding. On the other end of the spectrum are emergency communications during a snow storm, flood, or various natural or man-made disasters.

Society is becoming ever more connected to one another. Just about everyone now has a cell phone and a majority of people have smart phones. Along with this increased connectivity comes a heightened need for information. We live in a 24/7 world where the news is non-stop. There is a constant demand for the most up-to-date information.

The good news is that there are numerous tools that can be utilized to help communicate with various groups. These tools make communicating easier than ever and allow you to reach more people than ever before. What I hope to do is give you a brief look at a few of the tools available and how they can be used to communicate.

One of the best tools is a dedicated call center or help line for the public to call when they need services, to report problems, or to request information. Having one dedicated number reduces the need to have the public call various departments.
directly. Additionally, there is usually an application of the 80/20 rule where 80% of the calls will be for the same needs. Most organizations also use some sort of work tracking software that can be integrated into the call center allowing the service demands to be tracked. This helps the organization monitor how long it takes to complete service orders, as well as see trends in what services are needed most or where certain problems take place.

Another tool is the online service portal. Many public works organizations are implementing an online request for services. This allows the public to enter in requests anytime. Some of the more advanced applications allow for entry via smart phone and will include GPS info and pictures allowing the public to pinpoint and report the exact problem they are seeing.

Social media is another medium that can be used to communicate with the public. I will preface this by stating that numerous government agencies are using social media such as Facebook and Twitter, but there are various legal implications and protocols to follow. One important point with regards to social media is to make one person or a small group of people responsible for posting or updating on social media. This keeps the message consistent and holds someone or group responsible for the messages going out. Additionally, you may want your organization to formulate rules or guidelines for what will be posted and what will not.

Twitter is a great application for posting short messages that are no longer than 140 characters. While there can be two-way communication via Twitter, I would personally suggest that public works departments use Twitter as a one-way communication to broadcast your message. If you choose to use Twitter as a forum for the public to communicate to the department, you must have staff who are constantly watching Twitter so that the messages are seen by the department and can be addressed. If you don’t do this, you aren’t really communicating with the sender and it will be noticed and become an ineffective tool. I’ve seen some very interesting uses of Twitter in my home state of Wisconsin. I know of one agency that creates a Twitter account for all major projects and then posts updates from the inspectors onsite to the account. This creates a public record of all the updates for all to see. I know other agencies that use Twitter to communicate information during emergencies, such as updating information on road closures due to flooding and power or water outages.

Facebook is another social media tool many public works organizations are using. The advantage of Facebook is that it is not limited to only 140 characters per message. Facebook can also be used to document projects and alert the community to events. I’ve seen Facebook used effectively to discuss upcoming or proposed projects. The department created a page dedicated to the project as it was proposed and allowed the public to comment on the project. They then used the feedback in an iterative process to implement some of the requested changes. In my community, there are various neighborhood organizations that have created their own Facebook page. Having been on several of these pages, a number of the posts relate to services our department delivers. This allows the department to interact with the community on their page, where they are. Even if your department decides not to post on the community page, I would highly recommend looking at these groups’ site pages, at least from time to time. They can be a source of feedback on how you’re doing. If you don’t know what groups exist, I suggest asking your elected officials.

One final tool to discuss is text messaging. Our department uses text messages to alert people to snowfall events, in particular when snowfall is such that certain parking restrictions go into effect. However, the true power of texting was seen when tornadoses ravaged Illinois in November 2013. Wireless Emergency Alerts or WEA were sent to people in the path of the storm. The Federal Communications Commission (FCC) runs the program which allows for certain federal, state and local governments to send text messages to all cell phones (that receive texts) in a certain geographic area. The system targets the alert by selecting cell towers in a specific area. The text is then relayed through the cell tower to any phone within range of the cell tower. While this is used only in emergency situations, the advantage is the ability to send messages to anyone in a certain geographic area, regardless of whether they have signed up or not and no matter what the cell phone number is.

As you can see, there are various tools that can be used to communicate with the public. Each tool has distinct advantages and disadvantages and may work best for some situations and not for others. However, communication with the community is a requirement for public works; and as we all know how the saying goes, we need the right tool for the right job.

Paul Klajbor is the Administrative Services Manager for the Department of Public Works in the City of Milwaukee. Paul was in APWA’s 2011 Emerging Leaders Class. He can be reached at (414) 286-3271 or paul.klajbor@milwaukee.gov.
recently spent a week in Mexico attending a conference and performing a field study for the Jennings Randolph International Fellowship program.

**Background**

The purpose of the study was to focus on project implementation strategies used in Mexico. Specifically, I focused on four techniques—winning political favor, right-of-way acquisition, public outreach, and inter-agency coordination—and examined how they are employed in Mexico. Recognizing these project implementation techniques are people-focused, and therefore inherently cultural, I hoped the study would provide insight on how project managers in Mexico interact with citizens, other agencies, and politicians. I expected to find a contrast to how project managers operate in the U.S. which could offer new perspective on project implementation.

My interest in this topic goes beyond cultural curiosity. Of my many responsibilities as Engineering Manager at the City of Centennial, I am currently the project manager for a multi-agency $15 million roadway widening project. The project impacts adjacent property owners and requires significant coordination with stakeholders. It is high profile and politically sensitive on both the neighborhood and the elected official level. My ultimate goal for the field study was to cross-pollinate ideas from the U.S. and Mexico to identify specific techniques that could be applied cross-culturally to make project implementation in both countries more effective.

**Conference**

I attended the ICLEI – Local Governments for Sustainability Conference. Beyond giving a presentation on how these project implementation techniques are employed in America, I also attended very interesting sessions on mobility, transit, complete streets, environmental justice, and more. The most striking lesson I took from the conference was a new understanding of the scale and variety of Mexico’s challenges. Mexico is a large country and the quality of public services varies depending on the location. Some professionals were working to
provide rural areas with the most basic development and others were tackling Mexico City’s staggering and overwhelming traffic congestion.

The conference was proof there is good work going on all over Mexico and that Mexican professionals are looking at examples from far and wide—for example, pedestrian policy in New York City and a bike sharing program in Boulder, CO—as they develop solutions to their domestic challenges, making APWA’s partnership with ICLEI all the more relevant and valuable.

Field Study
I spent the week in Acapulco visiting with local public works officials. I was able to meet with professionals from the Office of Urban Planning and Public Works in Acapulco as well as professionals from a private planning initiative working in the State of Coahuila.

As I spoke with people and explored the project implementation techniques employed in Mexico, I discovered the techniques are actually very similar to those employed in the U.S. Take a look at the specific techniques I asked after and you’re likely to see many similarities to your current practice:

Winning political favor. How are projects chosen? Projects may come from the federal or state level and are planned and programmed according to short-term and long-term plans. Projects are prioritized according to need by professional staff, then reviewed by elected officials who have the authority to reprioritize projects as they see fit.

Right-of-way acquisition. How is property acquired? The government negotiates with private landowners to acquire property according to local and federal laws. If an agreement can’t be reached, the government has the right to take property—a process called expropiación—in order to complete the project and advance the public good.

Public outreach. How does the government communicate to affected parties? The typical public outreach process occurs two months before a project starts and utilizes TV, radio, social media, and newspapers to communicate information about the upcoming project. Meetings with affected parties take place at an individual and group level, and typically the uncooperative or upset parties end up receiving more time and attention than others.

Inter-agency coordination. How does the government coordinate with other agencies? The project scope for each individual project is evaluated for the impact it will have on neighboring agencies, utilities and stakeholders. For example, the City of Acapulco manages water and wastewater; a neighboring state manages the electrical utilities. Thus, the level of necessary coordination depends on the type of project being constructed.

I completed most of my interviews early in the trip. Reviewing my notes, I was surprised by the amount of overlap in the way our professionals implement projects. I was also a bit disappointed that I hadn’t yet discovered a golden nugget to take back home. I spent the rest of the time thinking about what I had heard, wondering if I had overlooked something significant. I chatted with conference attendees, and explored the city and ate tacos during my free time. My revelation came at the end of the week, after having spent the week observing how locals communicated with each other, both in group and individual settings.

The revelation was subtle, buried in a concept called “cultural context.” Cultures can be broadly described by certain characteristics: how people communicate with each other; how they view relationships; how they treat time and personal space; etc. “High-context” cultures
generally place more importance on relationships and group processes to accomplish goals and use a more intimate communication style. “Low-context” cultures, on the other hand, generally place more importance on process and procedure to accomplish goals and use a to-the-point, fact-based communication style.

Imagine all world cultures falling on a spectrum between high context and low context and you would find Mexico on the higher end of the spectrum and the U.S. on the lower end. The consequence these cultural characteristics have on project implementation is that, though our Mexican counterparts may be using the same techniques as we do in the U.S., they are more likely to be using them to advance relationships and group processes to help them achieve their goal. This natural inclusiveness makes them less likely to overlook affected parties that need to be reached, and the tone and purpose of their communication is naturally geared to build relationships. This philosophy offers quite a contrast to the U.S. where outreach is often considered a necessary evil or a box to be checked on the way to construction.

