Trash trucks used for snowfighting
Safe disposal of pharmaceutical wastes
Bird strikes and the solid waste professional
Zero Waste initiatives, and all things...

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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.
hey creep through your neighborhoods in the dark, pre-dawn hours, taking what they can, perhaps leaving a few things at the curb, but they’ll be back. They come back every week, sometimes making several trips, to get your stuff and they’re going to take it to their shop, break it down and process it to make products that you may eventually buy back from them. But this isn’t an episode of “The Sopranos,” the famous television show about a fictional “solid waste management consultant” in New Jersey. This is any typical morning in your neighborhood and mine and it is the story of a primary line of business for many public works agencies across the United States and Canada.

From the phone in your hand to the cup of coffee you grabbed this morning, Americans almost effortlessly generate waste, about four pounds of waste per person, per day, and have for the last 20 years. That adds up to about 250 million tons of municipal refuse that must be collected, hauled, sorted, processed and landfilled each year. In many cases, this tall order comes under the umbrella of public works operations. Every day, innovative, diligent and resourceful public works professionals transform the considerable volume and diversity of waste generated in our communities into valuable new materials, clean energy and soil-building compost.

Public works agencies have been at the forefront of solid waste management, integrating ever more sophisticated processing systems and pioneering everything from recycling programs for grass clippings to e-waste collection events. This is no small feat but like so many of the things public works agencies do very well, its seamless operation is often taken for granted. People tend to notice their solid waste services only when their pickup schedule shifts over a holiday, but they’re relying on public works more and more as solid waste management becomes increasingly sophisticated. When you begin to see the paper cup of coffee in your hand as future compost, and the phone as a deconstructed sandwich of precious metals, glass and plastic, solid waste management suddenly illuminates the possibilities of everyday choices to have a profound effect on the world around us.

Recycling rates in the U.S. have nearly doubled in the last 20 years as we are increasingly taking the time to rinse our milk bottles and bag our leaves, adding the now ubiquitous blue or green bins to our weekly pickup. And when there’s a new cart or bin at the curb, you’ll see public works professionals like Ed Hicks from State College, Penn., at public meetings to explain the benefits of organic waste recycling and composting. With recycling rates barely over 34% in the U.S., it’s these extra efforts that will ensure more valuable resources are given a second, third or fourth life.

In this issue of the Reporter, you’ll read about how our member agencies are striving to raise recycling rates while making solid waste management services more accessible and more effective by including...
multifamily housing in their recycling routes and reaching out to residents to help them take advantage of the programs. Providing colorful reminders in several languages and partnering with the local housing authority to track participation rates has yielded positive results for the Phoenix Public Works Dept. These recycling programs keep reusable material in production and help reduce operating costs at municipal landfills.

Household hazardous waste is a growing concern as residents bring in old televisions and outdated computers to e-waste collection events, often hosted by public works agencies, and those agencies check the box to recycle oil and batteries in the Fleet Services bay. Solid waste management professionals in public works are on the forefront of emerging pharmaceutical product stewardship programs aimed to properly dispose of discarded medications as household hazardous waste, a partnership with law enforcement agencies. Properly disposing of these materials is critical to maintaining the health of our communities and shared water resources and it’s just another way public works provides a vital service.

Solid waste management is a natural fit for public works because it has become so integral to our daily lives, and it has become a reflection of our values and a factor in the quality of life in our communities. Our Solid Waste Management Technical Committee has outlined the concept of Zero Waste in this issue, whereby packaging and production could preempt recycling by simply ceasing to generate waste, truly integrating long-term sustainability into that vision. As we collectively strive to be better stewards of our environment, public works professionals help reach that goal by efficiently and effectively delivering important services like solid waste management. It may not be the thrilling plot of a cable drama series, but it is a dynamic part of a promising future in public works.

“The key to implementation of sustainable practices is following a long-term program based on persistence, not insistence.”

because people do not know how to properly dispose of unused or expired drugs, every year these pharmaceutical drugs accumulate in people's medicine cabinets posing risks to public health and the environment. Experts estimate that up to 40% of prescription medications and over-the-counter drugs go unused by people each year. The accumulation of these medications is an increasing public health and safety concern nationwide. Rates of accidental poisoning or overdoses are on the rise, and according to the White House Office of Drug Control Policy almost 2,500 teens use prescription drugs each year to get high. In addition to problems with abuse or poisoning, these unused and expired pharmaceuticals can pose risks to the waterways, animal life and the environment if improperly disposed of. Drugs enter the environment through multiple sources including flushing toilets or through leaks from landfills. The U.S. Geological Society has found that pharmaceuticals have been found in the drinking water of 24 major metropolitan areas affecting 41 million Americans. The cost of treating wastewater for these substances is very high.

Public confusion, financial barriers and the lack of legal and convenient disposal options has led to the stockpiling of these medications at home or the routine flushing of these drugs down the toilet, thereby posing a pollution threat to the nation's waterways; or simply the discarding of these pharmaceuticals in the trash where they can end up in a landfill and potentially lead to pollution of the groundwater. Until recently, the only legal disposal options included flushing the drugs down the toilet or throwing them always in household trash, returning them to the manufacturer or through locally-run collection programs. However, in the past couple of years several states, localities and the federal government have taken steps to encourage the safe disposal of these unused or expired medications.

In 2010, President Obama signed into law the Secure and Responsible Drug Disposal Act (Disposal Act) which provided the Drug Enforcement Administration (DEA) with the authority to develop permanent, ongoing and responsible methods for disposal of unused or expired pharmaceuticals. Before the passage of the Disposal Act, there were only very limited legal ways to transfer possession of a controlled substance medication from users to other individuals for disposal.

In 2010, the Obama Administration and the DEA held the first National Prescription Drug Take Back Day collection event in partnership with several law enforcement and community health organizations. The National Prescription Drug Take Back Day was designed to provide a safe, convenient and responsible means of disposal. During the Take Back events local law enforcement agencies and community partners work together to collect unused and expired medications from their communities. In the last five years, the DEA estimates that they have collected more than two million pounds (1,018 tons) of pharmaceutical drugs through annual Take Back Days. The next National Prescription Drug Take Back Day is scheduled for April 27, 2013. Communities and public works departments interested in hosting a take-back event should contact their local law enforcement partners or the local DEA Field office.

The National Prescription Drug Take Back Day program is a key feature of the White House Office of Drug Control Policy's strategy for addressing the rise of prescription drug abuse and limiting the improper disposal of these drugs while the DEA works on developing regulations establishing a permanent, ongoing and convenient means for disposal of unused or expired pharmaceuticals. In late December 2012, the DEA took the first step in developing new regulations governing the disposal of controlled substance medications with the release of a notice of proposed rulemaking. The DEA is proposing requirements to govern the secure disposal of controlled substance medications by expanding the number of options available to collect these substances for the purposes of disposal. (77 Federal Register 75785) (December, 2012). The proposed options include: take-back events, mail-back programs and collection receptacle locations. The proposed regulations include specific language allowing law enforcement agencies to voluntarily conduct take-back events, administer mail-back programs, and maintain collection receptacles but the regulations do not mandate this. The regulations also would allow
authorized manufacturers, distributors and retail pharmacies to voluntarily administer mail-back programs and maintain receptacles onsite. The proposed regulations do not establish a mandatory program. The DEA is accepting comments on the proposed rule on or before February 19, 2013. To read the proposed rule and see the instructions on submitting comments, please visit the DEA website.

In addition to the developments at the federal level, several states and at least one community have taken steps to try and create programs placing responsibility on manufacturers for the disposal of their products, including unused or expired pharmaceutical drugs. Several states, including Maine, Maryland, New York, Pennsylvania and Washington, have tried to pass various state laws creating extended producer responsibility programs in their states for pharmaceuticals. Extended producer responsibility policies place the primary responsibility for end-of-life management of products on the manufacturers of the products. Alameda County, Calif., is taking the lead at the local level by enacting the first-in-the-country ordinance requiring drug companies to design, operate and fund a collection program for the unused or expired drugs they manufacture and sell in Alameda County.

The new Alameda ordinance, the Alameda Safe Drug Disposal Ordinance, is based on the extended producer responsibility policy framework adopted by CalRecycle. Under the new ordinance, drug companies are required to develop implementation plans and have the option of running programs independently or by partnering with others. The drug companies will also have to provide pre-paid envelopes for people to ship medications back for disposal or set up a series of drop-off locations at local law enforcement agencies. Failure to comply will result in fines of $1,000 per day. The Alameda County Household Hazardous Waste Programs estimates that about 1.5 million of the County’s residents have as much as 681 tons of unwanted drugs stockpiled in medicine cabinets. According to the County, there are 28 med collection sites throughout the county, which dispose of discarded medications at a cost to the County of $330,000 per year. A County economic impact analysis determined that “[o]f the annual $186 million in profits generated by drug companies in Alameda County, officials say the projected cost of a comprehensive program producer funded program would be about 1 cent for every $33 of pharmaceuticals sold in the county.”

The pharmaceutical industry quickly responded to the new ordinance by challenging the law in federal court. A coalition of groups including the Pharmaceutical Research and Manufacturers of America (PHRMA) along with the Biotechnology Industry Organization and the Generic Pharmaceutical Association challenged the new law as a violation of the Constitution’s Commerce Clause. According to the complaint filed by the manufacturing groups, the Alameda Ordinance violates the Commerce Clause because it directly regulates and burdens interstate commerce and its primary purpose is to shift the cost of a local regulatory program directly onto interstate commerce and out-of-county consumers. They also argue that the ordinance discriminates and favors local interests by deliberately shifting costs away from local consumers and taxpayers and onto drug manufacturers and pharmaceutical consumers nationwide. According to the three trade groups, if this new ordinance were allowed to stand, “[l]ocalities would be authorized to get something for nothing, simply by free-riding on interstate commerce and transferring the burdens to out-of-state consumers.” The parties are slated to be in court for preliminary matters in March 2013.

The battle over the Alameda County ordinance will likely have national implications and will set the direction for other states and localities struggling to deal with this emerging and growing problem. Producer responsibility laws already exist in many states and localities for other products like thermometers, batteries, and paint and these laws have not previously been challenged for their constitutionality. In the meantime, public works departments looking for ways to deal with these unused and expired pharmaceutical wastes in their communities, should attempt to partner with local law enforcement agencies to develop a take-back day while the DEA finalizes its regulations and the Alameda County Ordinance works its way through the court system.

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"Human diversity makes tolerance more than a virtue; it makes it a requirement for survival."

–René Dubos (1901-1982), French-American microbiologist and Pulitzer Prize-winning author

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It’s all about the people
An interview with Jeff Hammond, Snow Conference General Session Speaker

The Closing General Session at this year’s North American Snow Conference in Charlotte, N.C., will feature keynote speaker and NASCAR legend, Jeff Hammond. Hammond began his NASCAR career in 1974 working as a tire changer for Walter Ballard. After joining Cale Yarborough for three Winston Cup championship seasons and one more with Darrell Waltrip, he was promoted to the head crew chief position in 1982. As the old saying goes, “the rest is history”—Hammond set the sport on its ear, winning two more championships with Waltrip and amassing 43 wins as crew chief. Hammond now provides commentary for FOX, FX and the Speed Channel. He took time from his busy schedule recently to chat with us about his early days in NASCAR and what he’ll discuss with our attendees on April 9.

When did you first get interested in racing? Actually it was when I was twelve years old. I had an uncle that asked me to ride with him to Lancaster, South Carolina. He was going to pick up a race car and he was going to start racing the local dirt tracks. And from that moment on, my racing career started out working on a 1956 Ford, car number 54 originally, and I spent the rest of that summer going to the local short tracks helping my uncle, and my dad, so it was a little kind of like a family affair deal.

How did you make your progression from twelve years old all the way to crew chief? Well, it was kind of a situation where working the local short track, dirt track stuff, there were a couple of places that we’d go and buy parts and pieces. Holman-Moody was one, a place called Tiger Tom was another. And, being that they were the only parts houses for race cars around here, we’d go in and I would start meeting a lot of these local stars: Elmo Langley, Walter Ballard, Jim Vandiver. I also, through coming up around the local dirt tracks, got to meet a gentleman named Ralph Earnhardt, who was the father of Dale Earnhardt, and that’s where I met Dale about when I was fifteen. I actually watched him drive his first dirt race here in the Carolinas, I think it was at Concord. Because of that relationship and my desire to work on cars, the older I got—when we weren’t racing our dirt car—I would slip off and go to race tracks with guys like Tom Pistone, or Jim Vandiver, or Walter Ballard. And I’d help them. We raced on Friday and Saturday nights and I’d drive to the closer race tracks like Martinsville, Bristol, Rockingham, Arlington, and Brookskborough. I started learning how to change tires and be a part of a pit crew all before I was legally old enough to be doing it. But that’s how that kind of evolved.

I spent one year at college playing some football for East Carolina until I got hurt and tore a knee up. I came back to Charlotte and reestablished the relationships with these local drivers. Through those relationships I met a gentleman named Herb Nab—this was about 1975—who was crew chief for Cale Yarborough and Junior Johnson. And at the end of 1976 after the Darlington race in September, Herb asked me if I wanted to work for him. I told him yes and wound up going to work for Junior Johnson in 1976. I worked as a crew member, truck driver, tire changer, tire carrier, whatever, for him and for Cale during that period of time. We wound up winning three championships and a bunch of races from 1976 to 1980. In 1981 Darrell Waltrip came on board. I was still a crew member at that time, I was also the jackman. In 1982 our then-crew chief left and I asked Junior if he’d give me a shot at being a crew chief. He and Darrell agreed to let that happen, and I wound up being Junior Johnson’s and Darrell Waltrip’s crew chief from that point on.

What are some of the biggest challenges involved in being a crew chief? Well, one of the biggest things that I have found throughout my entire career is that it’s all about managing people. Understanding what the team needs, understanding the personnel you need to put in those places, and getting them to work together to get the job done. It also involves not only looking at the event that’s in front of you, but also looking far enough down the road to understand what the big picture is. So there are a couple of different levels that I feel are important when you assume that responsibility.

I think one of the hardest things is that when you come up through the ranks, and you develop relationships and friendships, once you go from being a supporter of a crew chief...
to being a crew chief and looking for that same support, you have to sometimes change who you are to develop a level of respect from your men and women who work below you so you can get the best out of them. So again, I go back to the part that it’s all about the people. They may not be the most talented people in the world, but if you put them together and do it right and lead them correctly, you can get some pretty extraordinary things out of them. It can be successful and even develop winning ways because of it. Success is one thing, but winning is kind of like the cherry on top of the cake, I’d say.

