Flood-proofing the Glen Ellyn Public Library

(see page 51)
55% of drivers today identify traffic delays due to road construction as the most frustrating part of their driving experience.*

With off-peak construction, asphalt pavements leave roads open to traffic during rush hour. Surface maintenance and repair is quick, ensuring drivers have a smooth, high performance surface with minimal inconvenience. No wonder an independent survey found 87% of engineers, developers, transportation officials and other key stakeholders chose asphalt for its ease of maintenance.** Smoother, quieter, fewer delays... that’s drivability. That’s asphalt.

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In my November 2014 message I referred to public works’ efforts for a more prolific involvement with other First Responders, and the important role played by our agencies in winter road safety. While that may be among our most critical services, it is by no means the only key involvement in which public works professionals operate with our public safety partners.

We’ve all heard the saying “Change is the only constant” and change has occurred consistently in the realm of public works. No place is this more obvious than in our planning, preparation, response and recovery role with disasters. Every year the extraordinary events that happen seem to evolve significantly, from the types of disasters to the shifting patterns of geographical locations.

Droughts devastated broad regions from the Rocky Mountains to the Appalachians in previous years, but this past year baked large areas of California. Flood damage also shifts from region to region, and recent early and heavy snowfall led to floodwaters in western New York that were not anticipated. During 2014 hurricanes battered the Hawaiian Islands yet left the East Coast untouched, and unexpected landslides have hit Washington and Colorado, leaving unimaginable death and destruction in its wake. Unprecedented in our lifetimes is the fact that coastal communities, regions and states have now begun formulating plans for rising sea levels and the many impacts which may result.

True resilience comes only from a perennial ability to adapt to evolving environmental and man-made challenges of immense proportions. As public works organizations we need to advance continuously, train extensively and collaborate repeatedly with many disciplines and agencies that a decade ago we may have only interacted with occasionally, or from afar.

As recognized First Responders, public works is an integral part of the “All-Hazards” and “Whole Community” approach to both emergency management and homeland security. It’s no coincidence that many states are beginning to combine homeland security and emergency management into a unified division or department, with Minnesota and Colorado as two examples. Emergency Operations Centers (EOCs) more frequently include staffing and subject matter expertise from the ranks of public works engineering and operations professionals. State and regional intelligence “fusion centers” are beginning to realize the value of our industry experiences and knowledge, and more frequently invite us to participate—appreciating us as force multipliers in their efforts.
APWA’s Emergency Management Technical Committee and subcommittee members are dedicated to representing our association in ways never envisioned only a few years ago. Contributions from individuals across the United States and Canada are building credibility, relationships and learning opportunities that elevate our industry status among emergency services peers. As individuals and leaders, each of us is called to action in furthering education, training, exercising, and preparedness throughout all public works agencies.

Compliance with National Incident Management System (NIMS) in the U.S. requires that all agency responders complete IS-100PWb, IS-200.b, IS-700.a and IS-800.b independent study (IS) online courses. All supervisors and above are expected to complete ICS-300, Intermediate ICS for Expanding Incidents (classroom attendance required). Under the NIMS mandate, the first four courses are (theoretically, at least) required to be completed—with records documented—before a state, tribal or local government can receive reimbursement funds from the federal government for disaster response or recovery funding.

Together with the following courses, a well-rounded training base is available to all public agency staff—at no cost, other than the commitment of time. Collaboration between APWA and FEMA/EMI led to creation of four public works-centric online courses, available as independent study programs.

- IS-552 The Public Works Role in Emergency Management (currently available as independent study through FEMA)

“\textit{We become not a melting pot but a beautiful mosaic. Different people, different beliefs, different yearnings, different hopes, different dreams.}”

\textit{– Jimmy Carter, 39th President of the United States, Nobel Peace Prize laureate (2002)}
APWA’s Awards Program recognizes individuals, groups and chapters for their outstanding contributions to the profession of public works. Some of the awards presented include Professional Manager of the Year Awards, Young Leader, Public Works Project of the Year, and Top Ten Public Works Leader of the Year, to name just a few.

Each award is listed on the APWA website. Criteria and nomination forms for the 2015 Awards Program are now available online.

NOMINATE YOUR AWARD-WINNER TODAY!

NOMINATIONS ARE DUE MARCH 2, 2015!

Visit www.apwa.net/awards

2015 AWARDS PROGRAM

under revision by Emergency Management Institute)
- IS-554 Emergency Planning for Public Works
- IS-556 Damage Assessment for Public Works
- IS-558 Public Works and Disaster Recovery

Along with these courses, FEMA and EMI offer dozens of additional training opportunities that are educational and useful to specific disciplines, and to generalists alike who are responders. Many colleges and universities across Canada and the United States also offer outstanding programs for furthering this education.

While APWA and the Emergency Management Committee work year round to provide interesting and informative articles—plus many in the online archives—it is imperative that each and every public works department or agency commit to ongoing training, involvement in disaster exercises and continuous learning from After Action Reports (AARs) and Lessons Learned sharing that is available from many sources.

Finally, we urge your teams to take a lead in using community and special events as training and process opportunities with the Incident Command System (ICS). “Practice makes perfect” is another old saying with relevance to disaster response, and fortunately most agencies don’t have regular emergencies on which to train. The next best method for gaining experience is to use ICS for predicted and planned events of all sizes. A good foundation of understanding and familiarity with the system and process lends well to proficiency under the most stressful of circumstances.

“Public Works First Responders” is a designation and title that will remain with our profession, our industry and our reputation for a very long time, and working together to become the most qualified and well-recognized among all is a matter of commitment and pride. It is no longer optional. It is part of what we in public works do!
Michael R. Pender, APWA Past President, dies at 88

Michael R. Pender, P.E., APWA National Past President in 1984-85, died on November 23 in Sarasota, Florida. He was 88.

Pender was born in Bay Ridge, Brooklyn, New York on February 18, 1926. He attended Dartmouth College, left for the Army and then returned in 1947 and graduated with an AB degree in 1949. In June 1950, he received his Master’s degree from the Thayer School of Engineering at Dartmouth.

Pender began his career as a project manager for Madigan-Highland Engineers where he devised the toll system for the New York State thruway and the feasibility of a railroad in the wilds of Columbia. He then went on to join the administrative staff of the 1964-65 New York World’s Fair Corporation, and became Commissioner of General Services for the Town of Hempstead followed by the same for Nassau County. He then reorganized the Public Works Department for the Village of Valley Stream, all located on Long Island, New York.

Pender’s involvement in APWA was extensive. He served as Chapter President for the then-New York/New Jersey Chapter in 1973-74; as Director of Region II from 1976-83; on the National Nominating Committee from 1985-88; on the Joint APWA-ASCE Committee from 1985-96; and was the Founder and First Chairman of the Sun Coast Branch of the Florida Chapter in 1993-94. He was named a Top Ten Public Works Leader of the Year in 1973. Pender’s proudest moment was when he was named APWA National President in 1984.

He is survived by his wife of 65 years, Francina Pender, and his five children, eight grandchildren, three great granddaughters, and one great, great grandson.

“Mike was a great leader of APWA both at the national and branch levels,” said Dale A. Haas, P.E., Immediate Past President of the Florida Chapter. “He was a mentor to many public works and engineering professionals.”
Emergency management outlook for the 114th Congress

Tracy Okoroike
Government Affairs Associate
American Public Works Association
Washington, D.C.

On Tuesday, January 6, 2015, House of Representatives and the Senate will convene the first session of the 114th Congress. The emergency management agenda includes a number of unresolved issues, including House-passed cybersecurity bills that the Senate is expected to consider during this session. Additionally, the Federal Emergency Management Agency is still awaiting reauthorization and Congress is likely to take up an interoperable communications bill.

**Cybersecurity**

Last summer, the House overwhelmingly passed a trio of bills intended to strengthen the nation’s cybersecurity efforts. This year, the Senate is expected to either vote on the House cybersecurity bills or pass its own cybersecurity legislative package. The House cybersecurity bills are outlined below.

*HR 3696 – The National Cybersecurity and Critical Infrastructure Protection Act of 2014*

This legislation strengthens and codifies the parts of the National Infrastructure Protection Plan (NIPP) and the National Cybersecurity and Communications Integration Center (NCCIC). The NIPP is a plan that states how government and private sector participants in the critical infrastructure community can work together to manage risks and maintain security and resiliency. The NCCIC is a central location where a diverse set of cybersecurity stakeholders from the public and private sector can coordinate their efforts to facilitate real-time cyber threat information sharing across critical infrastructure sectors.

*HR 2952 – The Critical Infrastructure Research and Development Advancement Act of 2013*

This legislation directs the Secretary of Homeland Security to report a strategic plan to Congress every two years detailing the direction of federal physical security and cybersecurity technology research. The report must also include information about development efforts for protecting critical infrastructure and details on the utilization of public-private research and development consortia.

*HR 3107 – Homeland Security Cybersecurity Boots-on-the-Ground Act*

This bill aims to improve the quality of the cybersecurity workforce through the establishment of occupation classifications, personnel assessments, and recruitment strategies focused on gaps within the existing cybersecurity workforce.

**Interoperable Communications**

In addition to the cybersecurity package, the House passed HR 4289, the Department of Homeland Security Interoperable Communications Act. This bill requires DHS to achieve and maintain interoperable communications capabilities among its agencies. The House overwhelmingly passed this legislation.
last July, and the Senate is expected to vote on it during this legislative session. APWA supports enhanced interoperable ability because being able to communicate efficiently and effectively between emergency responders is critical for preparedness, response and recovery operations.

**FEMA Reauthorization**

It’s been over a year since HR 3300, the FEMA Reauthorization Act, was reported out of the House Transportation and Infrastructure Committee (T&I). Since that fall in 2013, there has been no additional progress on the bill. The FEMA reauthorization Act was expected to reach the House floor in 2014; however, a busy legislative agenda prevented that from happening. The legislation is now expected to be considered this year.

HR 3300 reauthorizes several FEMA programs and authorizes $972 million annually for FEMA until fiscal year (FY) 2016. House T&I Committee Chairman Bill Shuster (R-PA) sponsored the bill which would reauthorize Emergency Management Assistance Compact Grants and allocate $2 million to the program for each fiscal through 2016, and reauthorize the Urban Search and Rescue Response System, allocating $35.18 million for through 2016. This legislation also calls for modernizing the Integrated Public Alert and Warning System by establishing an Integrated Public Alert and Warning System Advisory Committee. The Committee would advise the FEMA Administrator and develop recommendations for common alerting protocols and operating procedures.

APWA supports legislation that strengthens the nation’s cybersecurity efforts because public works agencies value the security of their cyber systems that control traffic management systems, water and sewage treatment facilities, emergency communications, and other vital operations. Public works employees are owners and operators of critical infrastructure systems, playing a key role in mitigation and preparedness efforts. In addition to cybersecurity, APWA will continue to advocate for increased federal funding, training and other resources to ensure that public works agencies can adequately perform their emergency mitigation, response and recovery responsibilities.

Tracy Okoroike can be reached at (202) 218-6702 or tokoroike@apwa.net.
Defining the role of Public Works as a First Responder, Emergency Response Provider or Public Safety Services Agency

One of the challenges for APWA’s Emergency Management Committee and its subcommittees is to gain recognition as being part of the First Responder community along with police, fire and emergency medical services. However, the role of public works goes well beyond the common image of First Responder. We have stated in the past that we are the only discipline in the emergency services sector that is both among the first to arrive and often the last to leave. That is a special role in which none of the other First Responder agencies fulfills.

The Federal Department of Homeland Security’s National Preparedness Goal has five mission areas:

- **Prevention.** Prevent, avoid or stop an imminent, threatened or actual act of terrorism.
- **Protection.** Protect the public and assets against the greatest threats and hazards.
- **Mitigation.** Reduce the loss of life and property by lessening the impact of future disasters.
- **Response.** Respond quickly to save lives, protect property and the environment, and meet basic human needs in the aftermath of a catastrophic incident.
- **Recovery.** Recover through a focus on the timely restoration, strengthening and revitalization of infrastructure, housing and a sustainable economy, as well as the health, social, cultural, historic and environmental fabric of communities affected by a catastrophic incident.

Prevention is exclusively a function of the intelligence agencies and law enforcement. Protection is also predominantly a law enforcement function. However, for disasters and other incidents, public works is extensively involved with other First Responders in the initial response activities. As the situation stabilizes and transitions to the recovery phase, the traditional First Responders return to normal routines. However, public works is often the lead agency for recovery where there is widespread damage to public infrastructure, restoration of public services and massive amounts of debris to be removed in a systematic process. During the recovery phase, public works incorporates mitigation measures whenever feasible to reduce the impact of future disasters. Mitigation is also introduced during the planning, design and construction of public improvements as preventive measures well in advance of potential disasters. While the other First Responders are strong in prevention and response, they have little involvement in recovery and mitigation. Public works is the only emergency service sector discipline that has well-defined responsibilities across most of the mission areas.