Lessons Learned
After my study, a few obvious lessons rose to the top:

- Regardless of the location or culture, public works officials face the same challenge in that they must all work with people to implement projects.
- Project managers in the U.S. would be wise to approach public outreach from a more relational standpoint. The natural consequences of a relational emphasis on public outreach will yield a more effective consent-building process.
- The most practical way to establish a relationship with stakeholders is simple: listen. As one gentleman from Coahuila said, “You must listen, even if it is nonsense.”

All in all, I returned home with insight into the way Mexican professionals work with each other and a new perspective on project implementation. For that, I would like to offer my thanks and appreciation to APWA, ICLEI – Mexico, and the Jennings Randolph International Fellowship program for the wonderful opportunity to cross cultures and learn.

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Why should you care about the Core Responsibilities of a Public Works Leader?

Confucius said, “Success depends upon previous preparation, and without such preparation there is sure to be failure.” So if preparation is critical to success, where do we begin? Well, let’s start by examining the core responsibilities.

- Asset Management
- Community Involvement/Transparency
- Emergency Response
- Professionalism
- Professional Development
- Ethics
- Succession Planning
- Sustainability

I was speaking with someone at the Congress in Toronto about a highway interchange that we are building. I talked about the beautiful public space that we are planning which will include public art displays, trails and gardens for people to enjoy. The response I received is that “it did not sound like an interchange.” The reality is that our community did not want an interchange. They wanted a highway barrier removed. Without significant community involvement and input we might have designed an interchange that would have solved a traffic problem, but completely missed the community needs and desires. So we have designed an interchange that will have more park and trail space over a major highway than roads and ramps. Community Involvement – a Core Competency.

In this issue you will find articles that talk about all eight of the Core Competencies. These eight areas have been defined by the Leadership and Management Committee as areas that are the underpinning of any successful public works leader. So here is an introduction to each.

Asset Management: The primary function of any public works agency is to manage our community’s critical infrastructure. The communities we serve depend on our roads and bridges, water and sewer, stormwater, solid waste and additional services. They are the most critical elements of our communities—even more so than the guns and hoses; we just don’t do as good a job of explaining that as do our Police and Fire friends. Knowing the condition and investment needs over time to ensure that critical infrastructure is always...
ready to perform is asset management. In this day of GPS, GIS and mobile data devices, asset management is moving into an exciting real-time environment.

**Community Involvement/Transparency:** The public we serve clearly wants and desires more and more services. This can be difficult with the funding limitations that we often have. It has never been more important that we involve our citizens in what we do than it is today. And it is not just around a particular project, as discussed above, but in the real world of the assets we maintain and the public has come to take for granted. We absolutely must get better at educating the public about the importance of this infrastructure and the resources needed to do it. I have often said that our infrastructure has a long life, but sudden failure. It is important to educate people about the cost of that failure. A great, recent example is the waterline failure that caused millions of dollars of damage to the UCLA campus. You don’t want that in your community.

**Emergency Response:** Perhaps more than any other area, public works has been great at emergency response, but it’s gone virtually unnoticed. Police and Fire often get the glory but without our roads, bridges and water supply or plowed roads, they would be ineffective. It is important that we are ready and capable when emergencies strike.

**Professionalism:** The days of strong-backed workers with construction equipment being sufficient to provide for a community are over. Not only must we know and employ the latest management techniques to maximize the value of our infrastructure, we must also integrate into many areas. Water quality, environmental and flood plain regulations, traffic safety—the list is very long. Anywhere in our organizations we no longer employ public works employees, but public works professionals.

**Professional Development:** If we are committed to professionalism then we must be committed to professional development. APWA has established three major points of focus through its strategic planning efforts: Education, Support of Chapters, and Advocacy. Chapters have made available Public Works Institutes that provide great professional development training. The APWA Donald C. Stone Center now provides credentialing for supervisors, managers and executives bringing professional credentials to all layers of our public works organizations. In addition, we have agency accreditation and certification of construction inspectors, floodplain managers and fleet managers, through the Emerging Leaders Academy and Young Professionals which provide a lot of opportunities for professional development.

**Ethics:** Perhaps no other responsibility that we have is more important than ethics. We serve the public, but without the public trust we can’t be effective. It is critical that we maintain the highest ethical standards or else when we ask for public support, funding or corporation, we will not have it. It only takes one person to destroy the credibility of our entire organization. So you must work to create a culture of ethics in your organization.

**Succession Planning:** We have not always been good at developing the next generation of leaders. The reality is that our jobs have become much more technical and can sometimes require unique skills. It is critical that we work to develop all our people to be ready to take our positions and rise to all the challenges of the future. This will not only provide continuity going forward, but will reward and empower the best of our employees. So get started planning the future of your organization. It will be a gratifying experience and an exciting project for the folks you are developing.

**Sustainability:** The funny thing about sustainability is that it has long been a part of our culture but we haven’t recognized or celebrated it. In the future we not only need to recognize it, but we must expand our efforts. The engineering profession has always looked at things like material cost savings or efficiency in our designs. This was an early form of what is now thought of as sustainability. We now not only think about cost of construction, but life cycle along with things like social impact and more global impacts. Adaptability or resilience has also become an issue, and with things like our floodplain delineations we have history and templates for these areas also.

So that is your CliffsNotes version of Core Responsibilities. Do you think you can get by with just this introduction? This quote by Merlin Olsen, NFL hall of fame defensive lineman of the Los Angeles Rams, who was always prepared, says a lot: “One of life’s most painful moments comes when we must admit that we didn’t do our homework, that we are not prepared.” I think Merlin and Confucius are saying the same thing, so this edition provides you lots of opportunity to do your homework and be prepared. Your community and profession are counting on you.

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Using an asset management system to get funding for infrastructure improvements

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City of Oakland, California
Member, APWA Leadership and Management Committee

Oakland, Calif., is a city of over 400,000 people located on San Francisco Bay. Oakland’s Public Works Department is a full-service organization responsible for managing eleven different groups of assets shown in the table on page 32. Historically, Oakland’s infrastructure has been underfunded, as is the case in most municipalities. This problem was further exacerbated by the recent recession which caused the layoff of nearly 15% of Oakland’s Public Works employees.

In general, public works departments find it difficult to compete for public funds, especially during recessions. Elected officials tend to give higher priority to public safety (police and fire) and to social programs which protect the neediest during difficult times. Funding for streets can always be deferred (and deferred, and deferred) for one more year while governments address hunger, poverty and homelessness.

Emotional appeals for funding for social programs which take place during budget hearings can only be balanced by a continuous discussion of the benefits of infrastructure investment—public safety improvements, support of business growth and creation of jobs.

Asset management principles focus on inventory (knowing what you have), condition assessment (knowing what you need) and levels of service (deciding what condition is acceptable and how much money to invest). Oakland Public Works decided to use these principles to help get funding for infrastructure improvements. An inventory, condition assessment and funding needs of each asset were conducted and assembled in the 2012 Infrastructure Report Card for the City of Oakland which was published, posted on the City’s website and presented to the City Council (see p. 32).

The Report Card explained:

Local Streets and Roads – since grant funds require that the City have a Pavement Management System, an inventory of streets was readily available. The condition of half of Oakland’s streets is assessed annually. The condition and cost of paving the streets is known—Oakland has an 85-year paving cycle. Information from the Report Card was used extensively in an attempt to pass a regional sales tax. Unfortunately, 66.5% of voters voted “yes”—750 votes short of the required 2/3 majority. A proposed sales tax will be back on the ballot this November.

Sidewalks, Curb Ramps, Stairs and Paths – a consultant study created an inventory and condition assessment of Oakland’s 1,126 miles of sidewalks. The assessment also showed that most of the damaged sidewalks were the responsibility of the fronting property owner—only broken sidewalks around City-
owned trees and curb returns were the City’s responsibility. The City began a program of repairing City sidewalks one street at a time while simultaneously requiring property owners to repair their own sidewalks. Property owners were given the option of hiring their own contractor or contracting directly with the City’s sidewalk repair contractor, thus benefiting from economies of scale. The program has been highly successful in repairing broken sidewalks.

**Bridges** – the City has inventoried and assessed the condition of the 38 bridges maintained by the City. Thanks to extensive use of state and federal grant funds, bridges are being rehabilitated to meet current standards.

**Traffic Signals, Signs and Markings** – the City has an inventory and GIS map of its 677 signalized intersections. In this case, the City’s emphasis has been on implementing “intelligent” traffic signal systems which result in upgrading signals one street at a time. The City needs to seek funding to conduct a complete inventory and condition assessment of its traffic signals, signs and markings.

**Street Lighting** – the City had a partial inventory of its 37,000 streetlights, but had not done a formal condition assessment. Development of new technology (LED lights) and availability of energy rebates allowed the City to replace its street lighting system at no cost to the City—energy savings are paying for replacement of the entire system. At the same time, the contractor is developing a complete GIS-based inventory which will allow continuing condition assessment in the future.