What are some of your favorite memories involving NASCAR?
One of them occurred in 1985 when R.J. Reynolds and Winston, one of the series sponsors, developed the All-Star Race, and they were going to run it the Saturday before the Coca-Cola 600 on Sunday. We built a special car for that race, the inaugural race, and we wanted to run the All-Star car in the 600 on Sunday. We had asked NASCAR if it would be possible to withdraw the 600 car, re-enter this other car, and start at the back of the field on Sunday. And originally we got the nod that we could. But halfway through the transition between the two cars, we had a ruling come out of Daytona Beach, Florida, basically from Bill France, Jr., saying, “You can’t do that.” So we had to put everything back in the other car, barely got it together—I’m talking we had the engine out of it, pretty much stripped these two cars down—and had to get one ready to go for the 600. So we had to put everything back together and basically got it online at the last minute. And we still went out and won the 600 that day. So we won two really important races that I feel helped burst us through the ‘85 season, because Bill Elliott had won a ton of races—he had the fastest race car pretty much all during 1985, won like ten or eleven races. We only won three, but the tenacity of that team, the resiliency of that team, and the fact that we never stopped fighting, we were able to overhaul him because of consistent finishes and doing our jobs. And at the end of the year we beat him for the Points Championship on top of that. So ‘85 is always going to be a special year for me because of the race in Charlotte and the end result of the season. Because we weren’t the best, but we never stopped until we became the best.

Recycling and waste management are major responsibilities for public works professionals. How do NASCAR teams deal with used oil and tires? We’re very fortunate to have a great relationship with people like Safety Clean, and most of the oil companies—at one time it used to be Union 76 and now it’s Sunoco—have helped us with the reclaiming process. Also, whether we were working with Valvoline or Mobile One, a lot of these major oil companies that provide the oil for different teams have also got plans that help you execute how to properly capture used oil and how to get it back in the system so it can be reclaimed. Same thing with the tires—rather than filling up a landfill with them, there are several companies within this area that will take these waste tires and reclaim them by grinding them up and making the rubber into horse arenas. I’ve seen them make mats out of them, or reclaim them to the point of putting the rubber back into the hands of Goodyear to be utilized in a different type of form than in a race car tire. There are a lot of companies that are very conscientious that work with us within NASCAR to help us make sure that we’re good stewards of the environment.

And the other thing is, when you go one step further, there are even companies like Kimberly-Clark Professional that provide services and data that show us that their type of
cleaning towels, their shop towels, are more biodegradable and friendly to the environment than using the shop rags that some of the teams have chosen to use.

What will you be sharing with our attendees at the North American Snow Conference? Having been a crew member to having achieved some successes in the position of a crew chief, I think I understand how hard work and perseverance, and sometimes not always getting the gratification or the accolades when you’re a crew member for a successful effort, are there. But how do you deal with that? And how do you deal with a boss that can sometimes be a little overbearing, unforgiving and unappreciative? I’ve lived that, and I’ve tried to share with not only the everyday worker but also the folks that are in management how important of an asset your people are, and sometimes how important a simple “thank you” can be for a job well done, even though you might think, “Well, that’s your job, you’re supposed to do it.” But a “thank you” can go a long way between one event to the next or one job to the next, and sometimes that can help motivate and continue to keep people focused. Just like we did in 1985—that was a small victory, but a big win at a key time.

And teamwork is so important. That helps also to lessen the long hours and sometimes the short pay combined with the lack of appreciation. Sometimes you get motivation and appreciation from within because there’s a team. You know you did a good job, you know you did it against all odds, and how you go about doing that really starts with the individual. You have to come to terms with who you are and what you want to be when it comes to being a part of a group and how you want to achieve success, and what success means to you. A lot of times it doesn’t come with a trophy or a bonus check. Sometimes just the simple satisfaction of knowing that if you didn’t do it, the ramifications—especially in your all’s business and some of the things that I’ve started to understand—is that if you don’t get the roads clear and somebody needs a policeman, the firemen, or an ambulance, they’re not going to get there because you haven’t got your job done. So I’ll be discussing how sometimes being mentally tough can work for you and work in your favor, if you allow it to happen.

For more information on the upcoming Snow Conference, please see pages 34-35 in this issue or visit http://www.apwa.net/snow.

Jeff Hammond circa 1992; the team was Darrell Waltrip Motorsports and the sponsor was Western Auto.
Making a list and checking it twice: DCS checklists

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The Leadership and Management career path was designed to target and improve those skills important to effective leadership. From the very start candidates are treated as leaders. That is why candidates select and contact their mentors, determine the speed at which they will finish the program, develop a plan for development, work on a project and finally submit a professional portfolio for review.

To this end, each level challenges candidates to manage time, work on communication, interpersonal relationships, critical thinking, innovation and self-evaluation. These and other critical skills were considered as DCS grew into a benchmark leadership development program. Upon completion of any of the levels, a candidate should stand tall and strong, confident they have met goals, acquired skills and knowledge, and have grown as a result of being in the program and completing the requirements.

The candidate is never alone in this journey, they are accompanied by a mentor to help navigate and promote professional growth.

As candidates in the DCS Center programs begin the journey to earn a credential, they soon realize that there are multiple steps that must be taken to complete the requirements. The best way to organize all of the tasks is to create a checklist that brings order out of the chaos of so many seemingly unrelated steps. A good checklist serves two purposes: (1) to create a timeline, and (2) to document what has been accomplished so far.

The Professional Development staff at APWA has given careful thought to the process for each level in the DCS Center and has created a checklist for each program (see page 10). Providing a clear path to follow not only ensures completion of the program, it is also good customer service. Candidates who are uncertain about what to do next sometime fall behind or become confused about achieving the credential. A well-designed checklist should reassure candidates that they are moving forward and haven’t missed any important steps. Candidates already in the program should be aware that a detailed checklist for each level can be found on the DCS Center participant website.

Candidate Setup
Shortly after applicants have been accepted into a DCS program, they receive instructions to log

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into the participant website where they will confirm their contact information, select a mentor from the online catalog, read the Mentor-Mentee Handbook, and sign the Mentor-Mentee Agreement. These steps should be completed within two weeks of their acceptance notification. Establishing scheduled communication with a mentor should also take place in those first two weeks.

The next two weeks should be spent working on a first draft of a Professional Development Plan (PDP). Working through the PDP requires candidates to describe their goals and expectations of the program and to create a timetable to reach verifiable and observable goals.

Completing an APWA-authorized institute is a requirement for candidates in the Public Works Supervisor and Public Works Manager programs, so participants should begin looking at the various institutes to determine which one will be the most suitable and make plans to attend.

### Professional Development Plan Checklist

During the third and fourth weeks, candidates should refine and add to their program expectations and goals and determine where they currently stand. There are specific activities that provide insight into a candidate’s current knowledge and abilities: PW Supervisor and PW Manager participants complete a pre-assessment; PW Executive candidates do a 360° Assessment which includes a self-assessment along with assessments from five coworkers and supervisors who evaluate the candidate’s abilities. Based on the results of these assessments—after describing their goals and expectations and obtaining approval from their mentor—the first draft of the completed PDP should be submitted to the DCS Center.

As the second month begins, candidates should be having regular conversations with their mentor and making entries in their online journal where they work through the core competencies and document progress on their PDP.

All candidates are required to create a project that has practical applicability to public works; ideally, the project should address a problem or need in the candidate’s workplace. PW Executive candidates who have already completed a master’s thesis or capstone may use those projects if they are applicable to public works. The project proposals must be submitted to the DCS Center Research Council for approval.

In the months following, participants continue to work on their PDP.
with guidance from their mentor. As progress is made on the PDP, candidates should be thinking about their project—a very important component of the credential. Candidates should show practical application of their expertise or knowledge of public works. For a PW Supervisor candidate, it may be selecting a truck and looking at asset costs for the life of the vehicle; for a PW Manager, it might be planning and potentially implementing a sustainability plan; setting policy would be an appropriate project for a PW Executive candidate. The lessons learned from the project should benefit the agency, organization or community.

PW Executive candidates will have oral exams before the DCS Center Review Council to discuss their projects. In the real world, public works executives must be able to defend proposals to superiors, city councils, or the community. The oral exam requirement develops an aspiring executive’s ability to answer questions from potentially contentious audiences with varying levels of knowledge or expertise.

At the conclusion of the program, a candidate’s full experience in the credentialing process is summarized and final documents are submitted to the panel reviewing the professional portfolios which contain the PDP, selected journal entries and projects. Candidates in the PW Supervisor and PW Manager programs must also confirm that they have completed an APWA-authorized institute.

**The Big Reward**

The most exciting item on the checklist is to receive the PW Supervisor, PW Manager, or PW Executive designation certificate and pin at the award ceremony at APWA’s International Public Works Congress & Exposition. (For recipients who are not able to attend Congress, presentations are made at local chapter events.)

Although earning the credential might feel like the end of the journey, for many candidates who complete the PW Supervisor or PW Manager programs, it is really the beginning of a long-term involvement with the DCS Center as they progress through successive levels of professional development.

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**APWA needs mentors!**

APWA’s Donald C. Stone Center is experiencing increasing enrollments in the Public Works Supervisor, Manager, and Executive programs this year. Nearly all of the 200 Public Works Leadership Fellows (PWLFs) have been selected as mentors, so we anticipate needing at least 35 more PWLFs in the coming months. It is important to maintain a small surplus of mentors so that mentees can find someone who meets their needs.

If you are interested in helping to grow the talent pool of experienced public works leaders by becoming a mentor, please submit your PWLF application by April 10. Applications and more information can be found at www.apwa.net/dcs.

If you are a PWLF who is already working as a mentor, please contact us if you would be interested in mentoring a second candidate. If you are a PWLF who has not been selected yet, please don’t despair—it takes a few months for many candidates to select a mentor. And remember that all PWLFs who are not actively mentoring a DCS candidate are asked to volunteer for 40 hours each year at a local chapter or to support APWA through other activities.
A

PWA and the public works profession lost one of its most respected members in January. Robert Charles (Bob) Esterbrooks, an Alzheimer’s victim, passed away in the presence of his family on January 3 in San Diego, California. He was 88 years old. A memorial service with full military honors was held for him on February 22, 2013, at Fort Rosecrans National Cemetery in Point Loma, California.

Bob’s skills, leadership and personality carried him to the highest levels of civilian and military life.

Bob joined APWA in 1957; was a member of the House of Delegates from its inception in 1968 until 1972; and had the distinction of serving as president of two APWA chapters, the San Diego Chapter in 1965 and the Arizona Chapter in 1970. In 1976 Bob began the first of two consecutive terms on the APWA Board of Directors and became president of the association in 1982. He also served as President of the Public Works Historical Society, 1992-1996, and made significant contributions to the PWHS Endowment Fund. In 1973 Bob was a Top Ten Public Works Leader of the Year recipient and became an APWA Honorary Member in 1987.

In remembering Bob, APWA Executive Director Emeritus Robert D. Bugher said, “He always conducted himself in a highly professional manner, whenever he was called upon to represent APWA and the public works profession. It was a pleasure to work with him in conducting the work of the association. He inspired cooperation among all segments of the membership. Bob was a real leader in every sense of the word.”

Among his activities with other associations, Bob was National Vice President of the Society of Military Engineers, 1975-1977, and of the American Society of Civil Engineers, 1988-1990. He was named National Urban Engineer of the Year by the National Association of County Engineers in 1982, and the Arizona Association of County Engineers established an award in his honor in 2000. The Robert C. Esterbrooks Award annually recognizes outstanding public works individuals.

A native of California, Bob’s distinguished career encompassed both civilian and military venues. His civilian career began in the City of Los Angeles, then it continued for seven years as the Assistant City
Engineer in San Diego. There Bob was instrumental in getting the city’s first civil engineering computer system installed—a machine “the size of a chest of drawers” and costing $25,000, almost three times his own annual salary.

After San Diego, Bob relocated to Phoenix, Arizona, in January 1966, to become the City Engineer of one of the fastest growing metropolitan areas in the nation. Although successful and satisfied in that job, Bob accepted an offer he “couldn’t refuse” in 1969 to become Assistant County Manager, Public Works Director, and County Engineer for Maricopa County, a job he held for the next twenty years.

During that time, Bob saw the county grow from a million to 2.1 million people and Phoenix was becoming one of the largest cities in the United States. Bob’s purview over public works covered nearly 10,000 square miles of Central Arizona and involved highways, buildings, drainage and flood control facilities, solid waste disposal installations, parks and recreation facilities, automotive and heavy equipment fleets and communications, more than 1,000 employees, and a $250 million budget.

According to his friend and colleague Jim Attebery, former Phoenix Assistant Public Works Director and City Engineer, “The one thing that stood out to me was Bob’s ability to identify and hire top-quality people. We competed on that a time or two. Sometimes he won. Sometimes I got the person. Bob was good at delegating. He could leave town for a week, sometimes two. When he returned everything was running well and he just stepped in like he had never been gone. Very outstanding trait!”

Bob’s military career spanned 42 years in the Navy, active duty and reservist, rising to the rank of Rear Admiral (Ret.), Civil Engineer Corps. Having enlisted in 1942, Bob began officer training and earned a civil engineering degree through the Navy wartime V-12 program at the University of Texas. He was commissioned as an ensign in the Navy Civil Engineer Corps in 1945 and his military career culminated with his command of all Naval Reservists construction and civil engineering in the Western United States.

Bob is survived by daughters Sandy Hanshaw, of Point Loma, and Linda Castile of Del Mar; son Jim Esterbrooks of San Diego; and five grandchildren.

Connie Hartline can be reached at (816) 595-5258 or chartline@apwa.net.
Workplace Diversity: What is your measuring stick?

Charles E. Pinson  
Safety and Accreditation Manager  
Anderson County, South Carolina  
Member, APWA Diversity Committee

“What Workplace Diversity: What is your measuring stick?” was the question I asked myself after my supervisor came to my office one day and said, “Charles, we (the Public Works Division) do not have enough diversity. I am going to need you to help me with this concern.” As an African-American, I was pleasantly surprised that management at that level was making the effort to address this issue. Coincidently, two weeks later I went to an Accreditation site visit in Largo, Fla., where Chas Jordan asked me if I would be interested in being on the APWA Diversity Committee. After being appointed, I began researching about diversity and how to increase workplace diversity. Through my research, I found the following steps to be essential to obtain this goal:

- Identify your agency’s or company’s needs.
- Make every effort to make your workforce resemble the community in which you operate.
- Make sure your workforce matches the demographic you serve.
- Develop a hiring strategy to increase workforce diversity.
- Develop a procedure to track, measure and enforce policy.
- Develop relationships with local organizations and with community connections including churches, cultural institutions, colleges, Urban League, National Council of La Raza.
- Use employee referrals and minority job headhunters.

