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High-dump sweepers save time and labor in regenerative air sweeping operations. Schwarze Industries' modern, high, off-loading sweeper models increase efficiency in communities of any size. (Photo provided)





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"It can take up to four times the amount of material to break a pavement/ice bond than to prevent it."

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A crisis averted



N EARLY AUGUST, PRESIDENT OBAMA signed a bill crafted by the House and Senate that will keep the Highway Trust Fund from running out of what relatively little money it has until October. It was another Hail Mary pass by a government that has been putting off crafting a viable, long-term solution to the crumbling infrastructure dilemma for years.

But given that lawmakers are on summer recess until Sept. 8, this extension hardly allows debate on the more reassuring six-year fund reauthorization crafted by the Senate. As painful as it is to say, it seems like more Band-Aid solutions to the situation are on the horizon.

The temporary bill prevented an abrupt halt in the flow of federal funds to states struggling to fix dangerous highways. We all know the statistics: about 65 percent of America's roads are rated in less than good condition and 25 percent of bridges need to be replaced, as the U.S. Department of Transportation has documented.

According to USA Today, this is the 34th time since 2009 that Congress has passed a short-term fix instead of the traditional sixyear highway bill.

"Careening from self-inflicted crisis to self-inflicted crisis undermines our system," Transportation Secretary Anthony Foxx wrote in a recent letter to state transportation officials. "We need Congress to break the cycle of short-term extensions; we need a long-term bill with significant growth."

Senators had hoped to persuade House members to take up legislation that would have authorized highway funding for the six-year period and provided a total of about \$47 billion in additional funding for the first three years. But House leaders said they needed more time

to review the Senate's 1,030-page bill before deciding whether to take it up or offer an alternative.

"A multi-year bill is now our joint goal,"

Senate Majority Leader Mitch McConnell, R-Ky., said in the midst of the proceedings. "That's important for our country. We know it represents the best way to provide state and local governments with the kind of certainty they need to focus on longer-term road and bridge projects." One can only hope we'll be lucky enough to see such legislation this year.

In this September edition of The Municipal, we will explore themes related to our nation's new-found awareness of stewardship. We're taking better care of the environment today than we have for at least the past 100 years; making more efficient use of natural resources, powering our industry and lifestyle with cleaner fuels and even extracting energy and more resources from our garbage. I'd say that these are all things we should have been doing all along, but history has proven there's a learning that indwells most progress - including ours.

At least we're doing it now, and The Municipal includes several ideas in this issue about how you can move your green projects one step further. Tennessee, in particular, has a few interesting green projects happening, all

"Careening from self-inflicted crisis to selfinflicted crisis undermines our system."

> of which have been achieved via innovative partnerships. Find out who these municipal partners are on page 14.

> Here in the North there are a few weeks left before we have to start hooking up the plow blades and loading the anti-icing equipment. Here's hoping that fall holds something for your communities to look forward to also. M



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November 2015

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Do you need a high-dump sweeper?





or many years, almost every model of mechanical sweeper had the capability to lift the debris hopper high enough to off-load the collected debris into a truck or rolloff container. For regenerative air sweepers, the product offerings were significantly less and the industry seemed very hesitant to embrace the practice of high dumping an air-machine debris hopper.

Around the year 2000, several manufacturers stepped up their offerings of high off-loading regenerative sweepers with modern, high-powered units that resembled their mechanical counterparts. At this juncture, industry experts predicted a wholesale switch to high off-loading regenerative sweepers. But then came the early 2000s economy, and right behind it, the recession of 2008. This slowed sweeper population growth, again stunting the growth of the high dump air sweeper. All of this is behind us now, and the switch to regenerative high-dumps is finally poised to take off.

For years the industry has realized that regenerative air sweeping technology has multiple advantages in many applications, due to having fewer moving parts and the ability to efficiently remove fine particles from a very wide area. What is not being leveraged with regenerative sweepers is the concept of utilizing the right tool for the right job. Low-dump sweepers are often driven to the dump site to be offloaded, or worse yet, dumped in a pile on the street. Then the debris is double-handled by being shoveled into a container or dump truck to be taken to the recycle and disposal area.

TOP LEFT: The A8 Twister Hopper can be lifted to 12 feet. (Photo provided)

LEFT: The A8 Twister features a large 6-yard hopper. (Photo provided)

RIGHT: The A8 Twister can work in heavy material. (Photo provided)

BOTTOM RIGHT: The Schwarze A8 Twister is uniquely positioned to provide the absolute best value for any regenerative sweeping program. (Photo provided)

When pointed out in this context, it seems that purchasing a high-dump sweeper would be an obvious choice.