**Stormwater** – the City has an inventory and a Stormwater Management Plan to upgrade its stormwater/flood control system. Unfortunately, the entire state is facing a severe drought which makes flood control seem like a distant problem. Recent attempts to obtain stormwater control funding have not been successful. The City needs to work with its neighbors on a regional stormwater fee when the rains return.

**Wastewater Collection** – settlement of an EPA lawsuit required the City to create a Geographic Information System and assess the condition of the City’s sewers within ten years. This work is underway. Deficient sewers are rehabilitated using sewer service fees which were increased to pay for the work.

**Public Buildings** – the City has an inventory of all 307 City-owned buildings. The condition of key buildings was assessed by a consultant. The City also developed a list of building occupants (City departments) and the area they occupy. A cost per square foot for maintaining the “leased” space was developed. City departments include this “lease” cost in their departmental budgets. The “lease” cost is also used to request additional staffing when a new building is being considered.

**Parks and Landscaping** – the City has an inventory and GIS map of all City-owned parks. The Friends of the Parks conduct an annual condition assessment of the City’s parks which is presented to the City Council. Dramatic cutbacks in City park staffing have been offset by large increases in volunteers who “adopt” City parks and work with City gardeners to keep the parks at minimum levels while efforts continue to find additional funding.

**Fleet and Equipment** – the City created a list of City-owned vehicles and equipment and then determined the number of “wrench hours” needed to maintain each vehicle and piece of equipment. The cost of maintaining each Department’s vehicles and equipment was then included in each Department’s budget. One side benefit was that once Departments saw a true picture of what their fleet was costing them, Departments began to eliminate unneeded vehicles to save money. Over 340 vehicles were turned in and sold at auction.

Although not every effort to improve infrastructure funding was successful, the Report Card proved to be highly effective in keeping infrastructure in the minds of elected officials. To keep the importance of infrastructure prominent, a detailed report on at least one of the eleven asset groups was presented to the Council’s Public Works Committee monthly. Presentations were also made to business, neighborhood and community groups to gather allies for the budget process. It is important to remember that asset management is a long-term continuing process, not a one-time effort.

During the budget cycles following publication of the Report Card, Council approved hiring of an additional paving crew, hiring of additional sewer maintenance personnel and equipment, restoration of several park maintenance positions, lease/purchase of 150 vehicles, and hiring of additional building maintenance personnel. The 2012 Report Card is being updated in preparation for the next budget cycle.

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# 2012 Infrastructure Report Card for the City of Oakland

The 2012 Report Card for Oakland’s Infrastructure follows the approach used by the American Society of Civil Engineers in assigning letter grades for each infrastructure category. The six components of Oakland infrastructure evaluated were capacity, condition, funding, future needs, operations and maintenance, and public safety. The formulas used for calculating grades are found at the end of this report.

<table>
<thead>
<tr>
<th>Infrastructure Component</th>
<th>Description</th>
<th>Facility Grade</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Streets and Roads</td>
<td>806 miles of paved streets</td>
<td>D</td>
<td>Street paving is totally funded by state and federal funds. Lack of local funds has created 85 year paving cycle. Street condition ranks 98th out of 109 Bay Area cities. Measure B1, sales tax for transportation, lost by 750 votes.</td>
</tr>
<tr>
<td>Sidewalks, Curb Ramps, Stairs, Paths</td>
<td>1,126 miles of sidewalk; 17,978 curb ramp locations; 232 sets of stairs and paths</td>
<td>D</td>
<td>City is spending $23M/year for improvements, but backlog is $109M. City needs to have property owners fix own sidewalks.</td>
</tr>
<tr>
<td>Bridges</td>
<td>38 bridges</td>
<td>D</td>
<td>Grade will rise to B when funded work on 21 bridges is completed.</td>
</tr>
<tr>
<td>Traffic Signals, Signs and Markings</td>
<td>677 traffic signal intersections; 200,000 signs</td>
<td>C</td>
<td>75% of signals need to be replaced. Need to retime signals and install “intelligent” traffic signal system.</td>
</tr>
<tr>
<td>Street Lighting</td>
<td>37,000 streetlights</td>
<td>B-</td>
<td>Lights meet current standards. Converting to energy efficient lights would save the cost of electricity.</td>
</tr>
<tr>
<td>Storm Water</td>
<td>400 miles of storm drains; 80+ miles of open creek</td>
<td>D</td>
<td>60-70 year old system with no dedicated fund source for maintenance, repair, or replacement.</td>
</tr>
<tr>
<td>Wastewater Collection</td>
<td>919 miles of sewer pipes; 7 pump stations,</td>
<td>B</td>
<td>25% of system rehabilitated in last 25 years. Rate increases have provided funding for increased cleaning and inspection. Pump station upgrades under way. Need to reduce storm water infiltration and inflow.</td>
</tr>
<tr>
<td>Public Buildings</td>
<td>300+ public buildings</td>
<td>D</td>
<td>Inadequate funding for capital improvements and preventive maintenance. Roofs leaking; boilers beginning to fail.</td>
</tr>
<tr>
<td>Parks and Landscaping</td>
<td>134 parks and public spaces</td>
<td>D+</td>
<td>25 gardeners laid off due to budget cuts. No routine maintenance of medians. No staff to maintain newly constructed parks.</td>
</tr>
<tr>
<td>Trees</td>
<td>42,642 street trees, plus trees in parks &amp; medians</td>
<td>D+</td>
<td>Extensive tree canopy, but five years of staffing cuts have eliminated tree planting and tree maintenance. Remaining staff responds to emergencies only.</td>
</tr>
<tr>
<td>Fleet and Equipment</td>
<td>1,489 vehicles and pieces of equipment</td>
<td>D</td>
<td>Fleet is 10.7 years old, twice recommended age. 341 old vehicles have been sold. Request to lease 150 vehicles has been submitted.</td>
</tr>
</tbody>
</table>
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Community Involvement/Transparency

Rick Fosse
Public Works Director
City of Iowa City, Iowa
Chair, Emergency Management Committee, APWA Iowa Chapter

As public works officials, we are entrusted with millions of dollars of the public’s money to build and maintain infrastructure systems. With that trust comes an expectation that we will plan and implement projects that are in the best long-term interest of our citizens. If we want to maintain this trust it is essential to involve the community in our decisions and be transparent in our actions. This begins with the development of the Capital Program and continues through the design and construction of each project. Most communities have become adept at seeking public input when developing and adopting a Capital Program. However, it can be more difficult to engage the public during the design of specific projects. Meetings with the public about projects can quickly become unwieldy complaint sessions. Some agencies have shifted to an “open house” format to reduce this risk. However, open houses are really better suited to presenting a design rather than seeking input before design begins and can miss the mark for truly meaningful dialog.

In our community we have developed a recipe that works well and is a prerequisite for nearly every project—the Pre-design Meeting. It can be the most important two hours we spend on a project. If done properly it will serve to better define the design parameters and save countless hours of problems during the construction phase. The meetings are built around the following five objectives:

1. Get to Know One Another
   – This is an opportunity for the neighborhood to meet the design team and the design team to meet the neighborhood. It is important for everyone to have a name and face to go with a phone number if they have questions. If you know who will be inspecting the project, bring them along. It is a good idea to let the folks meet the person who will be dealing with their day-to-day problems during construction. It is also good for the inspector to hear first-hand the concerns the neighborhood may
have; he/she will be better prepared to address them during construction. Be sure to take time before and after the meeting to visit with folks one on one; this is the only way you will get to know them. Bring along a plan view of the project with site features such as homes and trees. Bring colored markers to illustrate points on the drawing during the meeting. Encourage people to write their name on their home before or after the meeting. This will ensure that they looked at the plan in relation to their home and will provide you information that may not be readily available online.

2. Share What You Know About the Project – Perhaps the most important thing to convey to the
neighborhood is why the City is doing the project. Without understanding the worthiness of a project, people are less likely to tolerate hardships during construction. Since this is a pre-design meeting you will only be in a position to share the objectives of the project and perhaps a handful of details, but not much else. You will not be able to answer some of the questions about the project. That is a scary thing for engineers who are trained to bring solutions, but that’s okay. It is perfectly fine to say, “We don’t know the answer to that yet, but it is something we will examine during design.” Then go on to probe to learn more about what aspects of that issue are important to them so that it can be considered during design. Which leads to our next objective:

3. Get Input from the Public – The opportunity to be heard before design begins is paramount to effective engagement. It will also build trust and goodwill with the project team. Listen to concerns and ideas about the project. Perhaps you will learn about things that are unrelated to the original scope of the project such as a drainage problem or sanitary sewer surcharging that had not been reported to the City. In most cases it is most cost effective to fix these problems as part of the project rather than returning later with another project. It is important not to view this as scope creep; it is good design. Some very good ideas have come from neighborhood meetings. Sometimes the bulk of the questions will focus on the impact the project will have on their lives during construction. If the meeting begins to get bogged down here, move to the next section and discuss the issue head on. Then return to design-related issues later if necessary.