So why do the public and many emergency management officials have difficulty understanding and accepting that we are First Responders? If you ask the average citizen what the roles of the First Responders are, they would likely say the following:

- **Police:** Provide security, facilitate movement of traffic and people, catch criminals
- **Fire Service:** Extinguish fires and rescue people who are trapped
- **Emergency Medical:** Stabilize and transport people who are injured

Noticeably missing from any of these First Responder definitions is reference to flood containment, snow and ice control, infrastructure repair and debris removal. These, and a variety of other activities, are the responsibility of public works. If you look at the impact of disasters as essentially two-fold, i.e., impacts on people and impacts on infrastructure, the First Responders are the agencies that respond to impacts on people. Where does that leave public works? We certainly are responding simultaneously with those agencies that are helping people, and in many cases making it possible for the primary responders and aid providers (such as Salvation Army and Red Cross) to do their jobs. We are cleaning up debris, opening roads that are closed by debris, closing roads that are damaged by disasters and assisting with providing alternate routes, providing emergency power and water, and carrying out emergency and permanent repairs to the full range of infrastructure in the community.
The uniformed First Responders protect and help people; public works restores whole communities. And, for the most part, we are doing this while also supporting those other First Responder agencies.

The traditional First Responders, particularly police and fire, are generally resistant to public works using that term. Even certain offices within the federal government are reluctant to include public works in that category. Perhaps a different term that is more relevant to public works would be more appropriate and wouldn’t be met with as much resistance. While discussing the topic last year at the Department of Homeland Security SAFECOM and Public Safety Advisory Committee (PSAC) meetings, the term “preservation and restoration of lifeline services” was used and looked upon favorably. When you speak in terms of those lifeline services—providing access to and from disaster/emergency sites, keeping water in fire hoses, providing traffic management and traffic control for closures, detours and evacuation routes—the other First Responders take notice.

Many congressional laws or acts now use the terms Emergency Response Providers (ERP) and Public Safety Services (PSS). It is important to note that two very important aspects of emergency management and disaster relief, namely grants and funding, rely heavily on being recognized as “Emergency Response Providers” and “Public Safety Services” agencies. With that in mind, the following are relevant and critical tasks and responsibilities that public works agencies perform under these two key definitions.

Public Safety Services (PSS): As an important PSS agency, public works departments provide:

- Preservation and restoration of lifeline services
- Snow and ice mitigation programs for accident prevention
- Critical infrastructure and key resources (CIKR) protection and support, including...
  - Water and sanitation systems
  - Utilities and communications
- Dangerous debris removal and disposition
- Road and bridge safety inspections/maintenance/repairs
- Flood control, mitigation and stream protection
- Response vehicle preventive maintenance and field support
- Transit services delivery (and funding through Transit Security Grant Program) and funding for CIKR protection to owners and operators.

Emergency Response Provider (ERP): Response actions from public works agencies include provision of:

- Traffic control and management equipment
- Wildland fire equipment response, including cutting of firelines
- Search and rescue heavy equipment and operators
- Flood response personnel, equipment and mitigation
- Rapid Needs Assessment teams, including engineers, inspectors and field observers
- Traffic incident response and remediation, including towing services
- Debris management, planning and response teams and equipment
- Recovery planning, management and documentation.

FEMA training programs

FEMA, through the Emergency Management Institute (EMI), has a number of online training programs available free of charge through their independent study program. Compliance with National Incident Management System (NIMS) requires that all agency responders complete IS-100, IS-200, IS-700 and IS-800 online courses. Together with the following four public works-specific courses, a well-rounded training base is available to all organization staff—at no cost, other than the commitment of time.

- IS-552 The Public Works Role in Emergency Management (currently being updated)
- IS-554 Emergency Planning for Public Works
- IS-556 Damage Assessment for Public Works
- IS-558 Public Works and Disaster Recovery

For a complete list of the independent study courses, go to [http://training.fema.gov/is/](http://training.fema.gov/is/).
Building Relationships with Police, Fire and Emergency Medical Services (EMS)

Take advantage of special events, commerce meetings or even chance encounters in the elevator to hold discussions with Police, Fire and EMS personnel. Tips for the conversations and ways in which public works can work jointly include:

- PW provides the manpower, equipment and knowledge of the infrastructure to ensure timely and efficient operations.
- PW personnel are trained and equipped to support other First Responders in conducting search and rescue operations.
- PW uses the Incident Command and Unified Command Systems.
- PW could participate jointly in all-hazard training with Police, Fire and EMS.
- PW are key players in determining the status of essential facilities, lifelines (water/sewer, electric, gas and communications), transportation systems and structural hazards.
- PW is responsible for debris management activities which include clearing the debris that hinders immediate lifesaving actions and that poses an immediate threat to public health and safety.
- PW protects critical lifeline services—potential threats to the community’s water, wastewater and stormwater systems are serious.
- PW is responsible for fleet maintenance to other First Responders and supplying locations for staging areas during an event.

Before we can be fully recognized as First Responders, Public Safety Services or Emergency Response Providers, public works must first prepare for that role by obtaining the free NIMS/ICS training, incorporating the concepts, principles and practices into everyday routines, participating in planning, drilling and exercising with the other disciplines and educating the public, the media and elected officials.

Teresa Hon is the APWA Professional Development Program Manager in the Kansas City, Missouri, office. She can be reached by email (thon@apwa.net) or phone (816-595-5224).

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- Gratitude is due for the National Academy of Sciences Transportation Research Board, Cooperative Research Program (CRP) Digest, NCHRP Project 20-59 (41), “Legal Definition of ‘First Responder,’ November 2013” from which much of the background information was summarized.

In light of the above definitions, it would be very difficult for anyone or any grant authority to discount public works as a qualifying agency. The PSS and ERP categories clearly include public works as a combined “Public Safety/Emergency Response Provider” and this should be emphasized within all position statements, mission statements in communications with offices, divisions and departments of state government agencies across the country, and other agencies at all levels of government concerned with emergency management.

It is increasingly important to state facts regarding the roles and responsibilities of public works as “Public Safety Services” and “Emergency Response Provider” at every opportunity—to embed our value within the emergency management realm and, of course, to be eligible for grant funding.

Before we can be fully recognized as First Responders, Public Safety Services or Emergency Response Providers, public works must first prepare for that role by obtaining the free NIMS/ICS training, incorporating the concepts, principles and practices into everyday routines, participating in planning, drilling and exercising with the other disciplines and educating the public, the media and elected officials.

1 SAFECOM is a communications program of the Department of Homeland Security (DHS). SAFECOM provides research, development, testing and evaluation, guidance, tools, and templates on interoperable communications-related issues to state, local, tribal, and federal emergency response agencies.


3 National Academy of Sciences Transportation Research Board, Cooperative Research Program (CRP) Digest, NCHRP Project 20-59 (41), “Legal Definition of ‘First Responder,’ November 2013”

APWA is proud to announce that the Certified Public Fleet Professional (CPFP) eligibility requirements have been updated for 2015 and now allow individuals with private fleet experience a chance to earn their certification!

It’s Your Time. Get Certified.
For more information visit: apwa.net/certification
The Show for Snow heads to the heart of the North American Snowbelt

PWA and the Michigan Chapter are proud to bring the 2015 Show for Snow to the heart of the North American Snowbelt: Grand Rapids, MI! More than 1,500 snowfighters and other public works professionals are expected to attend the conference April 12-15, 2015.

With this area of the country regularly receiving upwards of 100” of snow per year (110.7” last year), it’s sure to provide a unique location where attendees can experience the most concentrated collection of snow and ice solutions available under one roof. The 2015 Snow Conference has it all—from expert-led snow and ice education sessions to an exhibit floor full of excited vendors who can’t wait to show off the latest winter maintenance solutions your communities have been looking for.
Don’t wait another minute, make plans today to join us in Grand Rapids for the Show for Snow in 2015!

From the historic lake effect snowstorm that paralyzed the Buffalo, NY community this November to the ever-increasing amount of southern states and municipalities having to deal with winter weather events, more and more snowfighters are putting in the hard work necessary to keep the public safe each and every year. The 2015 Snow Conference offers these snowfighters a unique opportunity to hang up their boots after a tough winter season and take in four days of education and networking. Whether their job involves winter street maintenance, transportation, emergency response, or public safety, they’ll be sure to find common ground and have a chance to exchange ideas and solutions with the manufacturers, distributors, consultants, snowfighters and other public works professionals they call their peers.

Combining urban sophistication with small-town warmth, Grand Rapids, MI is sure to deliver a Snow Conference experience like no other! It’s got a high-energy downtown that offers more than 90 restaurants, bars, entertainment venues and museums within a five-minute walk of luxury hotels and a state-of-the-art convention center. Attendees should make sure to also leave themselves time to visit a few of the topnotch breweries responsible for the city being named Beer City USA in 2012 and 2013.

Grand Rapids is also a paradise for outdoor enthusiasts where they’re never more than six miles away from a body of water. Fishing, boating and swimming are all favorite local activities along with biking, hiking and running the trails that crisscross the region, passing through skyscraper canyons to forests and wetlands. Wherever you go, whatever you do, attendees will enjoy small-town friendliness, safety and affordability. No wonder Lonely Planet named Grand Rapids and Michigan’s Gold Coast the “Number One Place to Visit in 2014.”

Along with a great city and fun social events, the Snow Conference promises to showcase industry-leading education sessions and exhibits at the DeVos Place Convention Center.

Each year a dedicated committee of APWA members and winter maintenance professionals works to develop the conference education program, and we’re honored to have the best and brightest minds in municipal snow operations attend the North American Snow Conference to present their sessions as a result of these efforts. In addition to the numerous programs featuring Winter Maintenance, Weather, Emergency Management, Fleet and Sustainability, attendees will also have an opportunity to participate in a panel discussion on the 2014 Top 10 Winter Maintenance Issues and a Talk Show focusing on operator safety.

There will also be plenty of time to explore the exhibit floor and talk with exhibitors representing more than 150 companies with products and services focused on innovative new equipment, ground-breaking technologies, snow and ice removal, winter road maintenance, and streets and fleet operations. Select exhibitors will present unique technical sessions in the Exhibitor Solutions Theater, demonstrating how their company’s technology or service provides a solution that addresses the needs of the snowfighting community.

This year, the always-popular General Session Talk Show turns its focus on operator safety. Winter maintenance is a dangerous job. We’ll have a panel of experts on hand to lead this important discussion on how to keep operators safe and what to do when incidents occur.

This year’s closing keynote speaker is Jeff Havens, one of the most in-demand (and funny) speakers in North America. In his hysterical presentation, Jeff will show how to understand, recognize, and resolve every generational issue facing today’s modern workforce. No exaggeration! By the end of “Us vs. Them,” participants will walk away with all the knowledge needed to address 100% of the generational
issues they can expect to face in the next 10-15 years. Because while other generational presentations focus on what people want, “Us vs. Them” shows why everyone wants the different things that they do. It’s an important distinction, and it will make implementing new solutions easier than you ever thought possible.

Back again this year is the Winter Maintenance Supervisor Certificate Workshop, which made its premiere at the 2011 Snow Conference. Designed for individuals charged with supervising their winter maintenance operations, this one-day workshop provides a well-rounded overview of all aspects of snow and ice control. Held on the first day of the conference, it provides a great foundation for deeper investigation into specific topics of interest throughout the rest of the conference.

The concurrent education sessions will offer a variety of topics, including a session where attendees will discuss the top 10 winter maintenance issues identified at the 2014 Snow Conference. Experts from national and international research boards such as Clear Roads, AASHTO, and the Transportation Research Board will join attendees in reviewing the “top ten” issues including what is being done to address these issues, whether any new issues have arisen in the past year, and whether any of the issues identified last year have increased in importance. This session will be very interactive, and audience participation is a must!

In addition to the myriad of education programming offered in classroom settings, the final day of the Snow Conference will focus entirely on technical tours. Attendees can choose between the Gerald R. Ford International Airport Winter Maintenance tour and the Winter Operations & Truck Fabrication/Regional Collaboration tour.

With three runways and numerous taxiways, the Gerald R. Ford International Airport (GFIA) is the second largest airport in Michigan. Those runways and the accompanying taxiway system must be maintained to serve 24 non-stop destinations and provide air service for over two million passengers a year. On average, the airport receives 82” of snowfall annually, and relies on both in-house staff and contractors to clear the 1.6 million SY of paved surfaces which include the airfield, 40 lane-miles of roads, and surface lots that accommodate approximately 6,500 cars. This exciting technical tour will take a look at the processes in place at GFIA that allow it to handle the relentless storms and severe weather seen during the winter months and provide a behind-the-scenes look at the vast snow equipment fleet the airport operates and maintains throughout the year.