The good news is that there is ample technology available to get the very best use of sweeping equipment. The Schwarze A8 Twister is uniquely positioned to provide the absolute best value for any regenerative sweeping program.

The A8 Twister's sweep system is extremely robust. With up to 140 hp available, it allows sweeping applications that cross into applications that up until now were considered too severe for regenerative air technology and relegated to mechanical sweepers.

The A8 Twister's 12-foot dump height allows off-loading into the highest of containers and dump trucks, including high sideboard tri-axle dump trucks.



In the event that no trucks are available, the A8 Twister, with its industry-leading 6-cubic-yard capacity and ability to quickly low side-dump just as fast as a traditional rear low-dump regenerative sweeper, means that there is no virtually no downside to this high-dump regenerative sweeper.

So if faster, more efficient, more flexible, more useable, more powerful and less complex with better asset utilization is something good, then yes: You need a highdump sweeper.

Information provided by Schwarze Industries



Focus: =

Reduce Reuse Recycle



According to the EPA, if 50 percent of the food waste generated each year in the U.S. was anaerobically digested, enough electricity would be generated to power over 2.5 million homes for a year. ??

Read the full story on page 26

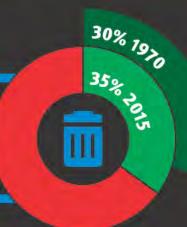
Before 1973 the U.S. had no curbside recycling programs. By 2006,

8,660

had sprouted up across the nation.

Source: www.nrdc.org/ cities/recycling/ asteps.asp The U.S. currently recycles 35 percent of its waste: 30 percent more than it did in 1970. (Reported by AP in Dec. 2013.

Source: www.nrdc.org/cities/recycling/ gsteps.asp



40 percent

The amount of energy consumed by the nation as a whole that is spent to heat, cool and electrify buildings; which is why retrofitting existing buildings to improve sustainability and energy performance is part of the movement to reduce energy use. Federal agencies have already been required to reduce their building's energy use by 15 percent by the end of the year.

Source: https://www.wbdg.org/ resources/retro_sustperf.php



"By burning areas
on a regular
basis, it helps
reduce volatile fuel
buildup and greatly
reduces the threat
of a wildfire."

Learn more on page 18

10 trillion

The estimated number of gallons per year of rainwater, mixed with pollutants, that flows "uninhibited and untreated" into local U.S. waterways due to impervious urban surfaces.

Source: www.nrdc.org/water/
philadelphia-green-infrastructure-retrofits.asp

"There are things that come through that people are genuinely confused about, and others they can't possibly be: dirty diapers, for example."

Get the whole story on page 22

Green partnerships build better communities



By SARAH WRIGHT | The Municipal

In the grand scheme of things, green infrastructure and retrofits are still the new kids on the block. Their newness is, perhaps, what makes forming partnerships so vital to succeeding with one.

"All relationships are important," Don Green, water quality supervisor for the city of Chattanooga, Tenn., said. However, he noted with green infrastructure it's critical to bring other entities on board in order to educate them and increase the number of green infrastructure projects being done.

"They are cost-effective and beautify an area — you get more out of them," Green said,

adding they become education opportunities not just for the public, but for entities that are brought on board to complete one.

A beneficial partnership—and one of the first green partnerships—Chattanooga undertook was with Chattanooga Metropolitan Airport. The airport, which has already been striving toward completing green projects, had acquired property in a basin area. **LEFT:** Pictured is an artistic rendering of what Chattanooga's infiltration basin will look like. The property is owned by the Chattanooga Metropolitan Airport. (Photo provided)

BELOW: Pictured are before and after shots of Johnson Street, which went from being a stormwater problem child to a showcase of green infrastructure design, complete with pervious pavers. (Photo provided)

Green explained the property contained raised impervious car lots. "They were in the hazard area for the airport."

For both the airport and city, the project offered an unique opportunity due to its high visibility in the Brainerd Road Corridor, a 21st Century Street and includes the Mission area, Brainerd Village, Eastgate, a library and the airport authority. Additionally, it served as a means to improve water quality by giving a boost to stormwater management and addressing runoff that would have entered Chickamauga Creek.

The city paid to design an infiltration basin to take the place of the car lots. Due to its high-visibility location, Green said, "We also created signage for the basin." The signage, along with the basin's park-like feel, serve as an invitation for the public to visit. Its location actually allows people to walk to it.