4. Provide a Preview of What to Expect During Construction – There is no better way to convey this information than with pictures. Develop a PowerPoint™ to show folks what their neighborhood will look like during the project. Try to select pictures from similar projects in similar neighborhoods, but always choose pictures that will show at least as big of a mess—if not bigger—than you expect. Never underestimate the impact on their lives. Never underestimate the duration of the project. You will feel pressure to underestimate the impact the project will have on their lives. Don’t do it. If you do, it will haunt you during construction. However, you can reassure them that you have been through this on other projects and will work to anticipate their needs. For instance, let them know that you will keep them informed during construction so that they have time to stock up on stuff from the store before the pavement is removed and they have to park two blocks way. Let them know that you will keep police, fire and ambulance informed so that they can plan how they will provide emergency services should the need arise. Let them know whom they should contact if they have problems during construction. That’s where it is nice to have the inspector there. Since we know that things go wrong on every project, share with them some pictures of construction bloopers in a lighthearted way which we usually call Murphy’s Laws of Construction. Oddly, we find that the fact that we are willing to share our bloopers is part of the trust-building process.

5. Share What’s Next – They will all want to know what’s next and how the project will unfold. Explain the schedule and any unknowns that may affect that schedule such as budget decisions that are not final or pending permits. They will also want to know how you will keep them informed. Should they expect e-mails and/or is there a website for the project? Tell them that they can expect to see surveyors in the neighborhood while you are working on the plans and that underground utilities will probably be marked a few times (please don’t remove the flags, our surveyors will do that). If the project involves easements or property acquisition, you will be contacting them individually about it.

That’s it; five easy steps in less than two hours. Pick a location that is in the neighborhood such as a school or church and be sensitive to the date you choose. Don’t conflict with sports events or traditional travel times such as spring break.

This is the best way to get your projects off to a good start. Always remember that informed and engaged residents are more supportive of projects and tolerant of the hardships of construction.

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APWA invites you to join your peers in the heart of the Snowbelt for the 2015 Snow Conference in Grand Rapids, MI April 12-15, 2015.

We’re proud to bring the Snow Conference to Grand Rapids where they really know their snow! They’re coming off their second snowiest winter on record, receiving more than 110” of snow. The city averages more than 70” of snow per year, with many of the surrounding areas receiving more than 100” per year on average. Rest assured, the 2015 Snow Conference will offer you an opportunity to experience the most concentrated collection of snow and ice solutions you’ll find under one roof in one of the most snow-crazy locations in North America!
Preparing for an emergency means fostering relationships

Jeanne M. Jensen, P.E.
Management Assistant
Water Utilities Division
City of Tempe, Arizona

It is often said that “knowing is half the battle,” and rarely is that more true than when it comes to handling an emergency operation at the municipal or higher level. As the economy has retracted and expanded, each department carries the mantra to do-more-with-less and it is rare that we have the time to go much beyond the daily tasks and projects that keep us busy to connect with our fellow departments. However, when it comes time to respond to those extraordinary events that cross departmental lines, knowing our resources, our colleagues and our capacities could save precious time, improve response, and reduce waste. The challenge for us is to encourage and foster the relationships and understandings between asynchronous departments so that when we are called to serve we can do so in a uniform and intentional capacity.

A lack of understanding when it comes to functional capability can lead to the misallocated resources and inefficiencies of response that are easily avoidable. When it comes to emergency response, the best planners in the world cannot work without a full accounting of the resources at hand. In order to help provide a better cross-agency knowledge and understanding, this article serves as a high-level discussion of plug-in opportunities to better integrate all first responder capabilities to serve the needs of the public.

The largest first response departments in most municipal operations are police, fire, and public works, but it is uncommon to have much interaction between these operations outside of large-scale response events. Creating opportunities to cross-train and develop personal connections can help build those communication networks that will come in handy when you need to activate your emergency operations center and get to work. Much of this comes from shifting the paradigm of first response being limited to police and fire with public works simply bringing the trash bins and street sweepers to the aftermath.

Though there are many ways to bring the parties to the table the reality is that without building and communicating value to all involved parties, there is unlikely to be much depth to the relationships. Some ways to help build mutual understanding is through cross training. Many public works employees require specialized training through programs such as OSHA HAZWOPER, HAZMAT, confined space entry, etc. and these opportunities to share training helps build personal and professional relationships in a genuine environment that encourages the exchange of information and ideas. When possible, the lesser-known department, typically public works, should be leading these events through becoming certified trainers, hosting refresher courses, and sharing

“Acknowledging and respecting our differences, capacities, and dedication gives the multifarious departments a solid foundation for working together.”
workplace examples of applying the principles conveyed.

Additionally, in-the-field training and exercises can utilize common facilities such as wastewater or water treatment facilities, solid waste collection sites, recycling centers, major industrial facilities, etc. and should have mixed teams of police, fire, and public works employees. The natural tendency to flock to what is familiar should be prevented and teams should be pre-selected or drawn to help encourage intermixing of employee groups. Training at existing city facilities can also help in training other departments about what the public works department does, or can do, to support or lead in emergency events. These sites are ideal for conducting confined space entry training, recovery and reconnaissance, etc. because they are already on the home turf of one of the departments, providing insight and deeper understanding of the capacities of the facilities and the staff therein.

The obvious place to bring these groups together is during the tabletop exercises many communities frame to practice emergency response strategies and scenarios in their emergency operations centers. One of the challenges tends to be that public works finds themselves seated at the logistics table and cannot readily weigh in for the other areas such as planning or operations where their expertise may be better suited. A properly developed tabletop exercise will challenge interdepartmental communication and should provide momentum into post-exercise hotwash discussions that invigorate a mutual desire to better understand the other players in the tabletop.

Planning a tabletop exercise can be extremely daunting and the first reaction of many communities is to simply copy the scenarios used by other groups; but a scenario with unrealistic injects will quickly cause participants to disconnect, lose interest, and check out. In order to really drive a tabletop that highlights potential areas to improve, communication should focus on a realistic, encompassing event that has a sufficient timeline to exceed the standard response mechanisms of the community. A major water main break, a dangerous four-alarm fire, or a terrorist event may seem a good baseline event but these may not engage all the departments in a team-based approach. Larger-scale and longer duration events are more likely to engage each area’s specialty and force some creative teamwork so scenarios involving regionalized flooding, long-term power outages with associated social order challenges, or loss of major infrastructure due to criminal activity are ideal.

After framing the larger scenario, tailored injects can be used to route discussions or engage groups dynamically through the event. Instead of preplanning the entire scenario, use this opportunity to turn the event into a “choose your own adventure”-style discussion. If the teams lead with a fire department response, throw out an inject that engages police; if police have stretched many of their resources to one area of the scenario, consider an inject that moves crowd control to public works and requires communication during the situation. Though the goal of a tabletop exercise should not be to needlessly fluster participants, a little excitement to keep heart rates up makes the event more memorable and more likely to carry real changes forward in how your departments come together to solve community problems.

It can be tempting for departments to silo their work areas and only begrudgingly share resources and intelligence even within a single agency or city and this tendency should be redirected into a communal energy that acknowledges and values each area’s strengths and abilities and makes the whole greater than the sum of its parts. Freeing up time and budget as available to bring departments together in both the structured, formalized setting of a tabletop exercise and the more informal training scenarios will help foster those one-on-one relationships that could really change the tide of a situation in practice.

Taking the time to personally acknowledge the value of each individual and department will bring the agency together. Conducting regular events that bring disparate resources together and careful management of interagency events will grow and foster relationships that extend beyond a late night shared in the emergency operations center. This sense of camaraderie and joint-focus can save resources and efforts which results in a better outcome for the communities we have been called to serve. Acknowledging and respecting our differences, capacities, and dedication gives the multifarious departments a solid foundation for working together. Opportunities to leverage expertise both vertically and laterally within the organization create a respect and understanding that day-to-day operations cannot achieve in our modern lean approach.

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December 2014 APWA Reporter
We all hear that professionalism is critical in the workplace. What does this mean? How do we know whether we are acting professional or not? There are many definitions to professionalism so it can become unclear just what it takes to be considered a professional. According to *Merriam-Webster* (2014) there are two different definitions:

1. The conduct, aims, or qualities that characterize or mark a profession or a professional person.
2. The following of a profession for gain or livelihood.

These definitions do not delve deeply enough into the concept to provide guidance for an individual to be able to evaluate or gauge personal performance.

According to Sherrie Scott in her article entitled “The Importance of Professionalism in Business,” there are five important aspects of professionalism. These include establishing boundaries, encouraging improvement, maintaining accountability, promoting respect, and minimizing conflict.