The Winter Operations & Truck Fabrication/Regional Collaboration technical tour will take place at the City of Kentwood’s Public Works Facility, where representatives from the Michigan Department of Transportation (MDOT), Kent County Road Commission, and the Cities of Kentwood, Grand Rapids, Grandville, Walker, Wyoming and East Grand Rapids will all be on hand to display their latest snowfighting equipment. Each agency will explain how they collaborate throughout the winter months to ensure a consistent level of service. They’ll also discuss how the agencies share resources, weather information, cooperative purchasing, and media relations to form a regional partnership covering the Grand Rapids metro area. In addition, Truck and Trailer Specialties, Inc. will be on hand to give participants an inside look at truck fabrication and to provide a hands-on demonstration showcasing several trucks equipped with the latest advancements in liquid applications, underbody scrappers, and wing plows. For those interested, a visit to see Truck and Trailer’s service facility can be arranged during this tour.

You can find more information about the 2015 North American Snow Conference and register online at www.apwa.net/snow. Make plans now to attend The Show for Snow!
The American Public Works Association (APWA) invites you to join us in the heart of the North American Snowbelt for the 2015 North American Snow Conference in Grand Rapids, MI, April 12-15! With this area of the country regularly receiving upwards of 100” of snow per year (110.7” last winter), it’s sure to provide a unique location where you’ll experience the most concentrated collection of snow and ice solutions you’ll find under one roof.
Don’t labor about what to do on Labor Day weekend – stay and enjoy Arizona

Amanda McGennis, Senior Vice President, Arizona Chapter Associated General Contractors, Phoenix, Arizona; Daina Mann, Communications and Public Engagement Manager, Gunn Communications, Inc., Phoenix, Arizona; and Scott Kirchhofer, Marketing/Design Specialist, Achen-Gardner Construction, LLC, Chandler, Arizona

The 2015 Congress in Phoenix will be here sooner than you think. There will be lots to do and learn during the Congress but there’s even more to explore in Arizona. Since Congress ends just in time for Labor Day weekend this is a unique opportunity to extend your stay and enjoy a taste of what this amazing state has to offer.

Arizona is a diverse state with an abundance of opportunities for fun, adventure and experiencing the unique culture of the southwest. From the majestic natural wonders of the Grand Canyon, Monument Valley and the red rocks of Sedona to our cool—yes cool—mountain regions to world-class golf, spas, shopping and culture, Arizona truly has something for everyone.

While we are well known for being the Grand Canyon State, there are other gems to be enjoyed throughout the state, many within a day-trip of Phoenix. In the Tucson area a short drive to the south, you can experience Karchner Caverns, San Xavier del Bac mission made famous in a PBS special on its renovation by Old World artists, the Old West Towns of Tombstone and Bisbee, the Pima Air and Space Museum, and the Wilcox and Sonoita wine trails. Just 90 minutes north of Phoenix, Sedona is a destination unto itself but is also a great jumping-off point to explore the Northern Arizona Wine Trail and the charming and historic towns of Jerome, Cottonwood, Prescott and Flagstaff—where you can spend an afternoon poking around unique galleries, shops and eateries. For those wanting to get back to nature, the cool White Mountains offer numerous hiking and fishing opportunities. If you are into astronomy, Arizona’s dark skies and world-class observatories (Mount Graham, Kitt Peak and Lowell) are an astronomer’s dream.

If you choose to stay in the Phoenix region, there are many exciting options. And while it will be warm, there are plenty of places to cool off. In fact, many Phoenicians choose to cool off locally by taking advantage of the many staycation packages offered by our numerous resorts—most of which feature expansive pools with water slides or surf waves, spa or golf-inclusive package and dining credits at resort restaurants.

In the air-conditioned indoors there’s baseball (Diamondbacks), fantastic museums (Internationally-renowned Heard Museum, Phoenix Art Museum, Children’s Museum and Natural History Museum) all in close proximity to the convention center hotel, as well as the Musical Instrument Museum, Pioneer Living History Museum and others within a short drive. For those who enjoy shopping, there are four (yes four) outlet malls in the Valley. In addition, Old Town Scottsdale, Glendale, Tubac, Jerome, Bisbee, Cave Creek and Carefree are home to some of the best local artists, shops and galleries. If you enjoy gambling, Arizona’s Native American communities have some of the nicest gaming facilities, and many are located in the greater Phoenix metro area.

We hope you will stay over and experience the many wonders of our state. To find out more of what this state has to offer go to www.visitarizona.com.

Amanda McGennis can be reached at (602) 252-3926 or amcgennis@azagc.org; Daina Mann can be reached at (623) 362-1597 or dmann@giiaz.com; and Scott Kirchhofer can be reached at (480) 403-9416 or skirchhofer@achen.com.
Grand Canyon (photo credit: Grand Canyon Railway) Greasewood Flat (photo credit: Visit Phoenix)

Civic Space Park (photo credit: Visit Phoenix)
Charting a new course: Dale Metzinger, PWM

Dale Metzinger is no stranger to leadership. In the Army, he was a leader before he was 20, and retired in 1995 as a Sergeant First Class. As a civilian, Dale served as a Project Manager for several years, and has been a Street Superintendent for the Town of Kernsville, North Carolina since 2008. His mentor Joe Johnson, P.E., PWLF, in addition to his role as the Public Works Director for the City of Leawood, Kansas, is an active member of APWA whose involvement in the organization stretches back more than twenty years.

These two leaders from widely divergent backgrounds and very different parts of the country met through the APWA Donald C. Stone Center’s Public Works Manager Program.

Joe became a PWLF and mentor out of a desire to “give back” to APWA as an organization, and an interest in passing on knowledge to a new generation of public works leaders and managers. Dale joined the program both as a means to acquire a significant credential for himself and as an example for his employees—demonstrating willingness to go that extra step to improve himself, and further his career.

Both Joe and Dale had similar things to say about the experience of being in a mentor/mentee relationship with a peer.

Joe feels that mentoring in general is a “two-way street,” with mentor and mentee learning from each other and gaining perspective outside their own comfort zone. He thinks it helps bring out the best in people, and makes the profession in general better and more educated.

Working with Dale, Joe said, helped him clarify his own thought processes and gave him a much wider perspective on common issues they both face in towns of similar size but dissimilar climates and demographics. He appreciated Dale’s extensive experience in pavement preservation, and enjoyed learning about techniques they use in North Carolina to overcome challenges posed by limited budgets and extreme weather in that part of the country.

Conversely, Dale learned about techniques Joe’s department uses which he wants to incorporate in his own program. He deeply appreciated Joe’s vast body of both “book” knowledge and real-world experience, and his ability to share both in an accessible, positive manner. Dale commented that Joe’s experience and insight into dealing with citizens in the community was especially helpful, and gave him perspective he needed.

“Mentor/mentee affiliation aside, as peers, Joe and Dale share a lot of life experience, and have become good friends outside the professional aspect of the program.”

Ann Lowenstein, Professional Development Coordinator, and Mabel Tinjacá, Ph.D., Director of Professional Development, American Public Works Association, Kansas City, Missouri
When asked what he’d say to another public works professional who might be considering joining the DCS Center program, Dale offered a number of encouragements: It’s a good way to get meaningful credentials; the DCS Public Works Manager program is tough, but it’s great—it will help you advance in your career and move up; the program is a more-attainable route to acquire credentials for someone who doesn’t necessarily have the time or funds to obtain a college degree.

As it happens, some other employees of the Kernsville Public Works Department have gone through the DCS credentialing program at the Supervisor level. Dale is so impressed with the program’s high standards, and the valuable skills they’ve all gained, that he intends to make obtaining a PWS certification mandatory for his crew leaders.

An important part of the Public Works Manager credential is the final project. With his project, Dale wanted to address the difficulty involved in educating the public at large about the realities of street maintenance and pavement preservation. Dale and Joe both concur there is a vast amount of information on the subject, but it’s widely scattered and exists mostly as financial comparison charts and technical papers. Dale did the research and produced a simple, easy-to-understand PowerPoint™ presentation which visually demonstrates the need and value of ongoing maintenance as opposed to the “glamor” of a full repaving.

Joe thinks the PowerPoint™ presentation that Dale produced is something every organization that deals with pavement preservation issues should have in their arsenal. He commented on the difficulty at every level—from local up to federal—of getting a public audience, be that the local Chamber of Commerce or the U.S. Congress, to relate to a fiduciary chart or a list of numbers. What Dale’s project did, Joe said, was to “put a face” on the numbers, making them relatable and “real” for people outside the profession. Dale graduated from the Public Works Manager program in July 2014.

When asked, both he and Joe concurred: This by no means spells an end to their association. Mentor/mentee affiliation aside, as peers, Joe and Dale share a lot of life experience, and have become good friends outside the professional aspect of the program. Both agreed that they will continue to communicate as friends as much as professional contemporaries—a relationship that might not have happened otherwise, and has enriched them both.

Ann Lowenstein can be reached at (816) 595-5217 or alowenstein@apwa.net; Mabel Tinjacá can be reached at (816) 595-5214 or mtinjaca@apwa.net.
Revised eligibility requirements for the Certified Public Fleet Professional (CPFP) certification

Keith Nicolson, CPFP
Fleet & Radio Communications Technical Supervisor
City of Eugene, Oregon

If you looking for a way to advance your career, validate your professional experience and demonstrate your value to your customers and managers, then the Certified Public Fleet Professional (CPFP) certification from the American Public Works Association (APWA) might be for you. The good news is the eligibility requirements have recently been updated to help those with private fleet experience become certified sooner than in prior years.

The CPFP certification is unique to the fleet industry because it puts your fleet knowledge and experience to the test and shows how you can apply your experience to real-world scenarios in the public sector. It’s more than a simple test; the CPFP certification process involves putting into practice what you know, showing that you can problem-solve and apply your experience to typical public sector situations.

Updated CPFP Qualifications
Recently the CPFP certification council reviewed and updated the qualifications and eligibility requirements to better reflect and incorporate an individual’s prior and current experiences. There has been interest from fleet professionals in obtaining the APWA CPFP certification; however, their years of experience in the public fleet arena had not quite reached the stringent eligibility requirements. One of the major changes has been the incorporation of some private sector experience in addition to the public sector. Other areas that have seen slight modifications include education levels/years.

While there are certain nuances of managing a public fleet, there are certainly a lot of similarities and cross-over with private fleets. The new eligibility requirements strive to incorporate that level of experience and allow individuals to continue to pursue their professional credentials through APWA.

CPFP Background
APWA established the CPFP certification in 2006. The purpose of the certification is to “promote excellence in fleet management by advancing the knowledge and practices of the public fleet professional to benefit communities through quality fleet services.” As an organization APWA strives to provide and promote distinction and integrity in the public works arena. Their certification programs set us apart from our peers.

Once you enter into the certification program, it is a self-paced preparation process. APWA does provide a recommended reading list but just reading the material will not guarantee a passing score. You need to demonstrate your industry knowledge in the wide range of disciplines needed for a fleet professional. The topics you will be tested on and the emphasis in each area include: Operations (20%); General Management and Business (16%); Asset Management (17%); Financial Management (17%); Human Resources Management (10%); Risk Management (8%); Environmental Management (7%); and Information Management and Technology Systems (5%).

Each of these sections will test the candidate’s knowledge in three different areas: the ability to recall information; the ability to apply the information; and the ability to analyze the information. (See chart next page.)

CPFP Benefits
Achieving the CPFP certification demonstrates to your managers, your customers, your team members and your public officials that you have the skillset to manage a fleet and take them to the next level. The CPFP certification establishes that you have in-depth knowledge of not only your program area but also those areas that impact what and how you do your job—including human resources management, risk management and information technology. The certification shows you have the skills to evaluate the strengths and weaknesses of your program and you know how to make informed decisions.
decisions backed by solid data. When you achieve CPFP certification, your users know with confidence that you are running a cost-effective and efficient operation.

Unlike other certification programs that first teach you the material and then test you on the information, there are no classes covering the scope of the material covered in this certification. Individuals seeking this higher level of certification need to not only rely upon their past experience, trainings and research but also demonstrate their ability to put it all into action.

If you are looking to take your career to the next level consider becoming a Certified Public Fleet Professional through APWA. For more information on the certification please go to the following link: http://www.apwa.net/credentialing/certification/Certified-Public-Fleet-Professional-(CPFP).

To reach Keith Nicolson, please call (541) 682-4867 or send an e-mail to keith.r.nicolson@ci.eugene.or.us.
Retaining a diverse workforce

Caroline Barlow, P.E.
Associate Civil Engineer, Murray, Smith & Associates, Inc.
Everett, Washington
Member, APWA Diversity Committee

As noted in previous issues of the Reporter, my fellow Diversity Committee members have emphasized why diversity is important, and have provided tools on how to proactively recruit a diverse workforce—one that welcomes employees of various cultures, ages, races, gender identities and sexual orientation.

Diversity’s benefits are numerous, as revealed in the July 2011 Global Diversity and Inclusion report published in Forbes Insights, which interviewed over 300 executives with direct oversight for their companies’ diversity programs. The study found that diversity is crucial to innovation and creativity in their industries. A diverse set of experiences, perspectives, and backgrounds fosters new ideas and drives innovation. Diverse teams bring a broad spectrum of talent and are better equipped to solve problems. In the public works industry, where staff are constantly seeking new solutions that will improve processes and save time and money, it is vital that their agencies embrace diverse workforces.