The workforce measuring stick is based on the demographic it operates in. Each agency or company should mirror the demographic it serves.

The Declaration of Independence states “that they are endowed by the Creator with certain unalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness.” It is very difficult to obtain these unalienable rights without gainful employment. When a person is employed they have an opportunity to provide for their families which is an important element in obtaining Life, Liberty, and the pursuit of Happiness.

Diversity is a broad subject, but for me, this definition captures the essence of the diversity experience: “Diversity is a commitment to recognizing and appreciating the variety of characteristics that make individuals unique in an atmosphere that promotes and celebrates individuals’ collective achievements.” Some benefits of diversity in the workplace are:

- New learning opportunities.
- Additional creativity.
- Increased productivity.
- Attracting and retaining talent.
- Increased market share and creation of a satisfied customer base.

Anderson County Public Work Division will begin as a pilot division for the County to implement the “Measuring Stick Program” beginning in March 2013. The program is intended to promote awareness and accountability as we embrace diversity in our workforce. The implementation process will consist of the following:

- Obtain support from top-level management.
- Schedule bi-annual meetings with the department heads and top-level officials encouraging them to support and promote the “Measuring Stick Program.”
- Review workforce demographic vs. service area demographic, assess recruiting method, and promote diversity.
- Develop a brochure to distribute to local organizations, churches, cultural institutions, colleges, Urban League, National Council of La Raza as required to become more inclusive in getting the information out about the types of jobs, job openings, and the method to apply for jobs.

In conclusion, when we toured Largo, Fla., I saw a beautiful flower garden. What made that garden so attractive were the many types and colors of flowers. If we can add some different flowers to our workforce garden, how beautiful our agencies or companies would be with people coming from near and far wanting to be a part of your workforce. As we grow in diversity, we also grow as an agency, as a department, and as a workforce.

Charles Pinson can be reached at cpinson@andersoncountysc.org.
Ed Hicks, State College, Pennsylvania’s Sanitation Foreman, has been instrumental not only leading a diverse, dedicated workforce, but has been a key person in selling a new collection system to the residents he serves. While one may think he started as a leader, you may be surprised to know that Ed literally worked from the bottom up. In the industry of refuse collection, Ed has literally done it all.

Ed began his career with the Centre County Solid Waste Authority, working in curbside recycling collection and sorting at the transfer station. Ed quickly made a positive impression with his affable way and hard work. He left Centre County for the private sector, working residential front-load refuse routes as well as commercial collection for Waste Management.

State College Borough brought Ed back into the public sector in 2000 when he was hired as an Equipment Operator. Ed quickly proved himself a natural in public service. His quick smile, friendly demeanor and service history in solid waste help him diffuse situations with upset customers in both the residential and commercial refuse operations.

Ed was promoted to Foreman over the sanitation operation late in 2002. Since his promotion, he has become the frontline supervisor over the Borough’s composting operation, as well. In 2012, Ed completed the educational requirements and passed the exam to earn certification from the Professional Recyclers of Pennsylvania (PROP) and Penn State-Altoona’s Certified Recycling Professional, including PROP’s Composting Specialization.

In 2009, State College began a pilot program for the collection of food waste/organic waste. The program was initially offered to 800 of the municipality’s 4,200 residential customers. At the end of the pilot program, residents within the project area overwhelmingly endorsed a proposal to collect food waste/organic waste curbside. In order to make the program financially neutral, it was necessary to change residual waste collection to an automated system. An automated system was first proposed in 1988, but implementation was voted down by Borough Council due to the outcry of citizens adverse to the change. Now, with the desire to add organic collection, citizens overwhelmingly endorsed the change.

Over the course of 2012, Ed joined others on the Borough’s Public Works staff in educating citizens on the new collection program. Ed and others spent hours of their time attending meetings in the Municipal Building and at Borough parks, introducing residents to the changes, talking over the concerns, and really selling the program. Residents have embraced the change, in large part to the efforts Ed and others have made.

State College’s new collection program kickoff is slated for late March 2013, and it has been Ed’s leadership skills that has not only sold the program to residents and elected officials, but will make the program successful in the end.
Solid Waste Management Committee: Working to serve as the center of expertise on solid waste issues

Nikki Guillot
Professional Development Program Manager
American Public Works Association
Kansas City, Missouri

When it comes to solid waste, people tend to make a few assumptions: we’re talking trash, distant landfills and lumbering garbage trucks. Other departments in your own agency may have misconceptions about recycling, automated collections or electronic waste disposal. It’s hard to imagine that something everyone uses every day could be so complex, variable and contentious but when you’re in the public works field, you quickly come to appreciate how those everyday services shape quality of life in a community, become a sore spot for residents or a watershed moment in public perception.

And when you have that council meeting or strategic planning session and Zero Waste initiatives or doubling landfill diversion rates suggestion comes up, knowing that it has the potential to affect all of your customers in their assumptions and expectations, you know you can turn to the Solid Waste Management Committee for the support, resources and information you need to get there.

Current members of the Solid Waste Management Committee include:

- Jason Marcotte (committee chair), Village of Northfield, Vermont
- Michael Foote, City of Gillette, Wyoming
- Mike Fraser, City of Salina, Kansas
- Trent Tompkins, City of Edmonton, Alberta
- John Trujillo, City of Phoenix, Arizona
- Mark Whitfield, Borough of State College, Pennsylvania

From bird control at landfills to a systemic Zero Waste framework, this issue of the Reporter is dedicated to the hot topics in solid waste management today brought to you by professionals in the field. The Solid Waste Management Committee is working hard to serve as the center of expertise on solid waste issues at APWA by partnering with the International Affairs Committee and with the recent addition to the committee of Trent Tompkins, Director of Collection Services in Edmonton, Alberta. The committee recognizes the innovation and advanced solid waste technology in place abroad and is reaching out to bring those lessons to our membership.

The committee has also partnered with the Fleet Management Committee on an article about refuse trucks used for snow removal, an invention of necessity perhaps, but certainly one that is providing efficiencies for both solid waste and fleet services staff. Few know residential streets better, even in heavy snow, than the waste route drivers who pass up and down them every day. This is just one example of how working across disciplines is such an asset to the public works community and can highlight the skills of one field of expertise to another.

The committee is looking forward to continuing these efforts and many more in their work plan for the next year, including monitoring rulemaking on disposal of pharmaceutical waste with the Government Affairs Committee and serving as subject matter experts in the creation of a solid waste technical specialty in the Donald C. Stone Center for Leadership Excellence. Along with a revision to the APWA Solid Waste Rate Setting and Financing Guide, the committee continues development of a new publication on the fundamentals of organics recycling for public works. All of this and more is accomplished through the diligence and hard work of our volunteer committee who generously donate their time and expertise to bring these valuable programs and content to our membership. Please visit the committee website for more information: http://www.apwa.net/technical_committees/Solid-Waste-Management. 

Nikki Guillot is the staff liaison to the Solid Waste Management, Water Resources Management and Facilities & Grounds Technical Committees. She can be reached at (816) 595-5221 or nguillot@apwa.net.
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As public works managers we are always seeking ways to save money and improve our levels of service. This is the story of how one city, in the face of budget restrictions, funded training that successfully achieved both goals. Yes, the City of South Jordan, Utah, found a way to keep training going with a reduced overall budget, saved money and increased its service levels. How did they do it?

First, it began with the introduction of an award-winning Safety Program. Why safety first? There were three good reasons. The program saved money by reducing costly equipment damage and loss. This resulted in the savings of over ten thousand dollars alone in the first year. Next, it reduced the number of lost workdays due to personal injuries. In fact, in the first year of the program they saved the equivalent in lost man-hours of two full-time positions.

Another major benefit derived from this program was an increase in employee morale (see Maslow’s Hierarchy of Needs). The program was coached in a way that said, “This organization cares about you and your well-being.” That created an instant understanding and bonding between employees and leadership. By including employees in the process as part of a Safety Counsel, it bought buy-in and cooperation.

This program required internal training and time with minimal costs but was well worth the efforts. As an unexpected bonus, the City received the lowest increase in annual insurance rates in the entire State of Utah, saving tens of thousands of dollars! The Safety Program won the APWA Safety Program Award two years running.

Public Works then developed a Career Path Program that required the attainment of advanced certifications, training, and skills for each step from basic maintenance worker through the leadership staff. The program was presented to the City Manager with the projection that the training would produce additional savings and increased levels of service. The program was funded from part of the savings generated from the Safety Program and insurance cost savings.

The program was approved and implemented in the next budget year. An Annual Training Plan that included managerial and leadership programs as well as technical training was created and implemented with near immediate positive results.

First, the employee responsible for the Streets Sign Program attended a class on a computerized sign-making machine. He did his homework and brought a plan forward to purchase the computer program and bring sign-making capabilities in-house. By implementing his plan, South Jordan saved nearly 25 percent of the annual sign budget including the startup costs that first year and is now replacing signs in a matter of hours rather than weeks.

Next, they sent a Streets Lead-Worker to the annual APWA Snow Conference. He came back with multiple ideas. First, the division calibrated their salt spreaders. That reduced the cost of salting during snow events from $3.48 cents per lane mile to $2.53 cents. He also learned about mixing red and white salts to work more effectively based on weather conditions. That also improved service level by improving efficiency and effectiveness of road salting.

Second, the employee learned about the advantages of pre-wetting roads with salt brine. He and his coworkers presented a proposal to build and utilize a brine system. When the numbers were crunched, they were given the go-ahead to design and build the system and dispensers. This program further reduced the cost of salting from $2.53 cents per lane mile to $1.15 cents. The mixing, storage and pumping plant was constructed in-house as were the dispensing systems for mounting on multi-use hook trucks that replaced limited-use 10-wheelers and bobtails (a plan developed by the Fleet Division to reduce fleet costs and improve usability of fleet assets). For the cost of less than $40,000, the City will save more than that annually.

Another idea came from the concrete crew. Rather than tearing out and replacing damaged sidewalks, they proposed to purchase a pumper that raised sunken sidewalks. The
cost was $15,000 to start up and allowed a two-man crew to repair more sidewalk in a week than a full crew of six could replace in a month for a fraction of the cost. This idea came forward after attending a local training session on concrete care and replacement.

Their latest program came in the form of building a dispenser for GSB-88. In the never-ending struggle to keep roads in good repair, the City has a treatment program designed to extend the service life of its roads. Part of the program calls for treating roads with regenerating agents. A bid was let for GSB-88 that came in at 11 cents per square foot. When the Streets Division manager and his staff came up with the plan to build their own dispenser and put the numbers to it they determined that they could do the treatment for 4.3 cents per square foot and build the dispenser for $6,000 to be used on the same hook truck as the brine dispenser. They saved more than the cost of the system on their first job.

I give great credit to the right-headed thinking of the South Jordan leadership to continue to invest in training that has proven to pay continuing dividends in cost-effective and service level improvements in the face of tough budget decisions. I also give great credit and thanks to the young men and women that have taken that training and put it to great use. The benefits will be realized by the residents of South Jordan for years to come. It pays to train!

Don Bruy can be reached at Dbruyc4@gmail.com.

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Chicago on the cheap: TV Dinners

Joel Koenig
Senior Project Manager, Crawford, Murphy & Tilly, Inc.
Chicago, Illinois
Member, APWA Chicago Metro Chapter Congress 2013 Steering Committee

Say what? Do you think I am talking about some microwaved yuck and a mushy chopped sirloin in goop? Not in the least.

I’ve learned there are a lot of folks like me who watch TV travel and food shows looking for something out of the ordinary. How else can you explain the popularity of this genre of TV?

I am blessed to have Don, a friend of mine in Chicago who has, on more than one occasion, guided me to some interesting establishments. I fondly recall his excitement at going to Schmidt’s Sausage Haus in Columbus, Ohio. It had been featured on the show “Man vs. Food” (www.travelchannel.com/tv-shows/man-v-food) where the host, Adam Richman, attempts to eat some gargantuan quantity of local cuisine in a short amount of time. Although this might be disgusting to some, I find it humorous. To this day when I mention Schmidt’s to Don, he goes on and on about their potato salad and how it tasted just like his German-born mom’s.

I decided to look into this phenomenon of TV travel/food hosts visiting Chicago, and lo and behold I discovered they’ve been here a lot. I thought I would share my thoughts on some of the more modestly priced Chicago eateries.

“Man vs. Food” has also visited Chicago. In one episode Richman goes to Lucky’s (3472 N. Clark,) a small sandwich shop not too far from Wrigley Field, where he attempts to devour three of their large sandwiches (fries and coleslaw included) in less than 20 minutes. I asked Michelle, one of our young staffers here at the E company, if she’s ever been there and she readily admitted she’s had three of their sandwiches but only one at each visit (she says). She likes it and recommends it.

Richman made a point of stopping by a “culinary landmark” and Chicago classic, Al’s Italian Beef (28 E. Jackson Blvd). An Italian beef sandwich is heaven on an Italian roll soaked in its own juices, special seasoning and topped with peppers. Mmm good. On the other hand, the show “Food Wars” put Al’s against Mr. Beefs (666 N. Orleans). The audience chose Mr. Beefs, but both offer simple fare in an unpretentious environment, so I say you choose.

Anthony Bourdain of the Travel Channel hosts the shows “No Reservations” and “The Layover.” Bourdain is a brash, and at times, a bit vulgar, gastronome. Between his shows he has visited many a Chicago establishment. One place he visited was Publican Quality Meats (825 W. Fulton Market Street). It’s the deli version of its neighbor and bigger brother, The Publican. If you like meat and fish, this is the place for you. The deli offers a simple fare and associated prices, while The Publican offers a full-service sit-down environment. The reviews on www.yelp.com for both are outstanding.

“Diners, Drive-Ins and Dives,” hosted by Guy Fieri, has a real working man feel to it. My son and I had a chance to follow in Fieri’s footsteps on one occasion and went to Kuma’s Corner (2900 W. Belmont.) My friend John had recommended it as one of the best burger places that my college-aged son would like. He was right. Kuma’s is a small place, but the closeness of the joint adds to its charm. The menu is on a blackboard, metal music plays over the speakers (not too loudly) and the wait staff

The Kuma Burger features the egg on top.
has more ink on their arms than the Chicago Tribune has on its front page. It's located just beyond the “yuppie” neighborhood of Wrigleyville, so it attracts a younger 20- to 30-something crowd who may not have the dough of their more affluent Gen X’ers. The burgers were great and the service was good. One warning—since it’s small, they demand that all of your party be present when you put in your name.