Boundaries can be personal or company established but should provide guidance for appropriate behavior to avoid conflicts and misunderstandings. Established boundaries help individuals avoid crossing the line when interacting with others. Awareness of the surroundings and those that are present will help determine the appropriateness of comments in given circumstances.

Encouraging improvement is both intellectual and physical in nature. Attire and behavior contribute to the improvement of professionalism. Dressing for success and striving to perform better will contribute to a more successful work environment as well as boosting the individual professionalism resulting in better performance in the organization and individual.
Accountability is a key component in professionalism. Accountability builds trust in the customer that the information provided is accurate and complete. Whether communication is verbal or written, professionalism counts; and by being accountable for that communication the best service is offered to the customer.

Professionalism in the performance of assigned duties creates the basis for respect accorded to those with authority and those served. A professional attitude helps guide in times of disagreements and conflict. Professional behavior cultivates respect even in times when others are behaving poorly and provides the ability to deal with difficult situations without becoming disrespectful.

Finally, minimizing conflict is a direct result of a professional environment. The more individuals practice being professional in dealing with others, the less likely conflicts are apt to arise. When parties in a discussion are behaving in a professional manner, differences in opinions and perspectives can be shared without creating conflicting situations. When respect is genuine in the environment, conflicts can be avoided (Scott, 2014).

Professionalism exists at different levels within an organization. At the basic level, it means understanding how to perform your assigned tasks and performing them in an efficient and effective manner. Always look for improvement in performance as an individual and continuously strive to become better at what you do. The next level of professionalism is when your communication skills become more effective. Evaluating your goals and working to create a team atmosphere helps generate respect for you individually and for your work. Finally, when you demonstrate a sense of responsibility, the higher level of professionalism is reached. Responsibility for one’s actions promotes the trust needed by others to allow you to take a leadership role and instills confidence in your performance.

It is important to understand that professionalism can be found at any level of job regardless of status or education. Having characteristics of timeliness, good attitude, appropriate dress, helping attitude, positive demeanor, taking responsibility for your mistakes, trustworthiness, and not participating in gossip will ensure that your professionalism will be appropriate and recognized regardless of your position. Never confuse the two terms “profession” and “professional.” We can all identify people in professions such as lawyers, engineers, or doctors that we do not feel are very professional just as we can identify people in professions such as waiters, custodians, and mechanics that demonstrate high levels of professionalism.

Now that we have looked at what professionalism encompasses, let me share what Monster Career Coach lists as the top ten things you can do to be professional at work.

According to the Monster.com (2014),

2. Reliability – be on time showing up for work and submitting your work.
3. Honesty – be truthful and upfront.
4. Integrity – practice consistent principles.
5. Respect for others – treat all people as if they matter.
7. Be positive – be upbeat and a problem-solver.
8. Support others – listen to others, show others how things are done properly, share the spotlight.
9. Be work-focused – stay on task and avoid bringing personal matters to work.
10. Listen carefully – many times people just want to be heard, so listen.

Just remember that being professional has nothing to do with your profession. Look at the ten ways to improve and continuously strive to improve on each, one day at a time. Over time if you become proficient at these steps you will become known in your workplace as a professional no matter what your job description is.

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References:


Professional Development: An important tool in leadership and management

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No matter what field, professional development is critical to equipping employees to do their jobs efficiently and effectively. While many technical designations require a certain amount of professional development hours in order to maintain the certification, it is also a useful learning tool for everyone, particularly those in leadership and management positions. During the “Great Recession” of 2008, professional development was one of the first areas to be cut from local government budgets. Government agencies could not justify paying for staff training opportunities when they had no money to pay for salaries and materials; however, staff was expected to continue to be innovative and provide high levels of service. Now that the economy has made improvements, agencies are beginning to allow more training opportunities again, even if on a limited basis.

APWA provides a variety of cost-effective ways to help public works professionals improve their soft skills and get proper technical training for a variety of levels from field staff to executive management.

In the spirit of lifelong learning, we must aggressively seek opportunities to pursue higher education and to train ourselves and our subordinates in leadership and management.

“...In the spirit of lifelong learning, we must aggressively seek opportunities to pursue higher education and to train ourselves and our subordinates in leadership and management.”

APWA’s Donald C. Stone Center for Leadership Excellence in Public Works provides professional development opportunities for the next generation of public works leadership, offering a system of educational opportunities that progressively lead to various certificates, certifications, CEUs, undergraduate and graduate credits, and degrees. The DCS Center offers four programs in the Leadership and Management Career Path: Public Works Supervisor (PWS), Public Works Manager (PWM), Public Works Executive (PWE) and Public Works Leadership Fellow (PWLF). APWA’s 18 Public Works Institutes are a great way to meet the requirements of the PWS and PWM certifications. There are also two other Professional Career Paths in the development phase. The Public Works Professional Career Path will also include the Technical Scholar and Master Scholar Levels. The focus will be professional development within a technical specialty and its application in public works. The Technical Specialty Career Path will include the Operator and Technician Specialist (OTS) Program: OTS I, OTS II and OTS III. The OTS III level includes the following APWA certifications: Certified Public Infrastructure Inspector (CPII), Certified Public Fleet Professional (CPFP), and Certified Stormwater Manager (CSM). The Master Scholar will be the upper level within the Public Works Professional Career Path. Master Scholars will mentor participants in the Technical Specialty career paths.
Professional development is especially critical for new or potential leaders in public works. APWA has made this a priority with our flagship national program, Emerging Leaders Academy. This program provides intensive leadership and management training within the context of public works. My own experiences in the Emerging Leaders Academy have been the most beneficial of my career thus far. The insights and knowledge that I received through the various activities and discussions have helped me to form my leadership and management style. It has helped me to grow within my agency as well as within APWA and has been integral in my personal and professional development.

Of course, the APWA Congress and other smaller conferences (like the North American Snow Conference) provide a one-stop destination for a multi-day training experience, but APWA also offers many online opportunities for growth and development. There is an extensive library and calendar of webinars and Click, Listen & Learn programs available to members. This is an affordable way to gain invaluable training, especially for groups of employees.

So whether you need to meet the specific certification requirements or brush up on your soft skills, APWA has training resources to meet your needs. For more information about any of these professional development opportunities or a comprehensive list of programming, please visit www.apwa.net/learn.

Hesha Gamble can be reached at (864) 467-4612 or hgamble@greenvillecounty.org.
A former U.S. President (who shall remain nameless) was once asked by a reporter if it was all right for his cabinet members to accept gifts from lobbyists. He answered by stating that it was not all right for his cabinet members to break the law. The ethical issue raised by the reporter’s question was avoided when the President gave a response in legal terms. Some would argue that any gift, no matter the size or nature, is inappropriate when exchanged between a government official and a citizen whose occupation is centered on influencing government officials to act in favor of their client’s interest. Most laws that attempt to address ethical issues surrounding gift giving set limits on the gift and call for its disclosure, thereby indirectly implying that the size of the gratuity is proportional to an individual’s susceptibility to influence. Thus the complex relationship between government officials and their constituents who seek favor is narrowed down to a dollar limit on gifts, which totally misses the mark.

When people behave badly, there is a tendency to try and prevent a recurrence of that bad behavior by passing a law to make it clear that it is unacceptable and will result in definite consequences to the transgressor. The expectation is that the majority of people will avoid the bad behavior because they will now be aware that it has negative consequences. In reality, the bad behavior was more than likely exhibited by a minority of people, and the majority avoided it before it was made “illegal” because of their basic beliefs and values. The minority that behaved badly may have done so for a variety of reasons, but whatever those reasons were, they overrode some basic value that society deems essential to social order and human coexistence. As a result, passing a law to try and govern human behavior seldom deters a minority of folks who will continue to behave badly, but in a more circumspect way. Or, as Plato put it, “Good people do not need laws to tell them to act responsibly, while bad people will find a way around the laws.”

We expect the behavior of those serving the public interest (and this includes everyone connected with public works) to be in accordance with the law, but also guided by certain values. These values include honesty, fairness, compassion, competency, professionalism, loyalty and trustworthiness. These values are often expressed in mission statements, codes of professional conduct and ethics codes. Unlike laws that attempt to guide human behavior through negative reinforcement (don’t do this, or else this will happen), ethics codes attempt to provide us with positive guidance for how we should conduct ourselves in our chosen profession. While this may be helpful to some who are not sure which values should apply to guide their behavior, for most people the generally accepted values found in most ethics codes are a given. It’s what is sometimes referred to as having a “moral compass.” By the time you are an adult, you either have it or you don’t. Without it, no code of ethics is going to help you do the right thing. With it, an ethics code simply reinforces the values you already strive to live by.

Ethical behavior is situational; laws and codes are categorical. Those who have been exposed to ethics seminars at work (usually taught by attorneys) find that they tend to emphasize how to avoid doing the wrong thing rather than how to select the right course of action from several acceptable alternatives. Prioritizing values is a necessary part of deciding what the “right thing” to do is in any given situation. As public works leaders we need to recognize that our employees face ethical dilemmas on a constant basis, which for the most part they resolve satisfactorily. What is needed is both a validation of this ongoing process as well as a dialogue about the nature of these dilemmas and the tools that can help make their resolution easier. Even good people...
need occasional guidance to keep from making poor choices. Providing this guidance, both by example and through frank and honest discussion, is a key leadership role.