But once these agencies have these workers on board, how do they retain these highly valued employees? By implementing a retention strategy that shows employees they are valued and helps them develop their talents. The following guidelines are key for a great strategy:

Commitment – Engage staff through surveys and interviews to determine their needs. Do this across the board—involve every member of the organization in this process. Compile the information and focus on the most critical areas of concern regarding retention and create a strategic plan to resolve these issues. Once a plan is developed, it is important that all staff are committed, from the top down, to implement changes. And of course, follow through and hold all employees accountable for administering the plan. Demonstrating sincere interest in people goes a long way towards creating a comfortable environment where everyone is valued and feels they are a part of the team.

Offer Mentoring – If employees are left to define their role or place in the organization, with no support or involvement by management, they may feel like outsiders and never feel welcome or accepted. Support new employees by pairing them with mentors who are truly interested in every employee’s career growth. A mentor should continually share insight, provide networking opportunities, and share experiences.

Promote Regular Diversity Training – Emphasize the importance of understanding and empathizing with different points of view. Give employees the opportunity to define their training needs and encourage workshops that require teamwork—this gives people with varying backgrounds the opportunity to learn how to work well together.

Diversity is important at APWA. As an example, the Diversity Committee coordinates the First-Timers Meeting during the International Public Works Congress & Exposition each year.
Support Upward Mobility – Make promotion opportunities transparent and open to diverse applicants. According to the U.S. Commission of Civil Rights, one issue that often factors into minority candidates’ decisions to leave an agency is a perceived lack of advancement opportunities. Provide leadership and career development training to cultivate individuals for these positions.

Avoid Tokenism – Encourage employee involvement on committees or in decision-making groups based on their interests and strengths—employees should not feel as though their value to the organization is based upon their minority status. In addition, do not assume that the minority employees speak for or represent their entire demographic.

Be Open-Minded – Studies have shown that minority employees often feel like their opinions are overlooked in the workplace. Over time, this kind of frustration can grow, eventually contributing to their decision to seek employment elsewhere. Don’t assume that “the way it’s always been” is the best way. New people bring fresh ideas and perspectives to the table that could solve problems. Create an environment where all employees feel their opinions and perspectives are valued.

Caroline Barlow can be reached at (425) 252-9003 or caroline.barlow@msa-ep.com.

Special Reminder: Please make sure you update your personal membership profile, including answering the optional questions 13-16 (see page 10, November 2013 Reporter). Please refer to APWA’s 2013 Diversity Resource Guide 2nd Edition and the Diversity Toolbox for more ideas in celebrating the diversity in your chapter.
How good is your team?

Don Bruey
Retired Director of Public Works
Ogden, Utah
Member, APWA Small Cities/Rural Communities Committee

“A small group of thoughtful people could change the world. Indeed, it’s the only thing that ever has.” – Margaret Mead (1901-1978), American cultural anthropologist

I would risk saying that many if not most organizations of reasonable intelligence would agree that their people are their most important assets. I here and now challenge that assertion! I believe that it is not the individual person or even the collection of the best and brightest people that make an organization great. Behind every accomplishment in history, being it flying solo across the Atlantic, sailing solo around the globe or inventing the light bulb, you will find a cohesive, well-functioning team behind the accomplishment. Even Albert Einstein didn’t work in a vacuum. He once remarked, “Many times a day I realize how much my own outer and inner life is built upon the labors of my fellow men, both living and dead, and how earnestly I must exert myself in order to give in return as much as I have received.” Thus I propose that it is that concept of team and teamwork that separates good from great in any organization.

This is especially true in the field of public works. For all of the experience gained in my life as evidenced by my thinning grey hair, I can’t think of a single job that does not rely upon teamwork to complete fully and successfully. As leaders in public works this begs the question, “How do we know how good our teams are?” We would all like to believe that our teams are high functioning but are they really and, if so, just how good are they? Even more basic is the question, “What makes a team effective?” Can we even measure how good they are? Fortunately there is a wealth of knowledge and easy-to-use tools that both define what makes a team highly effective and provide ways to assess them.

One such tool is a study entitled, Six Habits of Highly Effective Teams by Kohn and O’Connell. Within this work they clearly and simply define what it takes to build teamwork in an organization and how to measure the effectiveness of those efforts. One of the first clarifications that Kohn and O’Connell make is to define what constitutes a habit. They define the characteristics of a habit as:

1. **Frequency:** Behaviors don’t meet the definition of being “habits” if they are not manifested repeatedly.

2. **Engrained Nature:** A habit is a behavior that has become an integral part of one’s behavior pattern.

3. **Physical or psychological reward(s):** Habits, even “bad” habits, reinforce some physical, psychological or emotional need.

I suggest that if you are looking to improve the performance of your organization, you begin with examining your team’s cohesion and effectiveness.”
4. **Instinctive quality:** Habits are performed without much forethought. If an action takes much consideration, it is not a habit but a reasoned choice. Once a choice gets repeated several times, it is no longer a selective behavior but rather a more habitual behavior.

With the meaning of what a habit is let’s learn what the six habits of highly effective teams are:

1. **Strengthening Emotional Capacity to Improve Team relationships:** Superior relationship skills drive a team’s effectiveness. Organizational success and morale are heightened when team members relate well with each other. Conversely, teams will be dysfunctional when member’s relationship skills are absent, flawed, misdirected, untrusting or not aligned with organizational culture. Thought, “Is hiring the most skilled candidate the best practice if they are not a good fit with the culture?”

2. **Expanding Team Self-Awareness:** Effective teams have an identity that is driven by:
   - Its shared mission.
   - Its values and the norms that stems from these values.
   - Its competencies and strengths.
   - The perceptions of those with whom it interacts.

3. **Practicing Empathy and Respectfulness:** Respectfulness is an empathetic behavior that is “other” oriented, prioritizes understanding, and demonstrates caring and an ability to read situations and people. This means that teams and members:
   - Are non-defensive, seeking first to understand.
   - Accepting the perspective of others rather than assuming they are the same as their own.
   - Practice active listening. Listen as a receiver, not a critic. Rephrase content for understanding and reflect feelings.
   - Show respect by being honest and valuing candor; avoiding and/or confronting inequities and embracing diversity.

   Note: This habit differentiates between the Golden Rule and the Platinum Rule. The Golden Rule is to treat others the way we would like to be treated. This assumes that others want what we want. The Platinum Rule is to treat others the way **THEY** want to be treated. This requires active listening.

4. **Establishing and Regulating Team Norms:** Norms are both implicit and explicit. They should reflect the core values of the organization and are impacted by the degree (high or low) of socialization and conformity as:
   - High socialization and low individualism produces conformity
   - Low socialization and low individualism yields isolation
   - Low socialization and high individualism produces rebellion
   - But high socialization and high individualism results in emotionally intelligent, creative individualism.

5. **Thinking Laterally:** While many tasks performed by teams are routine and well defined, others present more of a “green field” opportunity that required innovation. Dr. Edward De Bono developed a process of lateral thinking (*The Six Thinking Hats*) that helps teams think in parallel, a process that reduces cognitive biases and promotes collaboration. Effective teams avoid the conflict method of considering new ideas and finds ways to get members’ thinking aligned about an issue.

6. **Entrusting Team Members with Appropriate Roles:** In effective teams, members feel secure in their roles, in other team members’ capabilities, and in the trust others have in them to perform in the role to which they have been assigned. Role designation, competence and trust are highly interconnected.

If you desire a snapshot of the effectiveness of your team/s, I suggest giving them the survey on pp. 26-27.

This is only one of many great tools available to measure team effectiveness. The article is only a quick overview to understanding and building a cohesive and effective team. I suggest that if you are looking to improve the performance of your organization, you begin with examining your team’s cohesion and effectiveness. It is a top-down process that begins and ends with leadership, and leadership is all about relationships. People don’t care how much you know until they know how much you care. Leaders can’t rely on rules alone as rules without relationships breed rebellion.

Don Bruey can be reached at dbrueya4@gmail.com.
Instructions: Circle the frequency rating that applies best to your team.

<table>
<thead>
<tr>
<th>Team Characteristic</th>
<th>Habit/s #</th>
<th>4 Always</th>
<th>3 Mostly</th>
<th>2 Sometimes</th>
<th>1 Rarely</th>
<th>0 No Opinion</th>
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<tr>
<td>Demonstrates competence in performing projects</td>
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<td>Demonstrates honesty within the group and with outside stakeholders</td>
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<td>Makes successful efforts to understands the needs of others</td>
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<td>Is easy to work with from others’ point of view</td>
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<td>Is fully accessible to each other and others</td>
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<td>Follows up routinely on internal/external requests</td>
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<td>Shares information openly</td>
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<td>Is attentive to promoting good relationships within the team</td>
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<td>Is skilled in developing good internal relationships</td>
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<td>Is attentive to working relationship between members and the team</td>
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<tr>
<td>Is skilled in developing working relationships between members and the team</td>
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<td>Is attentive to working relationships between the team and external stakeholders</td>
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<td>Is aware of its emotional temperature</td>
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<td>Is aware of its strengths and weaknesses</td>
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<td>Has documented its mission</td>
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<td>Adheres to its mission</td>
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<td>Recognizes what excellent performance looks like</td>
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<td>Embraces measurement and analysis of its performance against quality standards</td>
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<td>Allots time periodically for group reflection on team norms,</td>
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<td>behaviors, and effectiveness</td>
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<td>Has a distinct identity</td>
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<td>Listens actively in forums of all kinds</td>
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<td>Uncovers content or emotions in the group that have been left</td>
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<td>Seeks first to understand</td>
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<td>Is courteous in all internal and external interactions</td>
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<td>Embraces diversity within the team</td>
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<td>Has a set of established norms, both implicit and explicit,</td>
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<td>that regulate group behavior</td>
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<td>Adheres to these implicit and explicit norms</td>
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<td>Demonstrates an ability to think creatively and innovatively</td>
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<td>Has members in assigned roles for which they are competent</td>
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<td>Has members in assigned roles matched well to their basic</td>
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<td>personality style</td>
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<td>Understands each member’s role on the team</td>
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<td>Accepts each member’s on the team</td>
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<td>Trusts that other members will perform competently</td>
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<td>Is highly effective</td>
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**Scoring the Self-Evaluation:** Your average score is the sum of your subtotals in each column, divided by 35 minus the number of “No Opinion” responses.

**AVERAGE = __________

- **3.5 – 4.0** – Superior Team Cohesion
- **3.0 – 3.5** – Good Team Cohesion
- **2.5 – 3.0** – Fair Team Cohesion
- **Less than 2.5** – Lacks Consistent Team Cohesion
The following questions are intended to be used by someone interviewing or collecting information for an individual that they would like to nominate for APWA’s Recognize Your Leaders series printed monthly in the APWA Reporter.

Nominator’s Name: ____________________________________________________________

Candidate’s Name: ____________________________________________________________

Candidate’s Title: ____________________________________________________________

Candidate’s Agency/Organization: _____________________________________________

Candidate’s City/State: _______________________________________________________

How long has the candidate been involved in the public works industry? __________

How long has the candidate worked in their current position? _____________________

Please describe the reason that the candidate is being considered for recognition.

How was the candidate’s leadership ideas/actions brought to the forefront?

Who did the candidate work with to help bring this idea/action forward?

Did the candidate experience any challenges when trying to implement this?

Are there steps/processes that, when looking back, the candidate could have done differently to make this idea/action even more successful (lessons learned)?

Email submissions to bstein@apwa.net
Index to 2014 articles

Listed in this index are all articles published in the 12 issues of the APWA Reporter during 2014. They are categorized by subject, with subject headings in alphabetical order. All of the articles can be found on the APWA Reporter web page at www.apwa.net/Resources/Reporter.

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<td>CSM, CPII and CPFP Certification Exams (computer-based testing)</td>
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<td>January 29</td>
<td>Weather for Public Works</td>
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<td>February 12</td>
<td>Congratulations, You Are Now An NPDES Phase 2 MS4</td>
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<td>March 23-27</td>
<td>CSM, CPII and CPFP Certification Exams (computer-based testing)</td>
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<td>April 12-15</td>
<td>2015 North American Snow Conference, DeVos Place, Grand Rapids, MI</td>
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<td>April 23</td>
<td>Built to Last: Getting the Most out of Your Solid Waste Fleet</td>
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<td>May 4-8</td>
<td>CSM, CPII and CPFP Certification Exams (computer-based testing)</td>
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<td>July 13-17</td>
<td>CSM, CPII and CPFP Certification Exams (computer-based testing)</td>
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= Click, Listen, & Learn program (Free to Members)
= Live Conference (Paid Registration)
= Certification Exam
= Web-based training

APWA members may access past Click, Listen, & Learn programs from the Members’ Library at no cost. Programs can be streamed to your computer via the link found in the library.