The local public television channel hosts a show called “Check Please!” (www.checkplease.wttw.com) featuring the recommendations of three locals. Back in 2001 a little known state senator, Barack Obama, recommended a Hyde Park establishment near his home (before he moved with the family to 1600 Penn). His recommendation was Dixie Kitchen and Bait Shop, a place that features southern comfort food. Unfortunately that location has closed, but if you are interested in the food and are willing to go to Evanston, try their other location (825 Church Street). For you foodies, I recommend visiting the show’s website and getting a look at some really interesting places.

Slightly off the food show circuit, “Made in America” was hosted by John Ratzenberger. You may remember him as Cliff on the TV show “Cheers.” He visited the Chicago-headquartered Weber Grill factory in one show. Some entrepreneurs had the idea of opening an indoor grill featuring kettles grills and called it Weber Grill (539 N. State). If you love grilled food this is your place.

I could go on and on, but you get the idea. Chicago has lots of great places to eat. Come to Chicago and remember to save me a seat.

Joel Koenig is a Senior Project Manager with Crawford, Murphy & Tilly, Inc. He is serving as a member of the Chicago Metro Chapter Congress 2013 Steering Committee. He may be reached at (312) 357-2075 or at jkoenig@cmtengr.com.
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NPW13RP
Taking leadership to the next level

Don Bessler
Director of Public Works
City of Tempe, Arizona

hen Wendy Springborn, crack Tempe Public Works Engineering Manager, asked me to write an article on leadership for the APWA Reporter I immediately hedged because it sounded so big and I wondered if I really was the right person for the task. Wendy is one of those awesome staff who understands the importance of both “everyday professionalism” as well as “professional professionalism,” a.k.a. being involved in APWA. Frankly, I was a little worried I might let her down. A couple of days later my ego kicked in and I convinced myself that I know enough about leadership to say something about it. In a former life, I wrote a few articles for professional journals on a range of subjects and I often found grounding in the life lessons I learned as a child from “The Colonel.” My father, LTC Felix Bessler, U.S. Army retired, had a way about him that promoted structure, responsibility, accountability and respect and, of course, those things when repeated often enough tend to rub off. Sometimes, it takes many years before you fully appreciate the value of the values, but I believe that most people are fundamentally good and want to figure out how to do the right thing. The Colonel used an expression with my siblings and me when we were involved with some hands-on special project, and he wanted to move on to the next thing—“good enough for government work.” He had many other good and colorful military phrases and acronyms less suitable for this magazine. He even used to say, “Why are you standing around with your teeth in your mouth?” As a kid, I didn’t pay much attention to what was meant by these military idioms, or whether they were any real expression of quality control. To me, they just meant I was finished with the chore, or close to it, and I could play ball or watch TV or do something better than chores.

Over my career, I have had many opportunities to reflect on the “good enough for government work” mentality and I realized some time back that it really isn’t good enough. Because of the intense scrutiny of both elected officials and staff at the community level, as government work goes, I have come to believe that local governance is the most difficult. Our constituents and customers are typically our neighbors, our friends, or friends of neighbors, or often just part of the exponentially-emerging FB Nation. Our decisions and actions create both real and imagined impacts on individuals, neighborhoods, the community and, of course, our environment. The challenge for municipal government has always been to try to achieve a balance among the sometimes far-ranging goals and philosophies of competing interests where everyone supports everything, unless of course it affects them.

In the last 15 years or so, I find myself trying harder at being better at work. I seemed to have rushed through the first 30 years of adulthood thinking more is always more, then I came to realize that we will be judged by what we leave behind, quality counts. Our personal legacy matters to those around us. “Good enough for government work” as an expression between a busy father and a goofball son was a term of endearment, but in the adult world, as stewards of the public’s resources, we need a better attitude. My plea for all of us is to take the time to do the right things right. Beatrice Murphy, my wife Mary’s grandmother, at the seasoned age of 93 (currently 98), told me, “Try as you may, try as you might, things done by halves are never done right!” Simple, yet elegant.

That said, and not for nothing (thank you Jimmy Thornton), what follows are some quick hits on the leadership subtopics I have been asked to write about.

**Vision** – Good leaders can describe a vision for their team that provides a clear picture of where and what the organization is aspiring to go and become. I believe great leaders understand that they alone do not possess this blueprint, rather the team around them does. A great leader knows how to get this out of them by helping the team Dream Big and see small; the beauty is in the details.

**Mission** – Good leaders recognize that the three most important questions they can ask are “What
is our business?” “Who is the customer?” and “What does the customer value?” Great leaders realize that to answer these questions honestly they have to run the organization for the benefit of the outsiders, not the insiders. The best job security comes by showing up every day to do a job, not keep a job. Great leaders help their team play far more offense than defense, by having strategy that executes on the mission. Great leaders realize that managing involves delegating goals; micro-managing involves delegating tasks.

**Organizational Values and Ethical Conduct** – Good leaders understand that formally declaring what is important and how teams treat each other matters. Great leaders intuitively know that when it comes to culture and values, actions speak louder than words. In our business, rarely are any two isolated incidents exactly the same; our decision making sometimes seems disjointed and inconsistent to staff and that causes confusion and a lack of trust. It took me years to be able to articulate my philosophy on this issue but I feel like I’m finally on really firm ground. I find myself often referring to the use of “Guiding Principles” as the anchor to our conduct and our decision making; I believe complex problems are best solved when using Guiding Principles to break down barriers, solve the complexity of puzzlements and establish boundaries and consistency.

**Diversity** – Good leaders understand the importance of assembling a diverse team and the importance of “tolerance.” Great leaders reject “tolerance” as a minimalist approach to both civility and inclusion and actively seek differences as a catalyst to our strength—strength that comes from an open hand, not a closed fist. In Tempe, we have many extremely talented employees from the foundation to the rafters. At the executive leadership level within the Public Works Department I am personally fortunate to work with the strongest starting lineup I have ever been on the field with. I have an expression I use to have a little fun when I like to drill down into details, hopefully breaking the ice between managing and micro-managing. I call it “the thing about the thing.” So, let me share with you the “collective thing about the thing” with the employees I work closely with on a daily basis. I view their strengths as gifts to the collective leadership of the department.
• Julie: her selflessness and willingness to serve.

• Lorinda: her uncanny ability to snatch order from the jaws of chaos.

• Carla: her energy and passion for every little thing and her desire to dream big!

• Dhawk: his vast knowledge and the comfort he displays in his own skin.

• Shelly: her patient disposition and adaptability to new challenges; I remember well the desire to learn, learn, and learn.

• Greg: his curiosity toward discovery and challenge, and the ability to capture the momentous.

• Andy: his active penchant for forethought, structure and caution.

• John: his ability to humble me by his strength through compassion.

**Continuous Growth** – A good leader understands the value of leadership and “succession planning” to develop a corps of future leaders. A great leader understands the concept of “second chair leadership.” Charlie Meyer, our Tempe City Manager, schooled me on the art of the second chair leader—a person in a subordinate role whose influence with others adds value throughout the organization. Second chair leadership is unique because it is not reliant on the power and authority of organizational leadership. Those who succeed by influencing others are more effective, commanding followship by a kind of pure leadership intent on improving the entire organization from the first chair to the last by getting people to commit rather than to be compliant.

**Celebrate** – Good leaders understand that everyone, all rational people, need to be acknowledged for their contributions—encouraging the heart. There is all sorts of research out there about monetary vs. non-monetary rewards and, in my opinion, at the end of the day it’s all of the above. Great leaders go further because they recognize that the strongest, most productive teams are created when responsible humor, innovation, and risk taking are cultivated. In this environment, the impossible seems possible and, instead of “fits and starts,” things start by knocking off one impossible thing and then moving on to the next impossible thing. I learned this many years ago from a valued colleague and friend, Dan Barks.

So here I will end and hope that my career learnings can add value to yours, but I also want to circle back to where I started—the Colonel and life lessons. Whether it be from a parent or not, there are also these other people in your life that do the same thing: touch you and teach you something. They light your passions, they warm your heart and they make you feel like you make a difference, at least for them. I’m not talking about “Coaching for Success” or “Going from Good to Great,” “In Search of Excellence,” “Total Quality Management,” “Best in Class” or even trying to figure out “Who Moved Your Cheese,” but rather, things like lessons in integrity, ethical dilemmas, defining moments, why loyalty is a two-way street, why you cannot simultaneously be a leader and a victim, how to be kind to people, or sometimes how to audible and simply check off your receivers (subtext: don’t always be so friggin’ predictably uptight!).

Sometimes these inestimable lessons come from a friend, colleague, maybe a teacher, or a spouse or, in my most hopeful moments, a child; children can definitely see through all the adult noise. A few years ago my then-teenage daughter, Hannah, made me rethink something when for Mother’s Day she gave Mary a refrigerator magnet that said, “You spend the first two years of your child’s life trying to teach them to stand up and speak – and the next 16 years telling them to sit down and shut up!” Now that’s a lesson.

Don Bessler can be reached at (480) 350-8910 or don_bessler@tempe.gov.

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**Nominations for national APWA appointment**

APWA is now soliciting nominations for appointments to national level committees/task forces/external relationships for the August 2013–August 2014 year. Step forward and offer your expertise to your profession. Contact your local chapter to let them know you have an interest in serving at the national level. Information on appointments may be obtained on the APWA website at www.apwa.net/membersonly/nominations or from Cindy Long at clong@apwa.net or (816) 595-5220. A brief biographical statement must be completed online or submitted as hard copy. Nominations for committees/task forces/external relationships must arrive at headquarters by close of business April 1, 2013.
For more information about these programs or to register online, visit [www.apwa.net/Education](http://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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| **April 7–10**     | 2013 North American Snow Conference  
Charlotte Convention Center, Charlotte, North Carolina |
| **April 18**       | Gaining Efficiencies Though Water Metering |
| **May 13–15**      | 2013 APWA Sustainability in Public Works Conference  
San Diego Sheraton Hotel & Marina, San Diego, CA |
| **May 16**         | Modifying Operations and Facilities to Accommodate AFVs in Public Works Fleets |
| **August 25-28**   | 2013 International Public Works Congress & Exposition  
McCormick Place, Chicago, Illinois |

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= Live Workshop  
= Online program
New Zealand’s successful approach to wastewater odor control

Carla Dillon, D.P.A., P.E.
Engineering Supervisor
Orange County Sanitation District
Fountain Valley, California

Introduction
In June 2012 I had the opportunity to study odor control methods for wastewater in New Zealand and participate in the INGENIUM conference through the Jennings Randolph Fellowship and the Global Solutions in Public Works. New Zealand is one of few countries with national policies on odors. The purpose of my study tour was to learn how New Zealand regulated odors, familiarize myself with their procedures to assess odors, and decision-making methods for design of new facilities. Since wastewater conveyance and treatment is often a major source of odors, this tour included visits to six wastewater treatment plants (WWTPs) as well as interviews with government officials. Five WWTPs were visited on the North Island, including Lower Hutt, Mangere in Auckland, Moa Point in Wellington, Rotorua, and Whitianga. On the South Island, the Ta-huna WWTP was visited in Dunedin. The size of the WWTPs ranged from less than one million gallons per day (MGD) to nearly 100 MGD.

Odor Treatment Methods
The most commonly used treatment for odorous vapors in wastewater facilities was biofiltration (Figure 1 on page 30). This approach captures air from a process and routes it through a media that uses microbes to decompose odorous compounds. This requires little water and low maintenance. Other treatment technologies utilized for odor control included single-stage and multi-stage chemical scrubbers, chemical addition to liquid streams, spray neutralizers/deodorants, and covering and sealing sources of odor. Figure 2 (page 30) shows an inlet channel that is covered and sealed in Whitianga. Large air ducts that convey odorous vapor to a biofilter in Auckland are seen in Figure 3 (page 30).

Although the treatment techniques may be similar to U.S. methods, the key insights came from observing what was done differently, policy implementation and decision-making.

Regulations and Guidance Documents
The local government entity, such as the regional council, serves as both the regulator of the WWTP and the owner/operator. In many cases, the council enters a service contract with a private company to operate the WWTP. In some cases there may be multiple contracts: one for operation of the WWTP, another for the ocean outfall discharge, and another for pump stations and collection systems.

The Good Practice Guide for Assessing and Managing Odours in New Zealand offers extensive information to aid in design and odor investigations. The requirements related to odors are based upon the Resource Management Act of 1991. Under this Act, consents, or permits as referred to in the U.S., are developed based upon the project, the environment, and stakeholders. Some facilities have requirements for odor control systems, some have specific numeric emission limits, and some have odor management plans with the requirement of no discernible odors. The development process for the consent

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• APWA President-Elect;
• At-Large Director in the functional area of Fleet & Facilities Management; and
• Regions I, II, V, VI and VIII Regional Directors (by APWA members in those respective regions)

The ballot will be available for online voting between July 5 and August 5, 2013 on the “Members Only” section of the APWA website. There will also be a voting icon on the home page of our website. If you do not have access to a computer at home or work, you may access the APWA website at your local public library or other public access points. If you are not able to vote online, you may request a paper ballot from Cindy Long at (816) 595-5220. Additional reminders of the voting process will be sent through the infoNOW Communities; via e-mail to every member for whom we have an e-mail address, and in future issues of the APWA Reporter.

If you have questions, please contact Cindy Long at clong@apwa.net or (816) 595-5220.
includes a collaborative approach in design, accounting for stakeholder expectations, and results in a clear understanding on the implementation plan, and associated costs for ratepayers.

Beyond consents, I found those working at WWTPs were very conscientious of odors. For some WWTPs, odors were more of a concern due to factors such as nearby neighbors (Figure 4 on page 30). One WWTP developed a risk matrix for situations that could lead to odors with response options. Several WWTPs had notices around the facilities to remind employees of the importance of controlling odors, such as the notice on a door that was to remain closed to prevent the migration of odors shown in Figure 5 (page 31). Another WWTP had a requirement to meet a specific numeric limit for hydrogen sulfide. The facility’s self-imposed operational target, however, was actually 1,000 times lower than the emission limit, and they were consistently achieving it. This proactive approach was prevalent at all facilities visited.

The nature of contract agreements for operating WWTPs allowed for direct financial impacts if the WWTP caused odors. While I was not privy to the exact penalties, they were significant enough to make odors an extremely high priority for all those working at the plant.

Stakeholder Collaboration
It became apparent that one key stakeholder was the Māori throughout New Zealand. Māori refers to the “local” or “original” people of Polynesian descent that arrived centuries ago, between 900 and 1200 AD. The outward signs of the Māori culture can be seen beyond the artistic souvenirs in gift shops, but also in the names of towns, the spoken language, and even television broadcasts. To my surprise, the Māori culture also significantly impacts the design and operation of wastewater facilities and subsequently odors and odor control needs. Figure 6 (page 31) shows a Māori design integrated into a sewer maintenance-hole cover.