Ethical dilemmas generally fall into two categories—personal cost dilemmas and conflicting values dilemmas. Personal cost dilemmas are usually the result of an individual feeling that doing the right thing may have negative personal consequences. These consequences may include loss of friendship, reputation, or even one’s job. Resolving these dilemmas can often involve putting honesty and professionalism ahead of loyalty and compassion. It can also involve going against the prevailing “organizational culture” and resisting peer pressure. Usually the “right thing” to do is obvious to anyone with a moral compass, but the higher the cost, the greater the difficulty of doing it.

In the resolution of personal cost dilemmas it is helpful if an atmosphere of trust exists within the organization. As leaders we can develop this trust by setting an example of doing the right thing when we are under pressure. More importantly, we can encourage open dialog with our employees by having an open door, an open mind and an open heart. Personal cost dilemmas can be dealt with more effectively if employees feel that they can bring them up without being judged or lectured to. Making the right choice is easier if employees feel both validated in terms of the difficulty in arriving at the right choice and supported in the execution of it.

Conflicting values dilemmas involve choosing a course of action where there is more than one legally acceptable alternative that requires us to prioritize our values. In the case of decisions affecting the custodianship of public infrastructure, it can be argued that the standard for selecting the best alternative action should be that which optimizes the use of limited resources to effectively manage the design, construction and maintenance of that infrastructure. As a result, values such as professionalism, competence, honesty and trustworthiness may need to take precedence over compassion, loyalty and friendship. While the public and our organizations’ policy makers may place a high value on responsiveness and customer service, in the long run we will be judged more on how effectively we preserved the assets that are in our care, than how quickly we responded to complaints.

The current trend is to implement new processes and technologies to provide a higher level of sustainability. This is an admirable goal and speaks to some of humanity’s noblest values. However, there is often strong pressure to do this in areas where there is a lack of research that will prove these strategies are effective in the long run. When it comes to environmental cleanup, the cost of removing the last increment of pollutant may far exceed the benefit. Nevertheless, new regulations are constantly being promulgated without the accompanying funding to implement them. This creates a dilemma for local governments dealing with a limited budget. Choosing the right thing to do by emphasizing professionalism, competence and cost benefit can put a public works leader in jeopardy of being viewed as inflexible, unresponsive or insensitive.

In an atmosphere of “political correctness” it may take a certain amount of moral courage to point out that the emperor is not wearing any clothes (because he can’t afford them!). As leaders in the field of public works we owe it to the public to do our best with the limited resources and time we are given not only to achieve the “greatest public good” but to help define it in practical terms. It means applying the excerpt below from the APWA Standards of Professional Conduct on a daily basis, and making sure our employees see it as more than just a nice aphorism with little relevance to their daily decision making.

- I will strive to plan, design, build, maintain and operate public infrastructure in a manner that respects the environment and the ability of government to adequately preserve these assets for succeeding generations.

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The Undiscovered Country: Setting a successful path for the future

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How often do you think about the future? Is it every day? Do you think about your personal future, or even the impact you are having on the future of those around you? In Hamlet, Shakespeare discussed the future as “The Undiscovered Country.” This theme was reiterated in 1991 when a Star Trek movie was made with this term in its title. The future is a frontier we have no way of exploring, continuously “undiscovered.” We presume what the future holds and hope that we are correct in that presumption. How often are we right? When it comes to the continued success of our communities, we need to make the effort of planning for the future as serious as possible.

The next in our series of Core Responsibilities of a Public Works Leader is succession planning. Its basic premise is that we make the training and development of our next leaders an essential priority. The reason being, we need to navigate and prepare for that “Undiscovered Country.” If you plan accordingly, and prepare your folks to take up the good work you are doing now, the voyage has less potential for failure, and your community has more potential for success.

A public works leader has to continuously look to the future and navigate appropriately. This is the premise behind succession planning: setting up the future of your organization for success. While the country itself may be undiscovered, here is a road map to implement succession planning and make the voyage successful:

1. Cross Training
Cross training is the most basic example of succession planning and is far too often overlooked as a way of accomplishing it. Good managers normally see cross training as simply good management practice. However, the cross training is in essence a basic form of succession planning—a function for providing continuity and continued success.

One way to implement a cross training program is to require job shadowing in various areas of your organization. This could be done over trades skills, leadership abilities, or even types of equipment that someone is familiar with. Employees can build upon their value and thus, strengthen the continuity of your ability to operate the organization. In the City of Largo, our department uses this method for solid waste truck operators, heavy equipment technicians, and trades workers. Cross training provides us the ability to manage work issues even if we have employees out sick or on vacation.

We also employ this method with our managers and supervisors. Each division’s supervisors are given shadowing and cross training time with other supervisors to learn other functions and assist in different areas of management. The managers and senior team all learn the vital aspects of the other divisions as well, giving them the skill sets needed to manage department-wide functions in times of emergency.

2. Professional Development
Every organization should have a standard professional development plan in place for guiding individuals through the training and skills needed to move laterally or vertically in their organization. A standard professional development guideline assists your employees in knowing what is necessary to become what they want in your department, and makes it easier on you, the manager, to ask for funding and resources to make that development happen.

Succession planning is a tool that can be used at all levels of the organization. It should be common practice to provide training for employees that continue to build on the skills they have and to give them new skill sets at the same time. A trades worker who works on air conditioning equipment can also gain new skills on lighting controls, or new methods for plumbing integration. A supervisor who started as an equipment operator can receive management training, or do a ride- along with another organizational unit. Each of these ways increases their value to the organization and to themselves. It also makes these individuals great candidates to step up to the plate when needed.
3. Empower Youth

Youth in an organization does not necessarily mean age, but most importantly time in. The apple that is usually ripest is nearest to the trunk. In the case of planning for organizational success, the newest employees normally have the most energy, and have the most to gain by continued organizational improvement.

One way of empowering youth is through a structured feedback schedule for the first six months of their employment. This isn’t only to give them guidance on their performance, but to review your organization with fresh eyes. Many new employees sometimes see things that an engrained employee cannot. Once these ideas are brought forth, you now have someone who sees a potential problem and a likely candidate to pursue its correction.

4. Document Your Planning

I once heard a Largo Fire Officer say, “If it wasn’t documented, it never happened.” Well, in the case of succession planning, it may never happen. A successful plan requires that the ideas behind it be codified in a document. This does not mean that you need to say “John Doe” will be Public Works Director next, or “Jane Doe” will move into this position. What your plan should provide is an explanation of the expectations of employees to build their careers as well as their value to the organization. Providing this information is the best way to guarantee your plan gets carried out.

These documents also serve to empower your employees. A plan in writing that gives that employee a solid road map for success can give them the will to make it happen (with your guidance of course). It also shows that you are committed to your current employees and their futures, not only to the organization itself.

A documented succession plan is most effective if it shows two primary functions: Continuity of Operations and Professional Development. The first outlines the way the organization will run and continue to run even in times of difficulty. The other is the road map an employee can use for their success, relating to the department’s success. These two goals together can be an effective vehicle for organizational continuity.

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Now more than ever, we’re being bombarded by environmental messages. Cable news networks declare Earth “a planet in peril”; every major company and governmental agency is launching a sustainability plan; even his purple highness, Prince, is singing about going green. This information overload threatens to turn words like “green” and “sustainability” into meaningless clichés or green noise that people simply tune out. This is exactly why it is important for public works professionals to have a clear understanding what sustainability means in the public works context, what it means to us, our customers and our community.

Sustainability in public works, in the broadest sense, means delivering our services in a manner that ensures an appropriate balance between the environment, the community and our ability to pay.

Many people think that sustainability is environmental action only, but the emphasis is on the balance between the environment, the community and the economy. Sustainability is accomplished by the efficient delivery of services and infrastructure in an environmentally and socially responsible way that ensures the best economic choice in the long term. For instance, if a new project is affordable and good for the environment, but displaces community members, it’s not sustainable.

Sustainability is about making great communities better and reducing the footprint of our efforts so that
future generations are not burdened by our choices today. We only have one planet as a resource and our ability to continue to viably grow while reducing our impacts is critical to our long-term health and livable neighborhoods.

While sustainability is a relatively new term, public works leaders have been in the business of sustainability for as long as there has been a need to manage public infrastructure and services. Our profession keeps communities safe, powered by commerce and livable every day. Our successes are built on maximizing resources, creating lasting environments and shaping both the present and future of our communities.

Public works professionals frequently find themselves mired in reactive problem solving and crisis management, instead of taking a proactive, integrated approach to public works management. We often focus our efforts on short-term solutions that are inherently long-term in nature.