If you have expertise that you would like to share, please use the online Call for Presentations form to describe your expertise and perspective on the topic. www.apwa.net/callforpresentations/
n the East Khasi Hills district of Meghalaya state in northeast India, close to the border with Bangladesh, villagers weave together the roots of living rubber fig trees (*Ficus elastica*, for the gardeners among us) to construct living bridges; some may be over 500 years old. The initial work can take about 15 years (not that long, compared to planning and construction of some projects in this country!), but with age and growth the structures reportedly can support 50 people or more at one time. (A web search will yield photos.)

Even the most avid fans of sustainability will likely concede that living tree roots have limited growth potential in public works, but the fundamental material is looking promising. The roots are wood; wood is largely cellulose; cellulose may be the most dominant fundamental building block of our biosphere; and scientists have begun to learn about the remarkable properties of cellulose nanocrystals, the tiny bits that give plants their high strength and light weight.

Cellulose is the fibrous, tough carbohydrate that plays an essential role in the structure of plant cell walls. The organic chemical, insoluble in water, was first isolated in the nineteenth century by French chemist Anselme Payen. Scientists in the 1950s discovered that treating plant fibers with acids could produce suspensions of pure cellulose, and subsequent inspection of dried suspensions by transmission electron microscopy (invented in the 1930s) revealed defect-free, needle-shaped particles that we now know are cellulose nanocrystals.

Acid treatment of cellulose fibers also yields microcrystalline cellulose that is now widely used in the pharmaceutical industry as a tablet binder and food production. (It was an anti-clumping agent in last night’s store-bought pasta sauce at my house.) But only recently have scientists begun to discover the very attractive mechanical properties of the nanocrystals.

The particles are very small and thin. Cellulose nanocrystals produced from wood, for example, are 3-5 nanometers (nm) in width and 100-200 nm long. If produced from cotton, they may be 5-10 nm in width and 100-300 nm long. From other sources, nanocrystals as large as 20 nm in width and 1000-2000 nm in length have been observed. For comparison, glass filaments used in communication cable and fiberglass composites range in size from 4-34 micrometers (μm); one μm is equal to 1000 nm. The chopped glass fibers used in glass-reinforced concrete are about 1 centimeter long; that is, about 10,000,000 nanometers! About 1 million cotton-derived cellulose nanocrystals, lined up end-to-end, would not quite add up to one of those glass fibers; and 1,000 of those columns, side-by-side, would be about as wide.

While their sizes are small, these particles are strong, with theoretical properties similar to Kevlar. Experiments are showing that adding the cellulose nanocrystals to a polymer binder can produce composites with properties that some researchers term “spectacular.” Scientists foresee applications in such diverse areas as structural materials, wound dressings, batteries, and electronic displays.

On the other hand, the behavior of cellulose nanocrystals changes in the presence of water and the particles can degrade at temperatures as low as 200° C (well above the boiling point of water, but certainly not adequate for fire resistance). Also, we are a long way from being able to produce the nanocrystals in relatively uniform sizes.

But cellulose is abundant and its origin is the natural growth of plants, making cellulose nanocrystals a potentially very “green” material. While public works practitioners of the future may not be tending tree roots and vines, they could very well rely on farms as well as factories for their raw materials.

Andrew Lemer, Ph.D., is currently a Senior Program Officer with the National Academy of Sciences of the United States of America. In addition to technical papers and occasional articles for the Reporter, he writes on civil infrastructure and human settlement at www.andrewlemer.com.
The spirit, the will to win, and the will to excel are the things that endure. These qualities are so much more important than the events that occur.” – Vince Lombardi

I think that this statement from the legendary coach embodies the desire to create professionalism in the career of public works that APWA is striving to instill in practitioners.

This year the Leadership and Management Committee will be featuring an article in each issue of the APWA Reporter that will highlight one of the 11 units that are covered in a Public Works Institute (PWI). These 11 units make up the core knowledge that anyone who wishes to be a public works professional needs.

Serving on the Rocky Mountain PWI committee and as an instructor for some of the classes, I can attest to the depth each unit covers, and the substantial foundation that is provided to all graduates. In the Reporter series it will not be possible to provide this depth, but we will provide a substantial introduction to each of the 11 units. I strongly recommend and hope that you will take a little time each month and learn about that month’s highlighted PWI unit. This will not only provide a valuable introduction to anyone who is looking at moving up in an organization, but it will also provide fresh perspective and review to longstanding public works professionals.

The one thing that I have learned working with our PWI is that ongoing interaction with professionals from all aspects of public works, and supporting professions like law and finance, will make you better at what you do.
The Public Works Institute template was designed to address the supervisory and management needs of current first-line supervisors and higher, and those individuals aspiring to be better leaders and supervisors.

APWA Institute approval is based on participants receiving instruction in the 11 core units shown below. Institutes have the discretion to decide what content to deliver from a range of topics listed under each core unit. It is not required that Institutes cover all topics under each core unit, but rather consider the topics as a guidance tool. Local, regional and state responsibilities may warrant that additional sub-units be included by the chapter. The Public Works Institute template will continue to meet the APWA Donald C. Stone (DCS) Level 1 Public Works Supervisor (PWS) and Level 2 Public Works Manager (PWM) authorized institute completion requirement. The 11 units are:

- Unit 1: Supervisory Techniques and Skills
- Unit 2: Basic Management Skills
- Unit 3: Communications Skills
- Unit 4: Leadership Skills
- Unit 5: Community Service/ Customer Orientation Skills
- Unit 7: Fundamentals of Government
- Unit 8: Finance
- Unit 9: Resource Management Skills
- Unit 10: Overview of Public Works Operations
- Unit 11: Creating the Future

The institutes started in APWA’s chapters, and we now have 18 approved institutes. The structure and format varies from institute to institute. Time frames vary, but are built around 90 hours of minimum instruction. Completion takes from one to three years depending on how often classes are held. The Iowa and New England institutes are completely online, Florida is online and face to face, and the rest are face to face. Some are partnerships with universities while others use professionals in the field as instructors. If you don’t have a local PWI, you can contact any of the 18 established PWI’s about attending theirs. I have found that each PWI class forms a bond that will provide a core public works network that will endure for the rest of your career. I know this series will provide valuable information, and I hope that it will spur many of you to take this route to a PWS, PWM or PWE credential and a higher level of professionalism.

This education will also help you to achieve success, per Coach Lombardi: “The quality of a person’s life is in direct proportion to their commitment to excellence, regardless of their chosen field of endeavor.”

More PWI information can be found at http://www.apwa.net/learn/PW-Institutes.

Dan Hartman can be reached at (303) 384-8150 or dhartman@cityofgolden.net.

Rocky Mountain Public Works Institute
- New class will begin September 15, 2015
- Applications available June 2015
- http://colorado.apwa.net/MenuHomepage/434/PWI-Info
IFME meeting in Perth, Scotland

Frank Stevens, President, Institute of Municipal Engineering of Southern Africa, Westville, South Africa; Doug Drever, P.Eng., FEC, Project Director, City of Saskatoon, Saskatchewan, and member, APWA International Affairs Committee

The International Federation of Municipal Engineers (IFME) held their spring meeting in Perth, Scotland. The meeting was held in conjunction with a meeting of the Scotland Municipal Engineers, part of the United Kingdom’s Institution of Civil Engineers (ICE). There were a number of topics presented and discussed during the board meeting. Below you will find a number of the issues that were raised, and that we would like to highlight.

Under-use of debt

Chris Champion, CEO of IPWEA (Institute of Public Works Engineering Australasia), pointed out that: “Local government service provision is asset intensive and infrastructure assets have, on average, long, useful lives. In such circumstances, it is impossible over time to finance the acquisition of new assets while at the same time financing warranted asset renewal, without significant reliance on debt. Under-use of debt will result in intergenerational inequity in services and charging decisions—and an inability to accommodate needs for new capital works and asset renewal. Local governments are generally debt averse. Many councils are likely to better serve their communities by making greater use of debt, and many have considerable capacity to deal with urgent asset-renewal needs.”

Cahoot – CPD live’s cutting-edge online education platform

This is a web-based CPD learning site developed at Stanford and Harvard universities with a membership of five million people in 200 countries. The courses offered usually involve groups of 30 people per expert facilitator and there is a strong community “classmate” atmosphere. A 95.2% completion rate is achieved. An example of an offered course would be the NAMS ISO 55/000 Asset Management Standards course, which is made up of eight modules held over 10 weeks in 90-minute sessions. (For more information, visit www.cahootlearning.com.)
Presentations to the Institution of Civil Engineers (ICE), Scotland

ICE (Scotland) held a one-day municipal engineering seminar titled “Innovation in Action.” Frank Stevens presented on the Institute of Municipal Engineering of Southern Africa (IMESA), and fellow IFME members from the U.S., Canada and New Zealand also delivered presentations.

Sharing some insight into the challenges and innovative solutions related to municipal service delivery in South Africa and other countries of the world, we found them full of enthusiasm and questions asked by the audience encouraging.

A fascinating paper on the “Nordic Link” was delivered by Dr. Richard Blanchfield. This project involves the laying of two 500 kV cables a distance of 650 km, below the seabed, from Peterhead in Scotland to the coast of Norway. This is to form part of a European “super grid” which involves Scotland, Ireland, Spain and several Nordic countries at a cost of £1.2 billion. Of particular interest are the planned wind farms that will feed into the grid and the serious environmental challenges of seabed protection while laying the cable in 300 m-deep fjords.

Site visits

It has become an IFME tradition for the host country to showcase interesting projects of a municipal nature as part of the programme. The visits to projects in Perth and Edinburgh proved to be very popular and inspiring.

The Perth flood prevention scheme

The river Tay, which passes through Perth, has the largest peak flow of any UK river and has a long history of flooding. A site visit was carried out to the six-phase project, which was completed in 2002, and involves walls, embankments, flood gates, flood storage and pumping stations at a cost of £26 million. Prior to the completion of this project, a typical flood such as the one in 1993, caused by a combination of rainfall and snowmelt, would flood 1,500 properties at a cost of £40 million. During the project, special attention was paid to the landscape character, ecology, archaeology and cultural heritage of the affected areas. There has been no flooding since the completion of this project.

Three centuries of spanning the Forth

It must be every bridge engineer’s dream to visit the three iconic bridges spanning the Firth and Forth (Firth being the estuary and Forth being the...
We spent a very memorable half-day onsite, basking in the splendour of these structures.

**Forth Railway Bridge.** The 2.5 km Forth Bridge was built in 1883 using 65,000 ton of steel. At its peak, 4,600 men were employed on this project and 200,000 litres of paint were required to cover its 145-acre surface!

**Forth Road Bridge.** Completed in 1964, this 2.5 km suspension bridge caters for 24 million vehicles per annum. An interesting statistic is that the suspension cables, which weigh 6,350 tons, would stretch 1.25 times around the world.

**Queensferry Crossing.** With a completion date of 2016, this cable-stayed bridge is needed due to the deterioration in the existing Forth Road Bridge and its heavy traffic load. Construction of the three 210 m-high towers is already underway.

**Edinburgh Trams**

We were taken on a trial run of the new tram system, which includes the airport, Murrayfield Stadium, and criss-crosses the city of Edinburgh. The system will be integrated with train and bus services offering hop-on and -off tickets, and pensioners and disabled people will travel for free.

**Conclusion**

Among the meetings and tours, there were new acquaintances and networking opportunities to be made, illustrating that municipal engineers the world over are cut from much the same cloth.

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he mission of the APWA Donald C. Stone Center for Leadership Excellence in Public Works (DCS Center) is to position public works professionals for the twenty-first century. In keeping with this important goal, the APWA Reporter features a section dedicated to applied research in public works. This section, published quarterly, provides insight into thoughtful analysis of issues and opportunities based on applied scientific research methods as a way of further contributing to the body of knowledge.

Many of the articles appearing in this section will be capstone papers written by participants in the DCS Center Level 3 Public Works Executive (PWE) Program. Other research articles will be selected based on the applied nature of the paper and its relevance to public works.

Researchers interested in submitting articles should visit the website http://www.apwa.net/donald-c-stone/Donald-C-Stone-Center/Public-Works-Research to learn details of the requirements for publication. Articles submitted to the “Applied Public Works Research” section of the Reporter will be reviewed by the DCS Research Council, an expert group of professionals and academicians comprising the editorial board. Depending on the technical aspect of a submission, the Council may ask public works professionals to write a summary to highlight how the research can be applied. These will appear as “Research Application Summaries.” The 150-word abstracts of approved articles will be published quarterly. The full-length articles, as listed below, can be accessed via the link provided with each abstract.

This issue of the Reporter highlights two articles that fit the requirements for this section. The papers were published in the TRB 93rd Annual Meeting Compendium of Papers.

Disclaimer: The views and opinions expressed in these papers are solely those of the authors and may not represent those held by APWA or the entities referred to in the articles.