The Māori consider the discharge of treated human waste to water to be abhorrent. Treated wastewater must first pass through the earth before re-entering any water. The transport of biosolids near Māori sites such as cemeteries, meeting facilities, and other sacred land is also viewed as abhorrent. For some WWTPs, these beliefs drove decisions to handle biosolids onsite, which then required active odor management so as to not impact nearby neighbors or passersby. During the expansion of one WWTP, the designers and Māori stakeholders met. Through discussions, the secondary and tertiary wastewater treatment processes were accepted as meeting the intent of passing through the earth. As agreed-upon during the design development, a monument with stones imbedded in the concrete at the outfall structure (Figure 7 on page 31) symbolizes passing through the earth. Māori ceremonies may even be held at such monuments following construction and prior to operation.

Investigative Process
Although the intention may be no discernible odors, there are occasions when odors escape. The investigation and resolution are taken very seriously. The process may involve field visits by several plant employees, the water services manager with the regional council, and review of monitoring data. Employees that interact with complainants participate in specialized customer service training. Surveys regarding customer service are sent regularly to residents, and customer service is often an organizational performance measure.

Trained or calibrated noses are used in the odor investigation process. WWTP employees have their noses tested for sensitivity using olfactometry. If they pass the sensitivity test, they take part in sniffing for sources and odors at the receptor’s site. These individuals with calibrated noses may also be called upon to testify if a case related to odors elevates to the court system. This tool was utilized by several WWTPs, and appears to provide a valuable means of validating the presence or absence of odors in the field.

First-hand interaction was invaluable to learn how odor control is practiced in New Zealand. Although I learned much more than what could be conveyed in this article, what most impressed me about the success of their odor practices was the respectful and collaborative process. Prior to any construction, all interested parties have a mutual understanding of what is to come, and those operating WWTPs take steps necessary to comply with the spirit of the law and the commitment made to stakeholders.

Acknowledgements
Thank you to all those who made this study fellowship possible: all those who warmly welcomed me to their wastewater treatment plants and shared their knowledge, APWA staff and INGENIUM staff. Figure 8 (page 31) shows my host at the Moa Point plant. I would like to specifically thank Ross Vincent with INGENIUM who helped tremendously in connecting me with individuals at WWTPs and ensuring I had smooth travels.

Carla Dillon can be reached at (714) 593-7371 or carla_dillon@yahoo.com.
Figure 5: Odor notices

Figure 6: Māori design of cover

Figure 7: Symbol of passing through the earth

Figure 8: Valitha Roos, Manager, and Carla Dillon at the Moa Point WWTP
The APWA International Affairs Committee and Eisenhower Institute at Gettysburg College are pleased to announce the Jennings Randolph Fellows for 2013. Chosen from a qualified field of 14 applicants, these three APWA members will conduct topical public works study tours and make presentations at our partner associations’ annual membership meetings in Australia and the Czech Republic and Slovakia. With great pleasure, we announce the following Jennings Randolph Fellows for 2013:

Sujit Ekka, a Civil Engineer for the Public Works Department in Durham, North Carolina and recipient of the 2013 Jennings Randolph Fellowship, will use the award to attend the International Public Works Conference, hosted by the Institute of Public Works Engineering Australia (IPWEA) in Darwin, Australia. This will be followed by a study tour to collaborate with professionals from local public works departments, and Melbourne Water, the agency owned by the Victorian Government that manages Melbourne’s water resources. Melbourne and Durham share similar challenges in managing urban stormwater runoff, such as highly developed areas with rapid growth. The goal of this study is to translate knowledge of advanced stormwater treatment techniques and watershed management plans between Melbourne and Durham and to evaluate the functionality of existing regulations in implementing positive changes to protect water resources.

Sujit began his professional career in land development engineering, focusing on stormwater management and drainage design. His career in public service began with the City of Charlottesville in Virginia, followed by a Water Quality Analyst position in the City of Durham Public Works Department in North Carolina. In his current role as a Civil Engineer, Sujit manages stormwater projects and contracts for Durham Public Works. His technical skills include stormwater engineering, drainage, water quality, watershed management, and civil/site design. Sujit is a licensed Professional Engineer and a registered Professional Hydrologist. He holds an M.S. in Land and Water Resources Engineering from Virginia Tech, an M.S. in Ecological Engineering from the University of Arkansas, and a B.S. in Agricultural Engineering from India. He has published in peer-reviewed journals and presented at local, regional, and international conferences. Sujit has also volunteered in international water, sanitation, and development projects for Nicaragua and India.

Upon his return to the United States, Sujit will share his observations and experiences through presentations to local and regional organizations involved in stormwater management. He also plans to present at the 2014 APWA International Public Works Congress & Exposition in Toronto.

Elia Twigg, P.E., the Public Works Director for the City of Palm Bay, Florida since January 2012, was one of the recipients of the 2013 Jennings Randolph Fellowship for Australia. While in Australia, Mrs. Twigg will attend the IPWEA International Public Works Conference in Darwin, Australia where she will begin her study tour in Sydney and the surrounding area.

Mrs. Twigg notes that public works is the essential service for local government that oftentimes goes unrecognized. Her goal is to collaborate with other public works leaders nationally and internationally in changing that mindset of the general public and to continue her awareness campaign in the City of Palm Bay.
Mrs. Twigg graduated from the University of Florida with her Bachelor of Science degree in 2002 and her Master of Science degree in 2012, both in Civil Engineering. She began her career as a Project Engineer in 2002 in a small engineering firm where she did land development design, and then went to work for the City of Palm Bay in 2005 as the Right-of-Way Services Manager within the Public Works Department. In 2006, she was promoted to a Division Manager where she managed the operations (maintenance, construction and traffic operations) and did traffic engineering. She also obtained her professional engineering license that same year. In 2011, she was reassigned as a Project Manager where she managed all of the large capital projects, then was promoted to Public Works Director in January 2012. Mrs. Twigg is married with two young children, and her hobbies include going to the gym, playing soccer, boating, traveling and spending time with her family.

Upon her return to the City of Palm Bay, Mrs. Twigg will continue her outreach campaign and will share her experiences through presentations to the City Council, her APWA chapter and the public works community, and with other local organizations and homeowners groups. She is excited for this opportunity and is looking forward to the collaborations with other public works professionals from around the world.

Ray C. Funnye, Director of the Public Services Department in Georgetown, South Carolina, is a recipient of the 2013 Jennings Randolph Fellowship. Mr. Funnye will attend and make a presentation at the Czech-Slovak International Public Works Conference in Senec, Slovakia, April 2013. The focus of his conference presentation will center on American small cities/rural communities employing Public Private Partnerships (P3) strategies, as a means to provide critical infrastructure service delivery. Following the conference he will complete a study tour of the local public works departments in the Slovak and Czech Republics. The intent of this journey is to develop and maintain public works international relationships and work in collaboration with international partners. The objective of the study and exchange is to evaluate best practices for electronic waste collection and disposal in European countries.

Funnye is a South Carolina native who graduated from Savannah State University with a Bachelor of Science degree in Civil Engineering Technology. He also earned a Master’s degree in Management/Leadership from Webster University. He began his public services career in Atlanta, Georgia where he worked for more than a decade with project design, bidding and construction phases for rapid transit, educational facilities and general civil construction projects. In 1992, following a two-year deployment in the U.S. Virgin Islands, he returned to his home state as a plans examiner for Georgetown County. He was quickly promoted to Public Works Director and by 2002 he was named Director of Public Services for Georgetown County. In his role as the Public Services Director he is responsible for management and direction of several major divisions: Public Works, Environmental Services, Facilities Services, Capital Projects, Fleet Services, Airports, and Stormwater/Engineering. The department has a total budget of approximately $20 million and over 100 employees. Funnye was a 2010 recipient of APWA’s Top Ten Public Works Leaders of the Year award, was appointed to the APWA Donald Stone Center for leadership excellence in public works, serves as the APWA Region III delegate for the South Carolina Chapter, and successfully received APWA Accreditation status for Georgetown County in 2011. He volunteers for numerous community organizations and serves on several charitable boards where he offers leadership competency and enthusiasm to positively impact the lives of others.

Gail Clark can be reached at (202) 218-6732 or gclark@apwa.net.
APWA is proud to bring the 2013 Show for Snow to one of America’s prominent Ice Belt cities – Charlotte, NC! With a variety of winter weather events occurring in the Ice Belt annually, and even as far south as Dallas and Atlanta in recent years, it’s important to remember that winter maintenance is more than just snow removal.

With that in mind, the 2013 North American (Not Just) Snow Conference promises to be the best yet! Sit in on one of the many outstanding education sessions, featuring the very best in snow and ice control along with an expansive lineup of fleet and emergency management solutions to fit your needs. Don’t miss your opportunity to visit the exhibit floor, where you’ll have an opportunity to network with peers as you discover the industry’s latest cutting-edge technologies, equipment and processes you need to help keep your community safe next winter!

Sunday, April 7
Exhibit Hours:
4:30 – 7:00 p.m.
7:00 a.m. – 4:30 p.m.
Winter Maintenance Supervisor Certificate Workshop
1:00 – 4:30 p.m.
Education Sessions
4:30 – 7:00 p.m.
Exhibit Opening & Welcome Reception on the Exhibit Floor

Monday, April 8
Exhibit Hours:
9:00 a.m. – 3:30 p.m.
7:30 – 9:30 a.m.
General Session Talk Show: Emergency Management
9:30 – 11:10 a.m.
Coffee Break & Non-Compete Exhibit Time
9:40 a.m. – 3:15 p.m.
Exhibitor Solutions Theater Presentations
11:10 a.m. – 12:00 noon
Education Sessions

12:00 noon – 2:00 p.m.
Lunch & Non-Compete Exhibit Time
12:45 – 1:45 p.m.
Roundtables
2:00 – 2:50 p.m.
Education Sessions
2:50 – 3:30 p.m.
Refreshment Break & Non-Compete Exhibit Time
3:30 – 5:00 p.m.
Education Sessions
The Show for Snow

2013 APWA NORTH AMERICAN SNOW CONFERENCE

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APWA is proud to bring the 2013 Show for Snow to one of America’s prominent Ice Belt cities – Charlotte, NC! With a variety of winter weather events occurring in the Ice Belt annually, and even as far south as Dallas and Atlanta in recent years, it’s important to remember that winter maintenance is more than just snow removal.

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Don’t miss your opportunity to visit the exhibit floor, where you’ll have an opportunity to network with peers as you discover the industry’s latest cutting-edge technologies, equipment and processes you need to help keep your community safe next winter!

**Tuesday, April 9**

**Exhibit Hours:**
8:00 a.m. – 2:00 p.m.

8:00 – 8:50 a.m.  
Education Sessions

8:50 – 10:10 a.m.  
Coffee Break & Non-Compete Exhibit Time

9:00 a.m. – 12:15 p.m.  
Exhibitor Solutions Theater Presentations

1:00 – 3:15 p.m.  
Education Sessions

3:30 – 5:00 p.m.  
Closing General Session: Jeff Hammond, Keynote Speaker

6:30 – 9:30 p.m.  
Reception at NASCAR Hall of Fame

**Wednesday, April 10**

8:00 a.m. – 12:00 noon

Technical Tours:
- Tour #1: Charlotte Street Maintenance
- Tour #2: Freightliner Trucks
- Tour #3: Michael Waltrip Racing Shop

**Sunday, April 7**

Exhibit Hours:
4:30 – 7:00 p.m.
7:00 a.m. – 4:30 p.m.

Winter Maintenance Supervisor Certificate Workshop

1:00 – 4:30 p.m.  
Education Sessions

4:30 – 7:00 p.m.  
Exhibit Opening & Welcome Reception on the Exhibit Floor

**Monday, April 8**

Exhibit Hours:
9:00 a.m. – 3:30 p.m.
7:30 – 9:30 a.m.  
General Session Talk Show: Emergency Management

9:30 – 11:10 a.m.  
Coffee Break & Non-Compete Exhibit Time

9:40 a.m. – 3:15 p.m.  
Exhibitor Solutions Theater Presentations

11:10 a.m. – 12:00 noon  
Education Sessions

12:00 noon – 2:00 p.m.  
Lunch & Non-Compete Exhibit Time

2:00 – 2:50 p.m.  
Education Sessions

2:50 – 3:30 p.m.  
Refreshment Break & Non-Compete Exhibit Time

3:30 – 5:00 p.m.  
Education Sessions
Trash trucks used for snowfighting

Jeffrey Tews, CPFP, Fleet Operations Manager, City of Milwaukee, Wisconsin; Tyler Bandemer, Solid Waste Superintendent, City of Loveland, Colorado

Following a successful pilot program in 2009, the City of Loveland, Colo., Solid Waste Division began using trash and recycling trucks equipped with newly-purchased snowplows to open up residential streets. When a big storm hits (six inches-plus), the plows are affixed to fourteen trash trucks that plow the center third—not curb to curb—of residential streets.

As stated above, the trash-truck plows are only called out when the snowfall exceeds six inches deep, the weather forecast is poor and the higher priority streets are already passable.

A little history
Making use of the trash trucks—an existing City resource—to clear snow in Loveland was inspired by similar use of refuse trucks back east in cities like New York City, Milwaukee, Baltimore and others. Loveland may be the only small city west of the Mississippi doing this.

During the winter of 2006-07, when snowstorms fell one after another during a prolonged cold spell, City crews were so busy keeping the main roads open that they couldn’t attack the residential streets. Residents may have been just a block or two from a plowed roadway, but couldn’t get there without a four-wheel-drive vehicle.

In just a couple of days, the vehicles that did travel the unplowed residential streets packed down the snow, plus the ongoing freeze-thaw-freeze weather pattern resulted in roadways that resembled frozen and badly-rutted lakes. The City called out its heavy-duty equipment, plus spent about three-quarters of a million dollars hiring private contractors with road graders and front-end loaders. The results were not only costly, but disappointing. Even the heavy equipment couldn’t scrape up the ice, which had bonded to the streets.

In 2009, the Solid Waste Division tried an experiment. They purchased a snowplow and mounted it to one trash truck. When the first big storm occurred, they tried it in one neighborhood. It worked. When the next big storms hit, they tried it again. It worked each time. So, in 2010, for less than one-third the cost of the bill for the cleanup in 2006-07, the City ordered more plows. There was no cost for trucks because the City already has a fleet of trash trucks. And aside from a little maintenance after sitting through the weather throughout the year (i.e., o-rings and seals), the plows have a long lifespan.
Pros and cons

Our world is imperfect. There are always tradeoffs. Positives and negatives. That reality exists with this program also, but the positives far outweigh any negatives.