Sustainability considerations provide the industry a platform to assess and implement efforts that build better communities, preserve and enhance resources, and drive community engagement. The types of projects and infrastructure we build are designed not to just serve today’s users, but generations to come.

Sustainability is not a fad that will fade next week or next month; it is the foundation upon which we build the communities that future generations will reside in. Adoption of sustainability principles and use of key tools and rating systems will help public works practitioners tackle community challenges, and ensure that key decision makers are aware of the consequences and rewards of a wide variety of possible solutions before they make a final decision. Sustainability requires innovation so that we can continue to efficiently deliver services and infrastructure while promoting less waste, less pollution and less consumption.

While there are best practices in sustainability, there is not one set of principles, criteria, or best management practices that will work for all communities all the time. Each department, agency or community needs to define what sustainability means to their community and work to implement it. Public works leaders who embrace sustainability will be able to rethink and remake their communities by always being mindful of the interaction among the environment, economics and the community.

For more information about sustainability in public works, visit APWA’s Center for Sustainability. This website is designed to provide information, and links to other resources, to help public works leaders learn and embrace sustainability. As the website evolves you will see case studies, testimonials and other real-life examples of sustainable practices from APWA member communities or other sources. We invite you to visit the site often so that you do not miss any new developments.

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Despite—or perhaps because of—the environmental information overload, sustainability is a concept that people have a hard time wrapping their minds around. There are many ways to define sustainability, but all include a respect for the future:

Sustainable development “meets the needs of the present generation without compromising the ability of future generations to meet their own needs.” – United Nations Brundtland Commission, 1987

“What about the seventh generation? Where are you taking them? What will they have? We say that the faces of coming generations are looking up from the earth. So when you put your feet down, you put them down very carefully—because there are generations coming one after the other. If you think in these terms, then you’ll walk a lot more carefully, be more respectful of this earth.” – Oren Lyons, Haudenosaunee (Iroquois) Chief

Sustainability is the ability to achieve continuing economic prosperity while protecting the natural systems of the planet and providing a high quality of life for its people. – U.S. Environmental Protection Agency

““That’s human nature. Nobody does anything until it’s too late.”

– Michael Crichton (1942-2008), physician, producer, and author of Jurassic Park and The Andromeda Strain
Developing a strategic business plan for your agency

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Project Director
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Getting a firm handle on your agency’s operations is a tremendous challenge for any public works director, particularly in this era of “lean and mean” local government. Doing more with less is the watchword for most city or county commissions across the United States still reeling from the financial impacts of the Great Recession. In my opinion, what most agencies sorely lack is a firm road map on how to direct their future operations.

While the discussion in this article will be primarily focused on solid waste operations, my experience across the variety of public works services suggests that many of the planning lessons learned mentioned in this article can be applied to most, if not all, public works functions. Good planning, while not a panacea for all your agency’s problems, can help provide the tools to improve your operations as well as communicating alternative options to your decision makers and stakeholders.

Why is Business Planning Important?
Oftentimes, the spotlight of public attention is focused on solid waste agencies because of the perceived high costs to provide collection, recycling, and disposal services. Demands from public decision makers to keep local government operations efficient has oftentimes meant that agencies have not raised solid waste rates even while costs for critical cost items as labor, benefits, fuel, maintenance, and vehicles have increased dramatically in recent years. Many still have a portion of their revenues spent on unrelated activities or “free” services making full cost accounting difficult and adding to agency overhead. Lastly, competition from private sector vendors makes the threat of privatization intense and is used as a “hammer” by politicians seeking ways to keep rates and taxes low in their terms of office. For these reasons, I would argue that strategic business planning is an essential tool today for any public works manager.

The Competitiveness Scan
What I call the Competitiveness Scan starts off with a structured planning method termed “SWOT” which includes an analysis of the strengths, weaknesses, opportunities, and threats involved in the agency’s operations. Strengths simply mean the advantages of the agency’s operations over its competitors. Weaknesses are the characteristics of the agency’s operations that are at a disadvantage to other competitors. Opportunities are potential new markets or customer service areas that could provide additional revenues or provide enhance service satisfaction. Lastly, threats are elements in the wasteshed or service area that could provide opportunities to competitors.

SWOT analysis is a tool to help an agency consider its strengths and weaknesses in assessing potential opportunities for developing effective business strategies to achieve new market opportunities and respond to market threats. It is best conducted with the use of a varied group of agency staff (operations, finance, engineering, etc.) and with a series of probing questions such as:

- What do best?
- What areas need improvement?
- Is the perception of your agency positive?
- What factors are beyond your agency’s control?
- Has there been a change in pricing for essential agency resources (landfill space, price of diesel, etc.)?

As part of the threat analysis I have always found it important to benchmark the performance of the agency against competitors or similar agencies that seem to be “best in class.” The objective is to answer the question: How does the agency stack up against similar agencies or departments in your region?

I would argue that benchmarking is a critical step in any business planning process. “Benchmarking” can be defined as the systematic process of searching for best practices, innovative ideas, and highly effective operating procedures that lead to superior performance—and then adapting those practices, ideas, and procedures to improve the performance of one’s own organization. Benchmarking has been widely embraced by both the private and public sectors as an essential business practice for continuous performance improvement.
Solid waste collection managers rely on benchmarking data to:

- Objectively measure the quality and levels of the services they provide.
- Identify and implement best practices that will enable them to reduce costs and improve services.
- The need for benchmarking residential solid waste collection services has long been recognized by solid waste collection system managers.

There have been a number of national and statewide benchmarking studies conducted by the Solid Waste Association of North America (SWANA) Applied Research Foundation and state public administration groups such as the University of North Carolina-Chapel Hill, Institute of Government, North Carolina Local Government Performance Measurement Project. This benchmarking project has been collecting and analyzing solid waste collection benchmarking cost and performance data for 16 North Carolina jurisdictions for over a decade. SWANA published its benchmarking results for solid waste collection systems in 2008 in a book entitled SWANA Benchmark Project for Residential Solid Waste Collection Services. In addition to these sources of information, the manager could deploy a benchmarking instrument to collect additional statistics on collection efficiency, staffing, levels of services, and cost of operations and maintenance, as well as overall customer costs.

**Financial Analysis**

Once you have gathered benchmarking data on other similar agencies, it is important to conduct a cost of service or rate study. A cost of service or rate study is an essential tool to help focus the critical and management issues facing your agency or department (Exhibit 1 on p. 52). These studies help focus on possible budget cost savings and revenue enhancements.

Typically, these start with the following major work elements:

- Clearly-defined goals and objectives for the cost of service or rate study
- Evaluation of the agency’s operating budget through examination of each budget line item and assumptions of future operating conditions and costs.

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Exhibit 1. Top Ten Strategic Planning Issues for Solid Waste

1. How should free services to municipal departments be continued, and at what level?
2. Should you establish levels of service and extra fees for yard waste and bulky waste collection?
3. What is a reasonable rate fund balance given continuing agency contingencies? 10, 15, or 20% of annual operating expenses?
4. Have we considered the impact of retirements and loss of employees?
5. Should you assess private haulers a franchise fee?
6. Should your rates include discounts for senior citizens or disabled residents?
7. How should landfill closure and post-closure care be funded?
8. How should vehicle replacement be funded? Loans? Bonds? Lease Purchase?
9. Should your rate structure include some form of per unit rate for size of container (“pay as you throw” rates)?
10. Should the agency’s customer rates include an annual inflation escalation?

- Completion of a revenue sufficiency analysis that identifies the amount, timing, and financing source for required capital investments in the agency’s long-term capital improvement plan.

- Analysis of current customer rate structures and development of alternative recommendations on rate modifications.

A pro forma model is typically constructed to help conduct various “what if” scenarios to analyze alternative customer rates and develop financial forecasts of the long-term outlook of the solid waste system. The very best models can seamlessly provide powerful representations of key financial indicators for decision-making. The reader is referred to the APWA manual on ratemaking, Solid Waste Rate Setting and Financing Guide Analyzing Cost of Services and Designing Rates for Solid Waste Agencies, which provides useful examples of how cost analysis can be used effectively for strategic planning.

Putting the Plan Together
Your agency’s Strategic Business Plan should include all of the facets we discussed: the competitiveness scan and financial analysis. Unfortunately, most business plans prepared by both public and private sector organizations are static. That is, they exist as a document developed for a particular purpose, shared with its staff and decision makers in print or electronic form, and then placed in a file cabinet or digital folder on the organization’s intranet.

That being said, I urge my clients to develop a dynamic Strategic Business Plan that provides a highly usable road map to everyone in the organization. That is, a Strategic Business Plan goes beyond one-way informing and also communicates the plan by enabling a two-way, ongoing dialog to everyone in the agency. The plan should be shared with the agency’s stakeholders such as its typical strategic partners such as other departments or divisions, major vendors, waste suppliers, and outside consultants. In this way, the plan reaches beyond your agency’s walls and enables your strategic partners to help you achieve your desired results.