Before/After Study on the Effects of Signage and Striping on the Safety of a Modern Two-Lane Roundabout

Source: Transportation Research Board, Practice Ready Papers
TRB 93rd Annual Meeting Compendium of Papers

Authors: Richfield, Veronica; Hourdos, John; Asher, Kristin

Date: 2014
URL: http://docs.trb.org/prp/14-4584.pdf

“This paper presents the study of the impact striping and signing have on driving behavior at a two-lane roundabout located in Richfield, Minnesota. After its completion, this roundabout exhibited a suspiciously high amount of crashes. In response, engineers experimented with changes in the roundabout’s signs and striping, as roundabout design regulations are relatively lax and non-specific in contrast to ones for standard signalized intersections. An observational study was conducted that reduced 216 hours of before and after video records of the roundabout into a database of all the violations committed by drivers. Along with the observational data, crash records were analyzed and demonstrated that improper turns and failing to properly yield account for the majority of collisions. The changes implemented in the approaches to the roundabout and specifically the extension of the solid line seems to have reinforced the message to the drivers that they must select the correct lane before approaching the roundabout entrance. Although choosing the correct lane does not directly address yielding violations, it does reduce the occurrence of drivers conducting an improper turn, and to some extent reduces the need for a driver to change lanes within the roundabout. The implemented changes produced a reduction of 48% in normalized occurrences of improper turns, and a normalized 53% reduction of drivers choosing the incorrect lane a month after the changes while a year later these reductions were 44% and 50%, respectively.”
Drivers, Pedestrians, and Cyclists in California Want Complete Streets: A Comparison of Results from Roadway Design Surveys of Pedestrians, Drivers, Bicyclists, and Transit Users in Northern and Southern California

**Source:** Transportation Research Board 93rd Annual Meeting, 2014

TRB 93rd Annual Meeting Compendium of Papers

**Paper #14-5634**

**Authors:** Sanders, Rebecca L.; Griffin, Ashleigh; MacLeod, Kara E.; Cooper, Jill F.

**Date:** 2014

**URL:** http://docs.trb.org/prp/14-5634.pdf

“This paper compares findings from two recent surveys on roadway design preferences among pedestrians, drivers, bicyclists, and public transit users along major urban corridors in the metro areas of San Francisco and Los Angeles. Sponsored by the California Department of Transportation (DOT), the research explored design preferences that could increase perceived traffic safety, walkability, bikability, and economic vitality along urban arterials. Results from intercept surveys showed that roadway users desire similar design features along the test corridors, which carry 25,000-40,000 motorists bidirectionally and have comprehensive sidewalk coverage, but little to no on-street bicycle facilities. In response to an open-ended question about street improvements to enhance perceived traffic safety, Bay Area respondents ranked bicycle lanes and improved pedestrian crossings first and second overall, while respondents in the Los Angeles area ranked them in reverse order. Decreased speed was ranked third in the Bay Area, and fifth in the Los Angeles area. Other top suggestions included increasing streetlighting, traffic signals, and stop signs in the Bay Area, and better maintained roads and increased travel space in the Los Angeles area. These findings add to the growing body of evidence that design features generally deemed beneficial to one user group, such as pedestrian crossings for pedestrians, may also benefit other users. Moreover, these results suggest that roadway planning can implement a few key design interventions to enhance the travel experience of multiple user groups. Overall, the findings support the continued implementation of complete streets principles and policies.”

For more information about this special section of the APWA Reporter dedicated to applied research in public works, please contact Mabel Tinjacá, Ph.D., APWA Director of Professional Development, at (816) 595-5214 or mtinjaca@apwa.net.
Exercises are a key component of preparedness for any organization. They provide stakeholders with an opportunity to shape planning, assess and validate capabilities, and address areas for improvement. Exercises assess the participant’s ability to meet exercise objectives and capabilities, identify strengths and areas for improvement, and maintain readiness to respond to any incident.

Exercises test and evaluate plans and capabilities, and identify both capability gaps and areas for improvement. They familiarize personnel with roles and responsibilities and foster meaningful interaction and communications across organizations and disciplines. They strengthen organizations in its efforts to prevent, protect against, mitigate, respond to, and recover from all hazards.

Exercise Design and Development
In designing and developing individual exercises, the exercise planning team members are identified to schedule planning meetings, identify and develop exercise objectives, design the scenario, plan the exercise conduct and evaluation, and coordinate logistics.

Types of Exercises
Discussion-Based Exercises.
Discussion-based exercises include seminars, workshops, tabletop exercises (TTXs), and games. These types of exercises can be used to familiarize players with or develop new plans, policies, agreements, and procedures. They focus on strategic, policy-oriented issues.

- **Seminars** – Seminars generally orient participants to, or provide an overview of, authorities, strategies, plans, policies, procedures, protocols, resources, concepts, and ideas. They can be valuable for entities that are developing or making major changes to
existing plans or procedures. Seminars can be similarly helpful when attempting to assess or gain awareness of the capabilities of interagency or inter-jurisdictional operations.

- **Workshops** – Although similar to seminars, workshops differ in two important aspects: participant interaction is increased, and the focus is placed on achieving or building a product. Products produced from a workshop can include new standard operating procedures (SOPs), emergency operations plans (EOPs), continuity of operations plans (COOP), or mutual aid agreements.

- **Tabletop Exercises (TTX)** – A TTX is intended to generate discussion of various issues regarding a hypothetical, simulated emergency. TTXs can be used to enhance general awareness, validate plans and procedures, rehearse concepts, and/or assess the types of systems needed to guide the prevention of, protection from, mitigation of, response to, and recovery from a defined incident.

TTXs can range from basic to complex. In a basic TTX, the scenario is presented and remains constant—it describes the emergency and brings discussion participants up to the simulated present time. Players apply their knowledge and skills to a list of problems presented by the facilitator; problems are discussed as a group; and resolution is reached and documented for later analysis.

In more advanced TTXs, play advances as players receive prescribed messages that alter the original scenario. A facilitator usually introduces problems one at a time in the form of a written message, simulated telephone call, or other means. Players discuss the issues raised by each problem, referencing established authorities, plans, and procedures for guidance. Player decisions are incorporated as the scenario continues to unfold.

**Operations-Based Exercises** – Operations-based exercises include drills, functional exercises (FEs), and full-scale exercises (FSEs). They are characterized by actual reaction to an exercise scenario, such as initiating communications or mobilizing personnel or resources.

- **Drills** – A drill is a coordinated, supervised activity usually employed to validate a specific function or capability in a single agency or organization. Drills are commonly used to provide training on new equipment, validate procedures, or practice and maintain current skills.

- **Functional Exercises (FEs)** – FEs are designed to validate and evaluate capabilities, multiple functions and/or sub-functions, or interdependent groups of functions. FEs are typically focused on exercising plans, policies, procedures, and staff members involved in management, direction, command, and control functions. In FEs, events are projected through an exercise scenario with event updates that drive activity typically at the management level. An FE is conducted in a realistic, real-time environment; however, movement of personnel and equipment is usually simulated.

- **Full-Scale Exercise (FSEs)** – FSEs are typically the most complex and resource-intensive type of exercise. They usually involve multiple agencies, organizations, and jurisdictions and validate many facets of preparedness. FSEs often include many players operating under the Incident Command System (ICS). FSE events are projected through an exercise scenario with event updates that drive activity at the operational level. FSEs are usually conducted in a real-time, stressful environment that is intended to mirror a real incident. Personnel and resources may be mobilized and deployed to a scene, where actions are performed as if a real incident had occurred. The FSE simulates reality by presenting complex and realistic problems that require critical thinking, rapid problem solving, and effective responses by trained personnel.

Public Works is called upon for a multitude of incidents affecting our nation. We are usually one of the first-in following an incident and the last to leave as we have the responsibility to maintain infrastructure and cleanup following an incident. We are First Responders and have building plans, heavy equipment and skilled operators, assist with crowd control when asked by law enforcement, manage water and wastewater for our communities, and have a wide variety of engineering and technical specialists that bring knowledge to any situation.

Conducting periodic exercises ensure that we are ready to properly respond to any hazard in an Incident Command environment.

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A few lessons for looking at other avenues for disaster recovery funding

Loni Eazelle
Senior Disaster Services Analyst
Los Angeles County Department of Public Works

In Los Angeles County, there is the saying that California has four seasons—fire, earthquake, flood and drought! A quick review of historical disaster proclamations shows that since 1950, Los Angeles County has received 29 presidentially-declared disasters and 35 gubernatorial-proclaimed disasters. Through all of this experience, the Los Angeles County Department of Public Works has refined its cost expenditure and recovery documentation process to ensure that when there are presidential and gubernatorial declarations the eligible reimbursements costs are maximized.

In California, when a disaster strikes a jurisdiction a determination is made to proclaim a local emergency. The proclamation will be forwarded to the county level (Operational Area) with a request to forward it to the state. Under California’s Standardized Emergency Management System, requests for any assistance in a disaster must flow from the field, to the local government, to the Operational Area (geographical boundary of the county), to the State Regional Level (three regions in the state) and then the state level (Governor). When the Operational Area receives a jurisdiction’s request or the Operational Area determines to proclaim on behalf of the entire county, the proclamation may include requests for public and individual assistance under the California Disaster Assistance Act (CDAA). The proclamation will be sent to the state. Based on the preliminary damage assessment reports, the Governor will determine if an extreme disaster has occurred and decide to forward the proclamation to the Federal Emergency Management Agency (FEMA) requesting a presidential declaration and requesting assistance under the Robert T. Stafford Act.

However, since 2010, Los Angeles County has had several large incidents that have not risen to a gubernatorial proclamation. For consideration of a gubernatorial proclamation, Los Angeles County has an approximate threshold of $35 million in damages to be eligible for public and individual assistance.

So, what happens when there are no federal or state reimbursements for recovery to damaged infrastructure? Recently, the Department experienced a large storm event that resulted in $3 million in damages to road infrastructure. This was a significant impact to the Department; however,

As with any cost recovery, the most important thing is to have a defined recovery process to track and document everything from the beginning of an incident.

Note: This article is written from an emergency manager’s perspective with the intent of making public works emergency managers aware of other funding opportunities in the absence of a state or federal declaration. Readers are encouraged to consult with their agency finance personnel for a more complete overview of options.
when the county damages were viewed as a whole the dollar amount in damages did not meet the threshold for the state to proclaim a local emergency for public assistance. Department personnel well versed in road infrastructure reported that $2.4 million of the road damage was on federal-aid highways that could be eligible for the Federal Emergency Relief Program (Title 23, United States Code Section 125) administered through the Federal Highway Administration (FHWA). The FHWA Emergency Relief Program is managed by the State Department of Transportation (Caltrans) and provides reimbursement when repair costs exceed $700,000. Personnel started researching what was needed to be able to submit a request for reimbursement under the FHWA Federal Emergency Relief Program. The first step is for the state to proclaim a state of emergency. Normally, Caltrans would request a state proclamation and the county would be covered under the proclamation. In that state proclamation, Caltrans would formally request immediate assistance through the FHWA Emergency Relief Program to obtain assistance for highway repairs or reconstruction to federal aid highways. In this incident, however, the road infrastructure damages were predominately federal aid highways maintained by the county. Through collaboration with the county’s Office of Emergency Management, the Board of Supervisors proclaimed a local emergency, but did not request CDAA in that proclamation. The need was for the state to proclaim a State of Emergency, since the $700,000 threshold identified in the FHWA Emergency Relief Program was met. If the state proclaimed, the request could be forwarded to FHWA. As with any proclamations, there are deadlines that have to be followed to be eligible, so being mindful of the clock is important.

As another example, when a wildland fire has been federally declared for fire assistance, the Department can be eligible to receive cost recovery through the FMAG. The county’s Chief Executive Office would submit a Request for Fire Management Assistance Subgrant (RFMAS) for non-fire agencies for all actual eligible costs that include: overtime salaries and employee benefits; services and supplies; mileage; equipment and aircraft (if applicable). Under FMAG rules, essential assistance is an eligible cost. For public works, essential assistance includes traffic control, public information dissemination, and extraordinary Emergency Operations Center costs. Also, temporary repair of damages caused by eligible firefighting activities (with repair done within 30 days of incident period) is eligible. For example, if firefighting equipment caused damage to the roadways, guardrails or signage, the repairs are an eligible expense to be reimbursed. The FMAG does not pay for debris removal or damage to infrastructure caused from the fire, only damage caused from the firefighting activities.

As stated earlier, presidentially-declared and gubernatorial-proclaimed disasters in California have not been approved as they were in the late 1990s and early 2000s. Agencies have begun to research other avenues to seek recovery to damage costs. Several years ago, an event that only received a local emergency proclamation at the Operational Area level, city officials started asking their public works agencies what was an “on-system” federal aid highway and did they have any of those in their jurisdiction. The public works agencies knew exactly if they had “on-system” roadways in their cities and provided guidance to city management on the criteria and if there were eligible costs. The same happened for eligible costs for FMAG RFMAS. Keep in mind these are just a few examples of other avenues that the county has recently investigated and by no means is inclusive. Also, for both the examples listed, the recovery funding sought was only for specific areas and not recovery for eligible funds to the incident on a whole, which happens with presidentially-declared or gubernatorial-proclaimed disasters.