The big positive is obvious—citizens are able to drive down their small residential streets to the main streets. Residents are able to get to work, school, shopping, the movies, wherever. Four-wheel-drive is generally not required. The cost of a plow affixed to a trash truck is a fraction of the cost of a new plow truck, which is basically a horse in the stable most of the year, just waiting to be used. Considering that large snow events only happen 3-4 times per year on average in Loveland, the added wear and tear on the trash trucks pushing snow is at a minimum. And last but not least, the trash and recycling collection crews drive specified routes throughout the residential streets day in and day out collecting waste and are highly knowledgeable of the residential streets and the safest and most efficient way to maneuver through these areas, rarely missing a street because of their routing knowledge.

Now the cons. Plowed snow has to go somewhere. Clearing the center of the street means the plowed snow will pile up—windrow is the proper word—against parked cars and across driveways. Shoveling is generally required to get through the windrow.

City crews will open the residential streets, but they can’t shovel 25,000 driveways. That’s the tradeoff. But, the Solid Waste Division has also equipped its light-duty and heavy-duty pickups in the division with plows. These trucks are used for clearing cul-de-sacs, where the trash trucks equipped with plows may struggle with maneuverability, and are also used for clearing windrows from driveways of the elderly, handicapped and special needs customers. Since the City already has a list of these residents who need assistance with moving their trash carts, the City is able to utilize this same list for helping these residents during a heavy snow event.

Earlier is better?
City crews will hit the neighborhoods as soon as possible during and after a heavy snow event. The earlier the trucks get into the residential
neighborhoods, prior to residents driving on the newly fallen snow, the better the results of snow removal and preventing ice rutting. Generally speaking, the crews can get all residential streets plowed in about 6-8 hours.

And the trash?
Depending on the day of the week and/or the time of day when the large storm hits, residents’ trash and recycling collection may be delayed or even canceled for that week’s pickup. With a big storm, the truck drivers will be called upon to do double duty; clearing snow and picking up the carts. Snow clearing will have priority over cart pickup.

From Milwaukee
The City of Milwaukee has used its refuse trucks for plowing snow for as long as anyone there can remember. In Milwaukee, the first trucks out during a snow event are the dump trucks with salter insert bodies and underbody plows. Milwaukee utilizes 96 of these first-response trucks to handle snow up to four inches with the underbody plow. Depending on how much snow is predicted or how quickly it falls, these dump trucks can return to the yards to have a front plow mounted, allowing them to handle accumulations over four inches.

When needed, Milwaukee will mount plows on its 165 refuse and recycling trucks and send them out to supplement existing efforts on Milwaukee’s 1,400-plus miles (including about 7,700 lane miles) of streets. Refuse collection is suspended while full plowing operations are underway. The refuse trucks are a natural fit for snowplowing in Milwaukee, since snow operations are also the responsibility of the DPW-Operations Sanitation Section.

More than that, the refuse trucks are a great fit for plowing. Most of the trucks are of the cab-over or cab-forward design, which affords great visibility for the driver. The diesel and compressed natural gas (CNG) trucks are both maneuverable and powerful, and do not need any counterweight to move the heaviest of snow. Most of the refuse trucks have tandem rear axles, allowing the use of an inter-axle differential lock for the few occasions when the trucks may get stuck.

As also discovered in Loveland, the drivers of the refuse trucks know the residential areas from working those routes when collecting throughout the year. Milwaukee has dedicated staff driver trainers conduct classes throughout the year in driving both the salter dump trucks and refuse trucks with plows. Training on other equipment ranging from endloaders with large snow blowers to sidewalk tractors and dump trucks with ice-control equipment is required for all snowfighting crew members.

Each snow storm is unique in some way and staff must spend time figuring out the best possible plan of action for each occurrence. Milwaukee plows the main streets and highways first, then moves into the districts to provide curb-to-curb clearing of snow on all city streets. Once the majority of the snow has been removed, refuse and recycling routes are resumed where they left off before the storm. For the most part, refuse collection days that are lost to snow removal operations must be made up.

Milwaukee establishes a warm-weather schedule for both refuse and recycling collections. The schedules take into account holidays and furlough days, which push collection days forward. Crews often work longer hours each day, or perhaps an extra Saturday until the routes are caught up.

The refuse trucks in Milwaukee are all equipped with provisions to carry and utilize snowplows. These trucks have proven their worth and value in snowfighting operations for decades.

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Building support for a better alternative
Safe disposal of pharmaceutical wastes

Michael Fraser
Director of Public Works
City of Salina, Kansas
Member, APWA Solid Waste Management Committee

As citizens become more educated with the issues related to the safe disposal of pharmaceutical wastes, there is a growing concern. A large part of the apprehension on the part of those in the know is that the public, policy-makers, decision makers, regulators, and elected officials are not fully aware of all the potential hazards these unwanted products can generate when introduced into the environment or consumed through the drinking water supply.

According to the Water Environment Federation website, modern science has produced new products and medicines that have improved the quality of our lives; however, their production, use, and disposal have resulted in the presence of low levels of microconstituents in the environment. Microconstituents are miniscule particles of natural and man-made substances such as pharmaceuticals and personal care products, pesticides, and industrial chemicals, which have been detected within water and the environment.

Some people still believe it is fine to dispose of unused, expired, or unwanted medications by flushing them down the drain or toilet. They believe the wastewater treatment plants or their septic system will eliminate or neutralize the medicines before being discharged back into the rivers, lakes, and streams. However, there are potential hazards with the incorrect disposal of pharmaceutical wastes that are important to know about.

Did you know?

- The US Geological Survey in 2002 sampled streams in 30 states and of the 139 streams tested, 80% had measurable concentrations of prescription and nonprescription drugs, steroids, and reproductive hormones.
- Pharmaceuticals, including antibiotics, anti-convulsants, mood stabilizers and sex hormones have been found in the drinking water of 24 major metropolitan areas affecting 41 million Americans according to an article by the Associated Press (An AP Investigation: Pharmaceuticals Found in Drinking Water).
- Some pharmaceuticals that pass through the human body or that are washed down the drain are not broken down in the wastewater treatment process or filtered out during the water treatment process and end up in the drinking water supply.
- The exposure of even low levels of drugs can have negative effects on fish and other aquatic species, and may also negatively affect human health.
- Some pharmaceuticals are discarded in the trash where they ultimately end up in a landfill leaving the potential of leaching into the groundwater.

Although nationally, groups are supporting alternative methods of flushing pharmaceuticals down the drain, it seems to make sense for companies which manufacture, sell, and/or dispense pharmaceuticals to develop programs to take back unused or unwanted drugs, especially controlled substances so they can be safely disposed.

The American Public Works Association supports the need for new legislation to remove barriers for the collection and management of pharmaceutical wastes. They encourage pharmaceutical companies that manufacture these products to develop product stewardship programs to collect unwanted and unused pharmaceuticals. The improper disposal of unused or unwanted medicines not only poses a possible health concern for humans and animals, these drugs can create a problem in the home with accidental poisonings and/or drug abuse.

Federal legislation would help to provide some uniformity with all the states. Different states have different regulations and requirements. New federal regulations should not preempt the right for local governments and states to apply more stringent requirements. Also, the Federal Drug Administration (FDA) should eliminate the flushing recommendation from existing drug labels and not allow future drug labels to recommend leftover drugs be flushed. Furthermore, federal law should guarantee the anonymous take-back of any and
all pharmaceuticals in order to encourage participation in the turn-back program to remove these from the home and the environment.

The federal government along with some states and local governments are aware of the potential risks and have implemented medication take-back collection programs in order to try and reduce the accumulation of pharmaceuticals in the home that could lead to unintentional poisoning, drug abuse, or possible environmental issues. The Drug Enforcement Administration (DEA) hosted its fifth Drug Take Back Day in September 2012. Citizens participating in the four previous events brought in almost 1.6 million pounds (nearly 774 tons) of prescription drugs. According to the DEA website, most recently there have been almost 5,700 collection sites operated by nearly 4,300 of the DEA’s local law enforcement partners.

The Kansas Department of Health and Environment along with the Kansas Board of Pharmacy have developed a take-back program for participating pharmacies and household hazardous waste facilities (HHW) to collect uncontrolled medication generated by households, long-term care facilities, and hospice care facilities. The Kansas Medication Disposal Program offers Kansans a safe and environmentally responsible way to dispose of unwanted medications. Through the use of these established take-back locations for unused medications, citizens can help limit the environmental impact these medications may have on surface and/or groundwater, as well as reduce the possibility of accidental poisoning or drug abuse. Since the start of the program in April 2012, 53 pharmacies have enrolled in the program as well as dozens of Kansas Police Departments and HHW facilities.

In Saline County, Kans., the Sheriff’s Department has implemented a program called Operation Medicine Cabinet that gives citizens the opportunity to dispose of unused, unwanted and expired medicines by turning them in at the Sheriff’s Office instead of flushing them down the drain or placing them in the trash. This effort was begun several years ahead of the current nationwide drug take-back event now coordinated and conducted by the DEA. Pharmaceuticals can be taken to the Sheriff’s Office, Monday–Friday between the hours of 8:00 a.m. and 5:00 p.m. Since the start of Operation Medicine Cabinet in late 2009, the program has disposed of 2,731 pounds of unwanted medicines.

The problem with developing unified federal legislation is that there is not enough conclusive evidence available at this time to show that pharmaceutical wastes are a danger to human health and/or a hazard to animal or plant life. Although it is clear that humans and animals can be exposed to residual pharmaceuticals through drinking water, the health risks associated with the long-term exposure to these trace elements on humans, animals, or aquatic life is not clear enough for immediate action. Nevertheless, common sense tells us that it may be harmful for us to continue to consume these unknown pharmaceuticals, and it is in our best interest to encourage legislation to develop alternative disposal methods. Furthermore, even though there are some government collection programs available, the expenses for these programs should be paid for by the manufacturers and not the general public through local government tax dollars.

Please investigate what state and county resources are available in your area and develop plans to either partner with another agency or start your own take-back program for your community.

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It is in our best interest to encourage legislation to develop alternative disposal methods for pharmaceuticals.
What is Zero Waste and why isn’t everyone doing it already?

Jason Marcotte, MPA
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Chair, APWA Solid Waste Management Committee

Zero Waste has been a solid waste management theory that has been tossed around for quite some time. According to GrassRoots Recycling Network (GRRN), the definition of Zero Waste is: Zero Waste is a philosophy and a design principle for the twenty-first century. It includes “recycling” but goes beyond recycling by taking a “whole system” approach to the vast flow of resources and waste through human society. Zero Waste maximizes recycling, minimizes waste, reduces consumption and ensures that products are made to be reused, repaired or recycled back into nature or the marketplace (GRRN).

Zero Waste (GRRN):

- redesigns the current, one-way industrial system into a circular system modeled on nature’s successful strategies;
- challenges badly designed business systems that “use too many resources to make too few people more productive”;
- addresses, through job creation and civic participation, increasing wastage of human resources and erosion of democracy;
- helps communities achieve a local economy that operates efficiently, sustains good jobs, and provides a measure of self-sufficiency; and
- aims to eliminate rather than manage waste.

Where you are in the country and with whom you are talking affects the “reality” of getting to Zero Waste. This means that talking about “it” is great but actually “doing it” is very difficult and extremely complicated. If it wasn’t, every community in America would have implemented it already. Zero Waste presents compelling environmental, economic, and social goals for the twenty-first century. However, achieving Zero Waste or even substantially increasing current recovery rates requires an engaged public willing to question conventional economic wisdom and political practice.

Why is it so complicated?

It is complicated in many ways but there are a few major reasons that hinder its implementation. For example; “behind-the-scenes waste” is waste that is produced through the transport of materials to the manufacturing facility, through the manufacturing process itself, and then through the transportation of the finished product to the consumer. The manufacturing sector of the United States consumes nearly half of the energy used by the country per year. Since most of this energy is in the form of electrical energy and most of this is produced through the use of coal-fired power plants, the first waste product released by manufacturing clearly is in the form of air polluting elements such as acid rain and smog forming particulates. In addition, two-thirds of this energy is lost (wasted) even before it completes its journey from the electrical generating plant along high-tension wires into the manufacturing facility where it can be used.

This is part of the waste that we don’t even see and comes hidden in the products and packaging that we purchase. In Europe, a full fifty percent of the solid waste produced per capita per year is produced by manufacturing and mining activities. According to the same set of statistics, municipal trash in Europe only accounts for twenty-five percent of the solid waste. This means that the item bought today has sent two times as much trash to be disposed of before the product is used and finally disposed in a landfill. Product prices usually do not reflect their full environmental costs. Other hidden costs to consider are damages done to ecosystems and the loss of habitat in the acquiring of virgin resources. There also is the production of greenhouse gases through transportation. Manufacturing processes create a variety of toxic pollution that lead to health problems. All of these are real costs created by our current system but are not calculated into the price of goods.

Other challenges of Zero Waste are the government subsidies that support polluting industries and
manufacturing practices. Under current resource policies dating back a century, federal and state programs subsidize logging, mining, and waste disposal industries that directly compete with resource conserving enterprises engaged in recycling and reuse. Whatever subsidies that exist for recycling efforts pale in comparison with the subsidies provided to industries that use virgin resources. In order for Zero Waste to compete with this system, policies need to be put in place that actually “flips” the current system. This means that the government should be taxing companies that prefer to continue using virgin resources while at the same time subsidizing companies that incorporate sustainable recycling and reuse measures in obtaining the material needed in their operations. This will naturally stimulate companies to “rethink” how they can improve operations in a manner that incorporates methods that take advantage of this new subsidy and focus on recycled materials rather than the taxed virgin ones.

The biggest hurdle is that Zero Waste needs one hundred percent participation by government, industry and community. Government needs to have a comprehensive strategy to implement the appropriate legislation and policies that support, fund, and enforce a system aiming towards a Zero Waste goal. These policies need to be set in a manner that keeps industry competitive, fostering competition that would trigger the innovation of cleaner and sustainable technologies. This “innovation effect” would make production processes and products more efficient and competitive without harming the environment and depleting valuable resources. The final part for one hundred percent participation is the community. However, before a community can do its part, state and local governments need to have done a tremendous amount of “prep work” for full community involvement. As part of the federal strategic plan, state and local governments should have guidelines in place for education and outreach as well as establishing outlets for materials to be recycled, reused, returned, composted or disposed of if needed.