Final Thoughts
Strategic business planning takes a lot of hard work to develop a meaningful long-term game plan for your agency. Certainly business planning doesn’t come free. It is a time-consuming exercise, and any agency head has to weigh the value that is generated from spending time writing a plan versus simply going out there and performing daily operations. Based on my experience, however, these efforts are worthwhile and can provide excellent financial road maps that will empower your agency to respond to their opportunities and potential threats more strategically.

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I understand there is a new chapter in the 8th edition of the Public Works Management Practices Manual related to Environmental Management Systems. Can you give us a brief overview of what this encompasses?

Public works and utility agencies have significant responsibility for ensuring that operations are conducted in compliance with all federal, state, and local environmental laws and regulations, and that sustainability principles are incorporated into their operations. Because of the level of control and influence they have on the infrastructure and on activities having the potential to impact the environment in the communities they serve, as well as because of the visibility of their actions, it is imperative that agencies demonstrate leadership in compliance and sustainability. Compliance and sustainability improvement efforts are best achieved through structured implementation of an environmental management system (EMS) incorporating elements of planning, execution, and review that lead to continual improvement. An EMS provides agencies with the platform and opportunity to set and achieve environmental objectives and targets appropriate for the size of the communities they serve and the scope of their operations. Included in the chapter is development of a policy that establishes the agency’s commitment to environmental improvements and sustainability; development of action plans to meet stated objectives and targets that are consistent with the agency’s environmental policy; setting objectives and targets to reduce environmental impacts and comply with legal and other requirements; determining responsibility for implementing and ensuring that environmental compliance and sustainability programs are established at all levels in the agency; developing a procedure for training and education of employees; developing a procedure to identify, prepare for, and respond to potential emergency situations and accidents that can have an adverse impact on the environment setting performance measures; and developing an annual management review and report. If you are interested in reviewing an Environmental Management Plan developed and used by a local agency, you might want to contact Frank Uhlarik at fuhlarik@lincoln.ne.gov or Jackie Crumrine at Jackie.crumrine@norman.ok.gov.

We are seeing an increase in problems with raccoons, and worse yet, skunks, in our area. What are other agencies doing to handle their problem creatures?

The little stinkers are definitely a problem. There’s nothing worse than finding your plants destroyed by their digging or having your dog or person the recipient of their malodorous spraying. And raccoons, while not leaving behind their pungent scent, have created problems for years with their digging and their homing instincts lead them to return to former habitat areas. So what’s the answer to dealing with these critters? Skunks are attracted to residential areas by the ready availability of food, water and shelter. They become a nuisance when they live under porches, decks, garden tool sheds, or homes. They like to feed on ripening berries and fallen fruit and cause many other garden problems by digging while in search of grubs and other insects. They often search for food in lawns by digging small pits or cone-shaped depressions that range from three to five inches across. Raccoons are very similar in that they also damage lawns by rolling back sections of sod in search of insects. While there are
differing legal restrictions on how to eliminate skunks and raccoons in various states, relocation has not been found to be very satisfactory in either case and the animals are most often not considered “game animals” so they cannot be hunted. Suggested habitat modifications include limiting potential den sites by cutting back overgrown shrubbery and stacking firewood tightly. Garbage cans should have tight-fitting lids, and food items should not be placed in compost bids. Trapping is also a lucrative business for some small business concerns. The skunks can be trapped with an enclosed cage-type, live-catch trap. Plastic box traps are superior to wire traps because they are completely enclosed, thus reducing the risk of getting sprayed while removing the trapped animal from the site. Professionals have the experience and all the necessary equipment to trap and dispatch the animal. The major concern for health issues is the frequency of skunks to be infected with rabies, thereby spreading rabies with bites to other animals, such as dogs and cats. Before trapping or relocating these varmints, be certain to contact your appropriate state agency for permission to hunt, trap or relocate these nuisances.

**Ask Ann...**

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**Griffin** offers an ever-increasing line of pumps to fit nearly any bypass application. Whether it be above-ground diesel-driven pumps, above-ground self-priming diesel, hydraulic-driven submersible pumps, or electric-driven submersible trash pumps, Griffin can provide a pump to fit your bypass pumping need. If we do not have a pump in our standard line, Griffin will build a pump to fit your municipality’s need. Griffin’s exclusive installations and experience guarantee a quality pump and system for applications from a few gallons to several thousands of gallons per minute per pump. Pumps from as small as 2” up to 24” are readily available. Call 713-671-7000, visit www.griffinpump.com, or send e-mail to gpe@griffinpump.com.

Reduce your slip and fall liability this winter with STAND-UP Freeze Resistant Liquid Deicer

New **STAND-UP** helps facilities mitigate their slip and fall liabilities by completely clearing away slippery ice and snow pack from their steps, walkways and ramps. STAND-UP is a great alternative to salt around facilities since it keeps working even after the sun goes down. STAND-UP will not track into buildings, and it will not damage expensive stamped concrete and brick pavers like salt can. For more information, watch a short video of STAND-UP in action at www.rhomar.com or call (800) 688-6221.

ClearSpan adds options to HD Building line

**ClearSpan Fabric Structures**, the industry leader in tension fabric structures, has added three different length options to its **HD Building solutions**. The HD Buildings are available in both gable- and
round-style designs and can be mounted as a freestanding structure or affixed to other foundations, such as ponywalls or containers. HD Buildings are made from triple-galvanized structural steel tubing for the frame and a 12.5 oz., high-density polyethylene (HDPE) rip-stop fabric cover. “We added the three lengths of 160’, 180’ and 200’ simply due to customer demand,” said ClearSpan’s Senior Vice President, Matt Niaura. “Having these new profiles in our system will allow for a faster overall process from order to installation.” The HD buildings start at 25’ wide and cost as little as $7.49 dollars per square foot. For more information, please call (866) 643-1010 or visit www.clearspan.com.

TYMCO announces full availability of natural gas-powered Model 500x
TYMCO® has announced full availability of the 100% Compressed Natural Gas (CNG) powered Model 500x High Side Dump Regenerative Air Street Sweeper. Since its introduction, the Model 500x has only been available powered by a diesel auxiliary engine and has proven its performance and reliability in government, contractor, construction and industrial markets. TYMCO is now ready to expand the high side dump sweeper offering by combining our 20+ years of CNG expertise and experience from the Model 600 CNG with the highly successful diesel powered Model 500x. “TYMCO is a pioneer when using alternative fuels—starting with propane in the 1980s and first introducing the Model 600 CNG in 1993,” said Bobby Johnson, TYMCO Vice President, Marketing. “With over nine years of the Model 500x being successful in the field, offering this sweeper in CNG was the next logical evolution for this product.” For more information call (254) 799-5546 or visit www.tymco.com.

MobiKEY offers high-assurance access anywhere, anytime
Government personnel, agents in the field, contractors and other remote users demand access to their workspace from anywhere, from any device. Unlocking these productivity gains can dramatically increase an organization’s exposure to security threats and the risk of network breaches. Concurrently, IT professionals are asked to support mobility and BYOD initiatives on tightening budgets. MobiKEY, Route1, Inc.’s flagship technology uniquely combines secure mobile access with high-assurance identity validation and plug & play usability. Remote workers are able to securely and cost-effectively access their workspace from any device without exposing the organization to the risk of data spillage or malware propagation. For more information, please visit www.route1.com.

EcoVolt: The world’s first bioelectric treatment process
EcoVolt is a modular unit deployed onsite at industrial facilities that transforms wastewater management from a cost center into a profit center. The bioelectrically enhanced anaerobic system reduces biological oxygen demand by 90% while producing renewable biogas that can be utilized to generate up to 50% of a facility’s electricity. EcoVolt’s design delivers a far higher-quality biogas than traditional anaerobic systems, and eliminates the high energy requirements and operational expense typical of aerobic systems. Cleaned water meets heightened disposal regulations and can be easily polished for reuse onsite. Real-time, remote monitoring and automated control optimize EcoVolt’s performance. Interested in EcoVolt for your industrial operation? Please visit www.cambrianinnovation.com/solutions/ecovolt.
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2015  Aug. 30-Sept. 2  Phoenix, AZ
2016  Aug. 28-31  Minneapolis, MN

For more information, contact Dana Priddy at (800) 848-APWA or send e-mail to dpriddy@apwa.net.

National Public Works Week: May 17-23, 2015
Always the third full week in May. For more information, contact Jon Dilley at (800) 848-APWA or send e-mail to jdilley@apwa.net.

North American Snow Conference
2015  April 12-15  Grand Rapids, MI

For more information, contact Brenda Shaver at (800) 848-APWA or send e-mail to bshaver@apwa.net.

December 2014

3-5  Accelerated Bridge Construction Conference, Miami, FL, www.2014abc.fiu.edu


9-10  57th Annual Missouri S&T Asphalt Conference, Missouri University of Science & Technology, Rolla, MO, (573) 341-6222, dce@mst.edu


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