As with any cost recovery, the most important thing is to have a defined recovery process to track and document everything from the beginning of an incident. This is especially important for large-scale events that could become presidentially-declared or gubernatorial-proclaimed disasters; however, by practicing this due diligence for responses to significant incidents those non-traditional avenues to find reimbursement could be eligible if an agency has tracked damages and costs.

Loni Eazell is the Senior Disaster Services Analyst with Los Angeles County Department of Public Works. Loni has worked as an emergency manager for the Department for over 25 years. She has a degree from the University of Maryland, a graduate certificate in Emergency Management from Cal State Los Angeles and is Master in Exercise Preparedness (MEP). She can be reached at (626) 458-7340 or leazell@dpw.lacounty.gov.
Traffic Incident Management: Why public works is a critical partner

Dave Bergner, M.A., PWLF, Consultant, Monte Vista Associates, LLC, Mesa, Arizona, and member, APWA Emergency Management Committee; and Kimberly Vásconez, MPIA, Team Leader, Traffic Incident and Events Management, Federal Highway Administration, Washington, D.C.

Traffic Incident Management (TIM) is a specific set of practices and protocols for improving the control of traffic through or around the incident area. This provides increased safety for emergency responders, quicker restoration of normal traffic flow, and better information to the public. Though TIM concepts and methods, based on regular Work Zone Traffic Control, are very familiar to maintenance operations personnel of public works/transportation departments, surprisingly many responders from police, fire, emergency medical and towing have little knowledge or understanding of the correct way to establish a Traffic Incident Management Area (TIMA). The problem is compounded by lack of proper Temporary Traffic Control (TTC) devices, different policies and procedures, technical inability to communicate among the responding agencies, and insufficient training.

To address this situation, Federal Highway Administration (FHWA) launched the Traffic Incident Management Responder course in 2012. This free, four-hour course is open to all disciplines and presents best practices such as incident size-up, use of personal protective equipment, establishing Incident Command, common communication terminology, positioning blocking vehicles, proper selection and placement of TTC devices, emergency lighting control, designating where non-blocking responder vehicles should be parked within the TIMA or at a staging area, establishing detours, coordinating with Traffic Management Centers (TMC), and requesting the right resources at the right time. To date, over 66,000 responders have successfully taken the course; most of them are police, fire and EMS. Though nearly 10,000 employees of public works/transportation agencies have been trained, FHWA wants to get many more into the Responder program. The following chart details the percentage of participants by each discipline.

FHWA recognizes that public works/transportation is a critical component of TIM. We are not needed for most incidents, but when major problems do occur on the roadways then our unique capabilities and resources are urgently required. As with all-hazards emergency management, we do a good job when called upon but do not have the acknowledgment and acceptance by other responders, particularly the police and fire disciplines. We are often overlooked when it comes to planning and drilling for incidents and special events.

By actively participating in the Responder training with the

![National TIM Responder Training Program Implementation Progress - Total Trained By Discipline](chart)

Source: FHWA Office of Transportation Operations
other disciplines, public works/transportation employees have a forum to explain to what are our capabilities and limitations. Surprisingly, most operational-level—and even supervisory and command level, police and fire—don’t realize what resources and knowledge we have that can be utilized in these situations. For example, TIM practices that are becoming standard throughout the nation require more TTC devices than police, fire, emergency medical and towing vehicles can carry. Also, as those responders will be more focused on their primary responsibilities than on traffic control, they will increasingly call for public works/transportation for assistance and support. That’s why our employees, including supervisors, managers, directors and TMC personnel, need to participate in the TIM Responder course.

FHWA is working with APWA and other organizations to better promote and support the training for their members. APWA national leadership participated in a meeting on December 10, 2014 at FHWA offices in Washington, D.C. with officials of allied associations that represent public works/transportation. These included: International Municipal Signal Association; Institute of Traffic Engineers; American Society of Civil Engineers; Intelligent Transportation Systems America; National Association of County Engineers; International Bridge, Tunnel and Turnpike Association; Department of Defense Traffic Engineering; American Association of State Highway Transportation Officials; and a representative from CALTRANS. APWA representatives will also attend the 2nd Public Works and Transportation Executive Summit on Traffic Incident Management in late January 2015. In mid-January, APWA will conduct a Click, Listen & Learn webinar that will discuss in detail these initiatives.

This past October an e-mail was sent to APWA chapter leaders encouraging them to host the Responder course, either in conjunction with their regular meetings and events or at any other time that would be convenient. A similar notice was placed on the infoNOW Emergency Preparedness, Transportation, Operations, and Education and Training forums. Several chapter leaders have requested the Responder course for their
members. The course was well-attended at the Kansas City Metro Chapter conference in May 2014. FHWA supplies the instructors and materials at no cost. All that the host needs to provide is a classroom setting than can accommodate up to 70 attendees. FHWA also offers a free 8-12 hour Train-the-Trainer course; over 5,000 instructors from all disciplines have been trained but more PW/DOT instructors are needed.

The TIM Responder course is now available online at the National Highway Institute website; however, it is better to attend the actual class to interact with responders from other agencies and disciplines. https://www.nhi.fhwa.dot.gov/training/course_search.aspx?tab=0&key=traffic+incident+management&sf=0&course_no=133126

Also, the Emergency Responder Safety Institute (ERSI) offers free online courses: http://learning.respondersafety.com/Training_Programs/Traffic_Incident_Management_Model_Practices_Procedures.aspx

It is important to understand that all traffic incidents are local; though much of TIM was initially focused on freeways and interstate highways, attention is now given to incidents that occur on arterial surface roads and streets. A bad incident is a bad incident regardless of where it happens and TIM practices apply in all cases. Municipal and county public works departments need to be trained, equipped and prepared to respond.

For more information about the FHWA Traffic Incident Management courses, please contact James G. Austrich, National Traffic Incident Management, Responder Training Program Manager, Federal Highway Administration, Office of Transportation Operations, Traffic Incident & Event Management Team, James.austrich@dot.gov.

or:

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Dave Bergner, PWLF, is a retired Public Works Superintendent and former Emergency Services Planner. He is a member of APWA’s Emergency Management Committee and the representative for IMSA to the National Traffic Incident Management Coalition, the National Fire Protection Association’s Professional Qualifications Committees for Traffic Control Incident Management Personnel and Incident Management Personnel. He is also a member of the Transportation Research Board’s TIM Subcommittee. Contact Dave at dlbergner@gmail.com.

Kimberly C. Vásconez, MPlA, is team leader of Traffic Incident and Events Management in FHWA’s Office of Operations. Her team develops national policy, guidance, and tools for TIM, traffic planning for special events, incident management for transportation officials, and disaster transportation planning. Vásconez has 23 years of disaster management experience with FHWA, the U.S. Department of Homeland Security, the Federal Emergency Management Agency, and the U.S. Agency for International Development. She holds a master’s degree in public and international affairs. Contact Kimberly at kimberly.vasconez@dot.gov.
Glen Ellyn, Ill., is located in the center of DuPage County, 25 miles west of the city of Chicago, and northwest of the Interstate 88 and Interstate 355 Interchange.

The Glen Ellyn Public Library was built in 1994 and opened to the public in January 1995. The library is constructed on an old industrial rail strip of property immediately south of the Union Pacific Railroad. The GEPL is located on the west side of the Glen Ellyn Central Business District.

The Glen Ellyn Public Library is a very busy facility. To demonstrate, in FY 2013-2014 there were:

- 383,401 visitors
- 657,100 items checked out
- 79,212 users of the Internet
- 72,125 reference questions asked

The Event

On April 18, 2013, the Glen Ellyn Public Library suffered a catastrophe. The Village of Glen Ellyn realized 6.64” of rain in a 24-hour period. This storm equates to a 50-year storm.

The library building was completely unable to handle the rains that day. The stormwaters flooded into the outdoor utility wells. The large volume of stormwater in the utility wells ultimately burned out all the storm and sanitary pumping infrastructure within a couple hours. The building then succumbed and took over 5’ of stormwater in the basement. The water flooded all the building’s vital support systems. All HVAC Systems went underwater and were put out of commission and damaged beyond repair. Additionally, all of the pumping systems being out of commission caused the bathrooms on first floor to back up, thus causing more extensive damage.

The Immediate Response

- The library was closed to the public.
- Pro-Serve was called and were onsite the next day to initiate the disaster recovery services. Tasks completed by Pro-Serve included the following:
Water removal.
- Removal of all water damaged building materials.
- Providing temporary fresh air and air handling capability for the building.
- The removal of all moisture from the building to ensure that there would be no future mold issues.

Outside contractors were called onsite to initiate additional recovery services. Tasks completed by the outside contractors included the following:
- Replace the burned-out motors in all air conditioning and air handling equipment.
- Replace the burned-out motors in all the storm and sanitary pumping equipment.
- Restore all damaged flooring.
- Restore all damaged walls.
- Ensure the safety and integrity of all electrical, communications, and safety infrastructure.
- The library was reopened to the public on April 27, 2013.

**The FEMA Submittal**
Within five days after the April 18 event transpired the library and the Village both proactively prepared and submitted all required documentation to FEMA. This exercise is required to be eligible for any government aid for disaster relief.

Total costs due to damages, disaster recovery, cleanup, one month of library closure, engineering and construction of capital improvements was estimated to be in the vicinity of $700,000.

**The Stormwater Engineering Study**
The Stormwater Engineering Study commenced in May 2013. The purpose of the Engineering Study was to perform a stormwater analysis, determine the cause of the flooding, develop a preliminary plan for solution, determine the estimated cost for the solution, and obtain all required approvals and permits.

The Study commenced and the proposed scope of work included the following:

- Perform a complete topographic survey and develop Site Plan to facilitate the Study.
- Review all available existing and as-built plans.
- Develop a complete hydraulic model for the GEPL site and beyond.
- Conceptualize engineering and infrastructure solutions to ensure...
that GEPL will properly handle a similar storm in the future.

- Develop reasonable and probable costs for the construction of the proposed engineering and infrastructure improvements.
- Begin the coordination and approval processes with all involved agencies.
- Develop procurement options for the GEPL to most cost-effectively construct the infrastructure improvements.
- Develop a complete Engineering Report and present to the GEPL Board for review and approval.

The Involved Agency Discovery Process determined the following:

- Construction Permit would be required by DuPage County, because the north yard of the library was County property.
- The Village of Glen Ellyn is a “Full-Waiver Community,” meaning that all Building and Drainage Permits would be required by the Village.
- The leadership team of the library was most interested in constructing the necessary improvements as soon as possible. The GEPL leadership team wanted to eliminate its exposure to future storms as soon as possible. Therefore, the Engineer began to work with the Village Engineers and County Engineers immediately to minimize the review period for the required permits. The Engineer also encouraged input from both the Village Engineers and County Engineers to ensure that they felt to be part of the plan and position the library’s permit applications to be approved on first submittal.

The Stormwater Engineering Study discovered the following deficiencies in the Library Flood Prevention Program:

- Utility wells on the north wall were very susceptible to taking on stormwater. The natural topography flowed toward the north wall of the library. The library was taking on additional stormwater unnecessarily.
- The storm sewer system in the north yard of the library was rather obsolete and not functioning as originally intended.
- Several acres of railroad right-of-way owned by the UNPRR were draining through the library yard and directly to the north wall of the library.
- The landscaping design in the north yard of the library and in the east yard of the library were not acting as an asset to the total positive drainage plan.
- The storm pumps in the library basement were undersized and inefficient and required to be replaced.

The Engineering Study was approved and accepted by the GEPL in June 2013.

Project approvals and permits from the Village and the County were received in July 2013.

Project #1: Construct the parapet walls on both the Air Intake Well and the Exhaust Well

- The first line of defense was to construct 18” tall concrete parapet walls around the utility wells in the north yard of the library.
- The Engineer developed plan and quantities.
- Specific local contractors were invited to submit cost proposals.
- MYS Inc, was the selected Contractor.
- The Project was successfully completed in August 2013.

The Design and Construction Process

Upon completion of the Study the GEPL Board agreed on the following priorities moving forward:

- To make sure that all engineering is performed professionally and that all construction improvements are implemented correctly.
- All required stormwater improvement construction activities are to be completed within one year of the actual event.
- All procurement options are to be explored to have the construction activities delivered in the best and most cost-effective fashion possible.
Project #2: Construction of the Sewer Improvements

- The second priority was to re-create a working storm sewer system in the north yard. This sewer system needed to transport the water from the north yard to the sewer system in the GEPL main parking lot. The sewer system drains to the 42” storm interceptor sewer on Duane Street immediately south of the library.
- The Engineer developed plan and quantities.
- Specific local contractors were invited to submit cost proposals.
- Russ’s Plumbing and Sewer was the selected Contractor.
- The Project was successfully completed in October 2013.

Project #3: Re-Landscaping of the North Yard

The scope of the project was to ensure that the drainage system would never be overlooked or go unnoticed in the future. The North Yard is required to effectively drain to the new sewer system. The re-landscaping would entail the following:

- Ditch Excavation
- Underdrain Installation
- Installation of Fabric Lining
- Complete the Ditch with Cobbles

The Engineer worked hand in hand with the library’s On-Call Contract Landscaper, McAdam Landscaping.