These are a few of the many challenges of getting to Zero Waste. It is a little more complicated than just putting recycling at the curb. Zero Waste is a goal, and a process, a way of thinking that profoundly changes our approach to resources and production. Not only is Zero Waste about recycling and diversion from landfills and incinerators, it restructures production and distribution systems to prevent waste from being created in the first place. Zero Waste is a philosophy that encompasses this challenge. The vision of Zero Waste is becoming more and more accepted throughout the world. While some claim it to be an unachievable target, the reality of Zero Waste exists in everything surrounding us. Every by-product produced by an ecosystem is used by another organism. Resources are recycled throughout the system and never change into a form that is unusable. Although one company by itself may not be able to eliminate waste, with planning and coordination, their by-products could be used by another company. Municipalities need to use financial incentives to move their communities toward Zero Waste. Financial incentives will increase reuse and recycling, while penalizing landfill disposal and incineration. This full-cost accounting and life-cycle analysis includes the environmental and social costs of managing waste that continues to gain acceptance within public/private partnerships.

In a world in which the population is growing at exponential rates with resources being consumed at infinite levels and with economies completely dependent upon consumption, Zero Waste is a concept that will require tremendous effort, time, and buy-in. The long-term payoff for humanity is both economic and environmental sustainability. Zero Waste would provide us this best option in a world in which we must integrate the demands of progress and preservation. A triumvirate of government, businesses, and community can transform this concept into a reality.

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Bird strikes and the public works solid waste professional

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Many of us recall the heroic landing of US Airways Flight 1549 on the Hudson River in New York City on January 15, 2009. The landing was necessitated after the aircraft lost its engines just three minutes after takeoff from the LaGuardia Airport. The engine loss was caused by what officials call a “bird strike,” or in the case of Flight 1549, a flock of Canadian Geese.

Bird strikes in the aviation industry are a serious problem. Each year, about 4,500 bird strikes are reported, causing over $650 million in damage, and causing risk to the lives of aircraft crews and their passengers. In 1991, Bird Strike Committee USA was formed to:

- facilitate the exchange of information, promote the collection and analysis of accurate wildlife strike data
- promote the development of new technologies for reducing wildlife hazards
- promote professionalism in wildlife management programs on airports through training and advocacy of high standards of conduct for airport biologists and bird patrol personnel
- be a liaison to similar organizations in other countries.

The committee consists of officials from the Federal Aviation Administration, Department of Defense, US Department of Agriculture, airline/aircraft industry, and airports.

Public works officials need to consider how their facilities and operations may contribute to the bird strike problem. Even the placement of a sedimentation pond, which may attract large migratory birds, when placed within five miles of an airport, needs to be managed in such a way to deter the congregation of large numbers of birds.

In Atlantic County, N.J., the Atlantic County Utilities Authority (ACUA) operates a landfill within a 10,000-foot radius of the Atlantic City International Airport (ACY). The ACY airport serves commercial aircraft as well as hosts the Federal Aviation Administration Technical Center, Coast Guard Air Station Atlantic City and Air National Guard Base Atlantic City. Aircraft from all of these units as well as commercial flights transit the airspace over the ACUA landfill.

Landfills are known for attracting gulls and other bird species that when airborne are hazardous to turbine-powered aircraft. The ACUA landfill is a short distance from the vast expanses of southern New Jersey coastal salt marshes that represent the preferred night roosting location for countless tens of thousands of mixed species of gulls. This habitat is used throughout the calendar year. In the summer months, the bulk of the global breeding population of Laughing Gulls (Larus atricilla) uses the southern New Jersey coastal salt marshes for nesting. The monumental numbers of this species present an annual critical period of challenge for the ACUA from April to October.

At the ACUA landfill, bird deterrence is necessary to eliminate the risk of airborne collision with military and civilian aircraft operating from ACY. According to Bert Hixon, Wildlife Biologist with ACUA, the primary control effort is directed at gulls, geese, vultures and a number of other species whenever they appear at the landfill. Because these larger birds are daytime feeders, ACUA landfills waste at night, making sure all waste is covered before dawn. During daylight hours, waste is deposited from refuse trucks within enclosed buildings, then after dusk, with the cover of night, is hauled from the building to the landfill.

After night landfiling the principal method of gull deterrence involves patrolling the grounds—with special attention to the working face of the landfill—in search of gulls and whenever they are found, launching pyrotechnic devices at these birds from a roving, heavy-duty four-wheel-drive SUV or pickup. Vigilance against accumulating flocks of gulls must be maintained throughout the daylight hours, throughout the year and in all weather conditions.

Bird control at the ACUA landfill is continuous every day from dawn to dusk for 365 days a year. The public safety of Atlantic County citizens and all of South Jersey is at stake and
continuing efforts are mandated by the Federal Aviation Administration and the New Jersey Department of Environmental Protection.

In New York City, the North Shore Marine Transfer Station (MTS) in College Point, Queens, plans to open in the spring of 2013. Once up and running, the station will haul about 3,000 tons of waste by barge to landfills every day. The facility is less than 2,500 feet from the landing runway of the LaGuardia Airport. Within the enclosed facility, waste would be transferred from refuse trucks into sealed leak-proof containers, then loaded onto barges for final disposal. The new MTS will replace a transfer station which operated at the site from 1954 to 2001.

The new facility was reviewed by a technical panel that consisted of officials from the Federal Aviation Administration, USDA Wildlife Management, NYC Environmental Protection, NYC Port Authority, US Air Force, as well as other professionals within the field. Upon a thorough review, recommendations were made to the New York City Department of Sanitation on changes to the building design, adherence to strict operational procedures, and the development and implementation of an integrated wildlife hazard management plan and program, to reduce the hazards to aviation safety posed by birds. The panel of experts concluded that provided the recommendations were followed, the MTS and LaGuardia could safely coexist at their respective locations.

Atlantic County, N.J. and the New York City Department of Sanitation are fine examples of not only protecting the environment, but through ingenuity, protecting aircraft as well.

For more information on the ACUA landfill wildlife program, contact Bert Hixon, Wildlife Biologist, at (609) 272-6997. For more information on the NYC Marine Transfer Station, see the website: http://www.faa.gov/airports/airport_safety/wildlife/resources/media/final_report_nsmtps.ny.pdf.
City of Phoenix multi-family recycling efforts

Felipe Moreno, Management Assistant II, and Lorizelda Stoeller, Management Assistant I, Public Works Department, City of Phoenix, Arizona

In 2011, the City of Phoenix Public Works Department partnered with the City of Phoenix Housing Department to launch a multi-family residential recycling program at Park Lee Apartments and two other City-owned multi-family properties in Phoenix. The pilot program introduced recycling to Park Lee Apartments, a 523-unit, mixed-income apartment community in Phoenix.

Park Lee Apartments was built in 1955, consists of 34 buildings, and sits on 31 acres. Park Lee was acquired by the City of Phoenix and underwent an extensive renovation thanks to Neighborhood Stabilization Program funding in 2009. Full occupancy of the community is approximately 1,500 to 1,700 individuals.

The piloted recycling program will help the City determine the feasibility of expanding the recycling collection program to other multi-family sites across the city. The program began at Park Lee Apartments on January 1, 2012, and continues today. Prior to the launch, Public Works Department staff, along with Council support, dedicated time and resources to educating Park Lee residents of the new service offering along with identifying which materials were accepted in the new blue containers.

As the program nears one year in existence, approximately 17 tons of recyclable materials have been collected at Park Lee Apartments and two other City-owned multi-family properties. Without this program, many of these recyclable materials would have been sent to the City’s landfill, depleting the City’s resource and increasing overall operational costs.

The Housing Department has been instrumental in working with Public...
Works to collect statistical data used for the analysis of recycling and garbage collection, which is essential for determining the diversion rate and cost savings. To date, the program has a 13% diversion rate. As the City of Phoenix continues to meet the growing demands of managing the collection and disposal of the City's solid waste, programs such as the piloted multi-family recycling collection program will help the City identify programs that are successful in diverting material from the landfill. Diverting material from the City's landfill will extend its capacity and reduce overall costs associated with waste disposal at participating multi-family communities.

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With current landfills reaching full capacity and the growing emphasis on recycling, it is critical that public works departments nationwide start developing their own solutions to solid waste storage. As municipal budgets are shrinking, finding a cost-effective way to store ever-increasing amounts of solid waste is not an easy task.

The term municipal solid waste (MSW) refers to common items used by the public and then discarded. Some of these items may be recyclable, while others cannot be reused. MSW comes from residences, schools, hospitals and businesses. Of the four main components of the MSW industry, three need a large amount of space for proper storage. These include landfilling, recycling and composting. Covered storage is a necessity for these forms of solid waste to protect it from the elements, such as rain and snow, which can create a waste stream and contaminate the environment.

While regulations on solid waste storage may vary, most towns and states follow the same principle. Solid waste must be stored in a way that prevents a waste stream from harming the surrounding environment. States must comply with the U.S. EPA regulations for storing MSW, which leaves few efficient storage options.

One of the most common places to store MSW is in landfills. Landfills are sections of land that are cordoned off to protect the environment from hazardous runoff and other forms of contamination. Landfills cannot be located near environmentally sensitive areas including wetlands, faults and flood plains where there is an increased chance of contamination. They are constructed on top of liners, which are on top of about two feet of compacted clay. This is to be sure that no contaminants leak through the liner into groundwater below. Though landfills are very popular, they are filling up quickly and it is difficult to find new locations that meet the requirements to construct new landfills.

The first step to decreasing the amount of waste that goes into landfills is to increase the emphasis on recycling and composting. Recyclable products are now required to be sorted from other waste in many states. By recycling paper, plastic, cardboard and other materials, the amount of unusable waste will be reduced and less space will be required for its storage. Though you have to store recyclable materials as well, they will only remain in this location for a short period of time, meaning that other recyclables can be stored in the same space as they wait to be processed.

Composting is also a great way to reduce the amount of solid waste reaching landfills. Composting
Roof vents can easily be incorporated into the design of fabric buildings to allow vapors to escape while keeping compost or waste dry.

processes biodegradable waste, such as kitchen scraps, leaves and manure, and turns it into a highly effective soil for growing crops. Not only does composting decrease waste, but the end product will help plants grow more quickly into healthy, lush fruits and vegetables. Composting can be done in structures or in large piles. Leaving exposed piles, or piles under tarps, will most likely lead to runoff contaminating the environment, so structures are the most efficient place to create composting piles.

Buildings can be used for storing waste that normally would end up in a landfill, as well as recycling and composting piles. There are a variety of building options that can be constructed by public works departments for this purpose. Wood, steel and tension fabric structures are the most common types used for MSW storage. Wood and steel are more traditional building types for these applications, but recently fabric structures have been increasing in popularity for solid waste storage. There are many factors to consider when choosing which type of structure will best fit your department’s needs.

One of the most important factors in building choice is the size of the structure. Wood structures commonly have a maximum width of 150’, but can be constructed to any length. Metal structures have predetermined dimensions set by the manufacturer, so customization can be difficult. Fabric structures are often available in widths up to 300’ and can be built to any length. Unlike wood or metal structures, if needs change down the line, the length of fabric structures can be easily added to at any time. This is because fabric buildings can be extended simply by adding on extra trusses and extending the fabric cover rather than taking down a portion of the building to be able to add on to it.

Wind and snow-load ratings are also crucial when deciding on a solid waste storage structure. Naturally, buildings must be constructed to meet local building codes in your area. Fabric buildings can be custom designed to meet wind and snow-load ratings in any location, including hurricane-prone spots with wind loads up to 150 mph.

When working with a contractor to construct your building, be sure you are aware of the materials they are using. For example, if you are building a wood structure, ask the contractors what grades of lumber they plan to use. Lumber also needs to be checked for any defects to ensure the structure will be durable and long lasting. If you’ve chosen a metal building, the gauge of the metal is important. Most commonly, these buildings are made of 29-gauge steel sheets. For fabric structures, the highest quality manufacturers will use triple-galvanized structural steel tubing, which stands up in corrosive environments like solid waste facilities.

The last important factor to take into consideration when choosing a building is the lifetime expectations and warranties. The structure you choose will be a crucial part of your public works department, so
it should be guaranteed to last for an extensive period of time. With the necessary maintenance, wood buildings have a lifespan of about 20 years, and a metal building will last anywhere from 10 to 15 years on average. Manufacturers of fabric structures consider the average lifespan of their fabric covers to be 25 years, while the frame should last a lifetime. The average warranty on fabric covers is 15 years.

Tension fabric buildings offer the longest lifespan, are highly customizable and can be built to meet the needs of your specific location. They also have an advantage when it comes to construction timelines. Most fabric buildings take less than a week to install, while wood and metal structures require long timelines, costly foundations and frequent maintenance. Fabric structure maintenance is limited to twice yearly inspection of the building components and tightening of bolts when necessary.

Fabric structures have no internal support posts, which also makes them ideal for waste storage. Equipment can easily be moved in and out of the structure, and can be maneuvered inside with no obstructions. The high clearances these buildings offer allow for larger piles to be stored inside. Their abundant natural light also creates a safe work environment for employees who are operating machinery inside the structure, and adds to their economical nature.

Fabric structures are the most economical structure option because they are often up to 30% less expensive than wood and steel buildings. The natural daytime light that filters through the covers eliminates the need for artificial daytime lighting, which creates a significant reduction in energy costs. At night, the white interior of the cover reflects light, meaning that fewer fixtures are needed to illuminate the building.

Tension fabric structures are the newest option on the market for MSW storage, but they are not a new technology. Fabric buildings have been common in the agricultural industry since the 1950s. They are used for hay and equipment storage, livestock housing and more. Many livestock buildings are exposed to very corrosive conditions, especially when housing pigs or poultry. These structures have proven to be a great option for hog and chicken farmers, as the frames do not rust or rot in these applications. Due to the large variety of benefits and affordable cost, tension fabric buildings have become popular in many other industries, including waste storage and handling.

With so many options for MSW storage structures, public works officials need to be aware of the advantages or disadvantages of each type, while focusing on what is most cost effective and efficient for their department and location. While landfills have proven to work well in the past, space is filling up, and the amount of waste is increasing. A more long-term solution will prevent contamination and prove to be a great choice for any public works department.

Submitted by Alyssa Davis, Marketing Production Manager with ClearSpan Fabric Structures, the leading manufacturer of tension fabric buildings. The company is headquartered in South Windsor, CT, with manufacturing facilities located in Dyersville, IA. All structures are made in the USA. ClearSpan specialists guide customers through the process and communicate with in-house design, engineering and manufacturing teams. For more information on ClearSpan Fabric Structures, call 1-866-643-1010 or visit www.ClearSpan.com/ADAPWA.
Follow-up information: In the December issue, I shared information about the growing use of roundabouts in rural settings. Jupe Hale, a roundabout designer with WSB in Minneapolis, MN, sent me a link to a case study conducted by the Federal Highway Administration detailing a rural roundabout in Scott County, MN. The study relates the success of the roundabout in a rural high-speed setting and I think you may find it valuable information. Please check it out at: http://safety.fhwa.dot.gov/intersection/resources/fhwasa09027/252.htm. Thanks, Jupe, for the great information.

Q “I’ve been trying to follow some court cases involving the Environmental Protection Agency and individual states or regions concerning the regulation of stormwater flow as a pollutant. Anything new happening there?”

A You’re correct. There are several cases filed by states against the EPA that could have major consequences to all of our agencies. A federal court in Virginia ruled in early January that the EPA could not force Virginia to regulate stormwater flow because stormwater itself is not considered a pollutant. The basis for the case stemmed from regulations the EPA established in April 2011 that limited the rate of stormwater allowed into Accotink Creek, a tributary of the Potomac River. The intent was to limit the amount of sediment entering into the creek, since EPA believed it had a negative effect on organisms in the river. Virginia officials argued that the EPA overstepped its bounds by attempting to regulate stormwater levels and that the Clean Water Act only gave them permission to regulate pollutants themselves—and stormwater is not a pollutant. The case will likely go to appeal but could have an impact on other jurisdictions; some in Missouri have already faced this, but it is not known how great the impact might be. No one seems to know why EPA chose to use stormwater as a “surrogate” for sediment, which is what they were intending to limit, as opposed to limits directly on sediment itself. Stay tuned. We’ll probably hear more.

Q “We have tried to pass a bond issue twice and can’t seem to get our residents on board with the needs for the funding to upgrade our infrastructure. Very few residents even attend our public hearings when we conduct them or even informational meetings. We post lots of things on our web pages and even have used social media but it hasn’t seemed to make it any easier to get in touch with people. Any ideas how we might communicate better with them?”

A This is an age-old question. How can we involve our residents when they either don’t seem to care or are not willing to be educated and involved in our issues? Sometimes it may pay to think outside the normal methods of communication. For one thing, don’t wait to open the lines of communication when you’re ready to propose a bond issue or a special use fee or extending a sales tax for transportation purposes. That’s almost too obvious. “The only reason you want me to participate is to convince me to vote for your project.” And, that may be true. However, it may be that something more open and less threatening could be the solution. How about having just an Open Forum with the only purpose to get acquainted with your residents and to give them the opportunity to get acquainted with their elected officials, department heads, and other pertinent staff without having a specific agenda in mind? Have you considered having your informational meetings at a more neutral location, such as a school where it might be perceived as an “educational” opportunity rather than a “political” one? Some small cities are using this format as a way to open the lines of communications before you need the residents’ support so that a level of understanding and trust can be built that may pay dividends when you need them. Don’t just expect your residents to flock to your meetings when you need them. Try this informal approach to building...
awareness and support. If your agency is doing something to reach your residents, please share it with us.

**Q**

“I recently read about something called a ‘VMT’ project. What is it?”

**A**

The term is “Vehicle-Miles traveled fee” (VMT). It is a concept that would charge motorists based on how far they drive—as opposed to how much gas they consume. A VMT fee would help address a fundamental challenge facing both state and federal gas taxes; as vehicles become more fuel-efficient, the taxes generate less money for road construction and maintenance. While the environmental impact of a vehicle that gets 50 miles to the gallon might be better than a gas guzzler, it may be worse for transportation funding, since it still contributes the same amount to congestion and roadway wear and tear as any other passenger vehicle but would contribute much less revenue. This is a proposal that has been considered for several years by Oregon, Minnesota, Georgia, and elsewhere but only one, in Washington, has been enacted at the state level; while legislation has been introduced at the federal level which would instruct the Treasury Department to study ways the federal government could tax motorists on a per-mile basis, as opposed to the current per-gallon gas tax. The Highway Trust Fund, largely funded by the 18.4 cents per gallon federal gas tax, has been declining in revenues for many years. For more information, visit the Oregon Department of Transportation’s Office of Innovative Partnerships and Alternative Funding at http://www.oregon.gov/ODOT/HWY/RUFPP/Pages/rucpp.aspx.

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**Ask Ann**

Please address all inquiries to:

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Kansas City, MO 64108-2625
Fax questions to: (816) 472-1610
E-mail: adaniels@apwa.net

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The deadline to reserve your space is March 6; the materials are due by March 8.

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**Call Amanda or Kristen at (800) 800-0341.**
Rumpke Consolidated Companies, Inc., Columbus, Ohio

Challenge – Lack of covered storage for recyclable materials
Solution – Hercules Truss Arch Building
Size – 120’ wide x 45’ long
Application – Material recovery facility

Rumpke Consolidated Companies, Inc. ranks among the nation’s largest privately owned waste and recycling companies. With a strong respect for the environment, the company has found success owning and operating several landfills, transfer stations and recycling facilities throughout Ohio, Kentucky and Indiana. In 2010, Rumpke began a $2.5 million renovation to its downtown Columbus material recovery facility. This included a complete demolition and an addition to its tipping floor area, which meant that recyclable materials were stored outdoors.

Currently, there are no regulations in Ohio prohibiting the practice of leaving recyclable materials uncovered; however, the company was not comfortable with that. Rumpke engineer Dave Murphy explains, “We knew we could leave the materials exposed, but did not want to be a nuisance for the neighbors; papers and plastics could blow into their yards. Plus, the process runs better with dry materials and we wanted to maintain a clean facility by keeping the materials out of the elements.” Murphy was looking for different solutions to this problem when he came across a ClearSpan Fabric Structures brochure.

After reading the brochure and speaking with a Truss Arch specialist, Murphy began to work with ClearSpan due to their customized building options, quick construction timelines and durable structures. “We continuously have large equipment unloading materials at the recycling facility. We needed a lot of clearance especially for our back hopper which requires a height of 28’ to 30’, and we have an IT loader that scoops up materials then loads them onto our conveyor system,” explains Murphy.

Rumpke purchased a 120’ wide by 45’ long Hercules Truss Arch Building to serve as a cover for their material recovery facility. They decided to contract ClearSpan’s installation crew and the structure was built in a week and a half. Due to the ease of construction, the company was able to keep operations running smoothly and without complications.

Once renovations were complete, Rumpke no longer needed the building as a tipping area. “We were looking for a great solution to house some recyclable materials and the building served its purpose,” Murphy says. “We knew at the time of purchase it would need to serve other functions.” They plan on using this structure as a storage facility for either overflow at a glass building, or for heavy equipment at a landfill. “Overall we are happy with ClearSpan. The building performed very well,” concludes Murphy.

For more information, visit www.ClearSpan.com/ADAPWA or call 1-866-643-1010 to speak with a ClearSpan specialist.

During a major renovation in 2010, Rumpke added a Hercules Truss Arch Building to their existing facility. This allowed the company to cover recyclable materials that would have otherwise been exposed to the elements.
Dnaleri Industries (formerly Mid Atlantic Can Services, Inc.) knows the waste industry

Dnaleri Industries (formerly Mid Atlantic Can Services, Inc.) has been in the waste industry since 1979. Their “hands on” experience gives them a better understanding of what it takes to get the job done. The president and owner of Dnaleri Industries not only was a driver of waste transportation vehicles but did the repair and maintenance on the trucks and containers.

Dnaleri Industries is located in West Newton, Pennsylvania. The company provides services to the Greater Pittsburgh and surrounding areas. They repair and do maintenance of dumpsters and various trash receptacles at their shop and also have a mobile service where they offer onsite service.

What’s New
The Rigid Plastic Cover (RPC) was invented when the company was approached by a customer looking for an alternative to what is available in the market. Dnaleri researched and spoke to the workers in the waste industry and developed the RPC. The first RPC has been in use since 2003.

The RPC fits all standard receiver compactor containers regardless of their make/manufacturer. The RPC is 55”x70” with a 12” curvature for trash and recycling material stickout. The installation of the hardware onto the container takes less than one hour, then it only takes 70 seconds to install and secure the RPC.

Down the road you will experience no problems, injuries, citations or liabilities and no worries of failing while in transit. The unit is very user friendly and works great on all compactor containers. Dnaleri customers love this product. Some companies have received reduced insurance rates by using this new safety product. Reducing the litter that these containers normally lose from not being properly tarped and secured, the RPC has a huge positive impact on the environment.

Each kit includes: 1 RPC, 1 channel, 2 straps, 2 top stops, 2 side storage tabs and chain/s-hook.

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The Restrictor Guard is a simple solution to restrictor blockage. Catch basin debris collecting in front of an exposed restrictor can result in outflow interruptions, high detention area water levels, flooding and property damage. Why respond to these incidents after the fact? Constructed of galvanized steel, the Restrictor Guard lasts as long as the structure it is installed in. Don’t wait for a problem to occur. Install the Restrictor Guard today. Visit www.RestrictorGuard.com.

Waste Management with ClearSpan™ Fabric Structures

ClearSpan Fabric Structures provides energy-efficient, economical structures for a variety of waste management needs. State-of-the-art, USA-made ClearSpan Hercules Truss Arch Buildings feature abundant natural light and spacious interiors without interior support posts to hamper operations. Every Hercules Truss Arch Building is custom engineered to fit the requirements of the specific location, such as snow load or foundation type. With minimal foundation requirements, the structures can be permanent or temporary, and are easy to relocate. For more information, visit www.ClearSpan.com/ADAPWA or call 1.866.643.1010 to speak with a ClearSpan specialist.

Sewer Bypass Pumping

As our sewer infrastructure continues to age, rehabilitation is needed to keep it up and running. With Griffin’s line of trash handling pumps, contractors can bypass sewage during sewer line repairs—getting tough projects done and keeping the system working for the community that relies on it. Bypass pumping is a critical element of many rehab projects. Temporary bypass systems are used to transfer water supplies and sewage flow, so that these vital services are uninterrupted during construction. Griffin De-

**IROCK introduces RDS-20 Mobile Crusher**

IROCK, a leading manufacturer of screening and crushing equipment, has introduced the RDS-20 Primary Crushing Plant. The RDS-20 is a highly portable, easy-to-operate mobile unit. It combines a closed circuit design, high-performance four-bar impactor and heavy-duty components for reliability, increased efficiency and the precision to produce a uniform, cubical product. It also is versatile enough for use across multiple industries and can process a variety of materials, including quarry rock, demolition debris, recycled concrete, recycled asphalt and base rock for oil fields. For more information, call 866-240-0201, e-mail sales@irockcrushers.com, or visit the website at www.irockcrushers.com.

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The Ferrator© is the first patented, onsite ferrate reactor for municipal and industrial water and wastewater cleanup applications. Ferrate can now be delivered continuously for treatment processes in commercially significant quantities to remove or inactivate toxic metals, pesticides, drugs, hormones and other industrial toxins found in drinking water and wastewater. The Ferrator© reduces the cost of producing ferrate by over 90 percent, can be scaled for any application and easily retrofits into existing plant infrastructure. It utilizes commodity feedstocks available at most treatment plants, is fully automated and provides remote operation as well as 24-hour offsite monitoring. Call (407) 857-5721 or visit www.ferratetreatment.com.

**The Refinishing Touch**

The Refinishing Touch, a leader in furniture asset management to 20,000 public and private organizations, introduces a new addition to its Touch Textiles line: **Embrace™ recycled leather**. Recycled leather offers the same quality of traditional leather at a smaller cost. By adopting a process that reuses scrap leather, recycled leather reduces the waste traditional leather manufacturing produces, avoiding landfill buildup. Hotels, universities and government agencies looking to re-upholster furniture can now choose this stain- and scratch-resistant covering. The company’s first project utilizing Embrace is underway at Candlewood Suites in Killeen, Texas, where lounge, dining and desk chairs are being re-upholstered. For more information, call (800) 523-9448 or visit www.therefinishing-touch.com.

**PTV Vistro: A solution for all traffic analysis needs**

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Fleet Manager
Cape Coral, FL

Under the general supervision of the Public Works Director, performs responsible and complex duties in managing the Fleet Division. Manages and supervises a broad range of fleet-related functions and activities including, but not limited to, maintenance and repair shop operations, fleet fueling systems, vehicle and equipment acquisition, disposal, utilization, service and maintenance, division budgeting, and the administration of service and maintenance contracts. Coordinates Fleet Operations activities with department managers and staff, other City managers and employees, outside vendors, contractors, agencies and the general public as required. Requires considerable initiative and independent judgment in developing and meeting fleet objectives. Assures division compliance with applicable laws, ordinances, and codes; and provides professional and technical staff assistance to the Public Works Director. Online employment application required for consideration. For additional information and to apply please visit www.capecoral.net.

Operations Manager
Champaign, IL

The City of Champaign is accepting applications for an Operations Manager in the Public Works Department. This position will manage the work of the Operations Division, including in-house maintenance of City infrastructure systems; manage City contracts for various services; and develop and implement infrastructure system master plans. The position requires experience in a management level position in a government, construction, industrial, or manufacturing environment. A bachelor's degree in civil engineering, construction technology, public administration, management, or a related field is required. An equivalent combination of education and experience may substitute for a degree. An advanced degree in business or public administration is preferred. For additional job requirements and qualifications please visit the full job posting on our website listed below. The starting salary will be between $74,236 and $84,462, depending on qualifications, with generous benefits. Applications must be received online no later than Sunday, March 17, 2013. To apply, visit the City's Online Hiring Center at www.ci.champaign.il.us.
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International Public Works Congress & Exposition
2013 Aug. 25-28 Chicago, IL
2014 Aug. 17-20 Toronto, ON
2015 Aug. 30-Sept. 2 Phoenix, AZ

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

North American Snow Conference
2013 Apr. 7-10 Charlotte, NC

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

National Public Works Week: May 19-25, 2013
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.

MARCH 2013

3-6 Institute of Transportation Engineers Technical Conference & Exhibit, San Diego, CA, www.ite.org
3-7 NASTT’s No-Dig Show, Sacramento, CA, www.nodigshow.com

APRIL 2013

1-5 National Association of Environmental Professionals Annual Conference, Los Angeles, CA, www.naep.org
13-17 American Planning Association National Planning Conference, Chicago, IL, www.planning.org/conference
17-20 NASCC: The Steel Conference, St. Louis, MO, www.aisc.org
18 APWA Click, Listen & Learn, “Gaining Efficiencies through Water Metering,” (800) 848-APWA, www.apwa.net
21-25 National Association of County Engineers Annual Conference, Des Moines, IA, www.countyengineers.org

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Legend: IFC = Inside Front Cover; IBC = Inside Back Cover; BC = Back Cover

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