This Project was successfully completed on October 21, 2013.
**Project #4: Re-Landscaping of the North Yard**

The scope of the project was to create an overland flow escape route. If in the future a large rainstorm occurs during high water table conditions and with the storm sewers full, then it is intended that the north yard will overflow around the east side of the building directly to the interceptor sewer on Duane Street.

The Re-Landscaping would entail the following:

- Construct an Overflow Weir at the Northeast Corner of the Building.
- Construct an Overflow Channel along the East Side of the Building.

The Engineer worked hand in hand with the library’s On-Call Contract Landscaper, McAdam Landscaping.

This Project was successfully completed on October 25, 2013.

**Project #5: The Stormwater Improvements on the Railroad Property**

During the Storm of April 18, 2013, several acres of the Union Pacific Railroad Property drained into the North Yard of the library. This condition exacerbated the flood issues on that day.

The Scope of Work for the Project was to redirect this drainage area away from the North Yard and to construct this drainage area to flow directly into the Library Parking Lot Storm Sewer System.

This project was coordinated and managed by Dawn Bussey, Library Director, and by Julius Hansen, Public Works Director for the Village.

The work was completed by Union Pacific Railroad Forces and Village of Glen Ellyn Forces. This work was accomplished at no cost to the GEPL.

This project was completed in November 2013.

**Project #6: The Replacement of the Storm Pumps**

The Storm Pumps in the Lower Level required change.

Currently the stormwater is pumped directly into the storm sewer. During the April 18 storm, the storm sewers were full and stagnant. The Storm Pumps worked continuously without moving any water until they burned out, approximately an hour later.

The proposed condition will change the outlet piping to pipe out above ground and drop into the outside storm sewer. A two-inch air-gap will be provided, in case the storm sewer is full. If the storm sewers are full, then the pumped stormwater will release into the North Yard. The existing 3 HP Storm Pumps will be removed and replaced with 5 HP Storm Pumps which will pump the stormwater over the additional required head. The GEPL decided to maintain its current provider and new Metropolitan Pumps were designed for the lower level. The New Pumps were also designed on a new variable speed drive system, to improve the operational efficiency. To maintain the integrity of the system, the piping air gap system was installed in a new “Hot Box” to be located along the north wall.

The Engineer completed Plan and Contract Documents. The Project was put out to bid. Six contractors bid on the Project. The Project was successfully built by DeFranco Plumbing and completed in April 2014.

**The Costs of Engineering and Stormwater Infrastructure Improvements:**

The Total Cost to the Glen Ellyn Public Library due to the April 18, 2013 rainstorm event and the subsequent engineering and construction costs are detailed as follows:

- Engineering = $68,800
  - Study and Permitting = $31,570
  - Design & Construction = $36,230
- Construction = $87,159.58
  - Parapet Walls = $10,675
  - New Sewers = $3,875
  - Re-Landscape the North Yard = $19,251.25
  - Re-Landscape the East Yard = $7,709.33
  - UNPRR Improvements = $0. [Performed by RR forces]
  - New Storm Pumps = $45,649

**Conclusion**

The rain event transpired on April 18, 2013. The final inspection and approval of the last construction improvement was on May 6, 2014.

All newly installed drainage systems are behaving as designed and intended.

*Edward J. Kalina can be reached at (630) 796-2064 or ejk@engineeringsolutionsteam.net; Dawn Bussey can be reached at (630) 469-0879 or dbussey@gepl.org.*
**Q** “We recently installed a new dog park, first of its kind in our community. Everyone loved it—or so we thought. We couldn’t believe it when people called to complain that their dogs were “getting dirty” in the dog park. What do people want? Doggie grooming areas, as well? And, isn’t it the responsibility of the pet owner to worry about their animal and not a city responsibility to ensure their pets are groomed?”

**A** Boy, some people wouldn’t be happy if you hanged them with a new rope! It would surely seem that the problem would lie with the pet owner to keep their dogs clean. However, you might need to check the area more closely now that it is up and running. You may be surprised when you inspect it to see that something you least expect could be creating the problem. For instance, I visited one such park that had all the amenities, including a spigot where water was provided for the dogs for drinking purposes. Upon closer inspection, the water from the spigot was discharging onto a bare dirt area and the more it was used, the muddier it got. Indeed, the dogs were getting dirty! Sometimes we forget that the amenities we provide can be a great benefit, but if we don’t consider all the angles you can indeed get dirty doggies! Just a thought. Check your pet areas as you would check your people areas!

**Q** “We are hearing more and more about the use of drones for various reasons in cities and counties. Some of our residents have expressed concern that this may be violating their right to privacy. Is the use of drones at such a high level now that there will be legal regulations and then, how would we enforce them?”

**A** We’ve all heard the stories and promises of the wonderful things the use of drones will provide to improve our daily lives, from delivering packages, to covert surveillance, to filming on movie sets. Just recently there were two separate incidents where small drones were flying in the airspace of commercial airliners during landing or takeoff. As long as you can purchase one for as little as $25 there will be someone who is flying them either for fun or for mischief. Setting legal boundaries for their use is probably going to be needed but is likely to take years to enact. This year alone, 36 states have introduced legislation to protect individuals’ privacy on some level. Only four of those laws were enacted. It will be a slow process.

However, there are some very positive uses of drones within the public works arena. We recently visited the site of the new wastewater treatment plant under construction in San Luis Obispo County, Calif., where the use of drones has proven to be very beneficial. The site is a large one, as you can imagine, and John Waddell, project manager, shares that they were using the drones for pre-construction inspection, environmental reviews, spotting or assessing damages, and bridge inspections. The media provided by the flyovers has been of a high quality but with a very low operations cost. If you’d be interested in how they have used the drones, you might contact John at lowwp@co.slo.ca.us.

If your agency is utilizing this technology, let me know how it is assisting your projects and I will share it with our readers.

**Q** “I just saw a copy of the 8th edition of the Public Works Management Practices Manual and see the newest chapter is titled “Environmental Management Systems.” Just what is that and why is it part of public works?”

**A** Easy answer to the last question; a little more detail to the first. Public works and utility departments most often have the greatest responsibility for ensuring that operations are conducted in compliance with all federal, state, and local environmental laws and regulations, as well as ensuring that sustainability principles are incorporated throughout their operations. Consider your own agency and the level of control and influence you have on the infrastructure and on activities that have a potential impact on the environment in your community, as well as the high visibility of the projects and programs...
you conduct. Strong leadership in compliance and sustainability become an imperative for public works/utility departments. As you might expect, sitting down to develop a program to ensure that compliance and sustainability improvement are being met is a detailed process that involves structured implementation of an environmental management system (EMS) incorporating elements of planning, execution, and review that lead to continual improvement. An EMS provides agencies with the platform and opportunity to set and achieve environmental objectives and targets that are appropriate for the size of the community you serve and the scope of your operation.

If this is a new program or process for you, or if you have been trying to determine how to go about developing one, you should find the *Management Practices Manual* to be a systematic and comprehensive guide to doing so. If you are interested in some examples, you might want to contact Dave Flynn, Deputy Director, San Luis Obispo County, Calif., at dflynn@co.slo.ca; Frank Uhlarik, Compliance Administrator for Public Works and Utilities, Lincoln, Neb., at F Uhlarik@lincon.ne.gov; or Jackie Crumrine, Training and Development Manager, Norman, Okla., at Jackie.crumrine@normanOK.gov. This is an outstanding opportunity for you to utilize successful programs as a guide to establishing your own.

**Q** “So, how many Accredited agencies are there now?”

**A** The Town of Smithfield, Va., just became the 97th agency in North America to be awarded Accreditation. With a population of only 8,900 and a small staff, they met all the requirements and did it well. In addition to this, we currently have 35 agencies that have signed contracts and are working through the program towards being Accredited and more are joining us every week! If you need more information about the program or how to have training provided in your own agency, please contact me. It is well worth the effort and time and any of the 97 agencies will tell you that, too!

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**Ask Ann...**

Please address all inquiries to:

**Ann Daniels**
Director of Accreditation
APWA, 2345 Grand Blvd., Suite 700
Kansas City, MO 64108-2625

Fax questions to: (816) 472-1610
E-mail: adaniels@apwa.net
Walz Scale: a leader in the field of measurement

Walz Scale has announced that field-testing is underway on their WLS Volume Load Scanner at multiple locations this winter. These field tests are designed to prove the accuracy and reliability of the Walz Load Scanner for managing salt usage per storm event as well as overall salt inventories. Initial reports indicate that the system provides very accurate reporting of actual carried salt volumes per truckload with increasingly accurate stockpile inventory tracking.

Field-testing is also being conducted at a large roadway construction project to verify the accuracy and dependability for managing actual material movement for excavated earth and crushed stone. These field tests are expected to prove the exceptional benefits of cost savings and overall improved accuracies of incorporating the Walz Load Scanner to earth moving projects versus a standard truck scale or manned survey.

Walz WLS Dynamic In-Motion Volumetric Load Scanner

The Walz Load Scanner is a revolutionary new technology that uses lasers to scan vehicles in-motion delivering accurate carried volumes and high definition 3D imagery. Typically the system also incorporates RFID technology (RFID Reader and RFID Tags) to automate the scanning process and eliminate the need to man the system. This provides operations with a trouble-free and man-free system for accurately managing each and every truckload of material. This system also delivers exceptional price savings over traditional methods of managing truckloads such as traditional truck scales and manned surveys.

Payload Pro Management Software

All Walz Load Scanners systems operate with the Payload Pro Operating System allowing for operations to run the system from a variety of platforms from tablet devices and touch screen kiosks, to standard laptops. This advanced reporting software provides managers with real-time data and tools to better manage their operation and make improved decisions to improve overall productivity and throughput. Critical data like real-time stockpile inventories, material and truck load data, even cycle time data is tracked and reported through this software. Optionally, data can be stored and accessed remotely from our web-based cloud system delivering access to managers from any location with an Internet connection on their smart phones or tablets.

About Walz Scale

Since 1966, Walz Scale has been designing, developing and manufacturing weighing & measurement solutions to improve productivity in all industries. Walz Scale is a leader in the field of measurement, and has extensive knowledge in providing weighing solutions to a variety of industries and applications. For more information, please call (309) 694-3200 or visit www.loadscanner.com.
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Load Scanner technology from Walz Scale

Walz Scale has introduced new technology that is posed to revolutionize the tracking and management of materials excavated or moved by trucks. The new Load Scanner technology utilizes laser technology to accurately scan and measure the amount of material that is carried in open-top vehicles, while the vehicle is in motion. Furthermore the system can be operated unmanned eliminating the need to manage the system, and reducing overall operational costs. System deliverables include real-time stockpile inventory management, truck and material data, as well as cycle-time analysis. For more information call (309) 694-3200, visit www.loadscanner.com, or see our Advertorial on page 58 in this issue.

McCarthy Building Companies and Sundt Construction joint venture project

A joint venture between McCarthy Building Companies Inc. and Sundt Construction Inc. was recently selected as general contractor for the $120 million Ocotillo Water Reclamation Facility (OWRF) Expansion and Process Improvement Projects for the City of Chandler. The project includes $100 million in new construction and $20 million in upgrades to the existing plant. Located near the southwest corner of Queen Creek and Price roads in Chandler, the OWRF expansion project will include upgrades to the existing 10-mgd wastewater treatment plant and the construction of an expansion facility that will be built for a future capacity of 30-mgd. For more information, please visit www.mccarthy.com.

SNO-FLO snow and ice anti-stick coating

SNO-FLO is a new anti-stick coating that makes the job easier for contractors hired to remove snow from downtown areas or parking lots. SNO-FLO prevents high-moisture-content snow from sticking to your truck beds and loader buckets so it slides right out when you get to the dumpsite. No more costly delays caused by manually removing the snow from your truck bed! Apply SNO-FLO in seconds with our 25-gallon or 60-gallon powered sprayers. No mixing. Call 1-800-688-6221 or visit rhomar.com.

Automated meter reading leader Datamatic becomes certified Trimble service center

Datamatic, a leader in meter reading solutions for utilities worldwide, announced that it has been named a Certified Repair Depot for Trimble’s line of ruggedized Nomad handheld computers. Datamatic has completed the expansion of its existing Plano service center to include repair capabilities for the Nomad’s 800 and 900 lines. The certification allows Datamatic to take care of its hundreds of worldwide utility customers from the Plano service center rather than requiring these customers to send handhelds to Trimble for repair. Additional information about Datamatic is available by calling (214) 520-3430 or visiting www.datamatic.com.
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2016  Aug. 28-31  Minneapolis, MN
For more information, contact Dana Priddy at (800) 848-APWA or send e-mail to dpriddy@apwa.net.

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

North American Snow Conference
2015  April 12-15  Grand Rapids, MI
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Attend or Exhibit. apwa.net/snow