RIGHT: Pictured is the design for the Denso Eco Park in Athens, Tenn., which will feature a hiking trail, solar shade structure, permeable parking, natural swimming pool, Japanese fruit orchard, existing wetlands and more. (Photo provided)

"What the airport was going to put into it and what we were going to put into was in the agreement," Green said, noting this allowed both parties to have an understanding of what was expected before going into the project. "It's important to manage expectations. Have a signed agreement, especially with green infrastructure since it's very new. It's not like concrete - it takes lots of maintenance and oversight."

Chattanooga has also partnered with businesses to bring about green infrastructure retrofits. As a major upgrade to alleviate flooding on Johnson Street got underway, developers of the Flying Squirrel restaurant approached the city in regard to working with it on the problem in the immediate area of the business. The fact there was another development occurring in the area involving a LEED-certified youth hostel called The Crash Pad made a green retrofit of the street perfect.

"We did a public-private agreement," he said. "The city designed the project, and the commercial business paid for the pavers."

The retrofit used pervious pavers to correct some of the stormwater issues Johnson Street had experienced in the past. This project also allowed city staff to experience green infrastructure within the public realm while testing the city's new Rainwater Management guide, which incorporates green infrastructure as the preferred tool to infiltrate or harvest the first 1 inch of rainfall in new and redevelopment projects. Additionally, the rebuilding of the street was done in Woonerf style so it would be pedestrian and bicycle friendly.

The partnership went off without a hitch and has led to other developers within the combined sewer area to contact the city about similar approaches.

Athens, Tenn., population of between 13,000-14,000, is no stranger to green infrastructure projects. Public Works Director Shawn Lindsey stated the city tries to have at least one project going at all time. With each of those projects, Athens has brought on board a variety of partners.

"Universities and colleges are easy to partner with," Lindsey said, noting they've worked with both the University of Tennessee and Tennessee Wesleyan College.

"Industrial partners are a little harder - but we are getting some."

Most recently, the city was approached by Denso, a global automotive component manufacturer headquartered Japan, about building an "eco park." Lindsey completed a design for it, plus a PowerPoint to showcase components of the park, which includes a whole gamut of green infrastructure, from permeable parking pavers, a green parking lot, green energy - both solar and wind - and a natural pool that uses wetlands for filtration, to a community orchard

After the design was completed, Lindsey said they selected a property owned by the McMinn County Economic Development Authority, which due to its preexisting wetlands was otherwise unusable - a win-win for all involved. The project is currently underway and is in phase one of three, which includes building a Japanese-style pavilion and picnic area.

"You have to have (partnerships) in most cases," Lindsey said. "Often you don't have one entity that has everything."

He described how the local YMCA needed a parking lot. "The Y didn't have land, but the

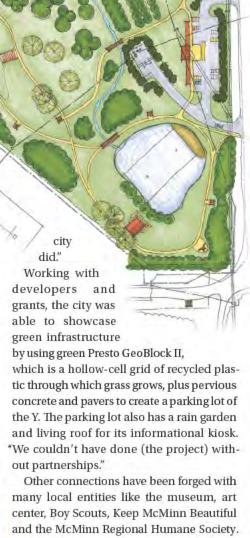
On the Web

and a half mile trail.

The city of Chattanooga won first place-along with project partners Andropogon Associates, ARCADIS and the Chattanooga Metropolitan Airport - for its video about the Brainerd Road project in the for-profit category of Water Environment Federation's 2014 stormwater video competition.

The video can be viewed online, youtu.be/ajGjZobV8ms?list=PL4C55204 EF5052D5B, alongside several other entries.





The city is even trying to work with farmers,

with Lindsey noting they hope to start a pro-

gram that will focus on converting old, no

longer used farm ponds into wetlands. The

program isn't underway yet, though. Athens

still trying to secure grant moneys to launch it.

200-300 volunteers - usually from the

churches," Lindsey said. The volunteers

"We also have a Day of Service with

"As public works director, I'm in a position to do these partnerships," he said. "That I have all the different contacts helps."

In addition to nonprofits and businesses, grant partners are also important.

A good relationship can result in grant givers reaching out to entities to alert them when grants become available. Grants are, Lindsey said, based on trust, with providers wanting to know the money is being put toward what was agreed upon. For this reason it's important to keep track of grant money to further trust and a good relationship. Another consideration is applying for grants with another entity.

"We have a great relationship with Keeping McMinn Beautiful," Lindsey said, "and we apply for grants together."

Of course, all partnerships need a starting point. For this purpose, Lindsey suggested, "First you need to start meeting, talk about everyone's various missions, see where the lines cross." He added, "Take an interest—you'd be surprised where lines cross."

One instance of lines crossing was with McMinn Living Well, an initiative aimed at improving healthy living in the community. Lindsey explained they shared a connection when it came to green infrastructure through bikeways, trails and green spaces—things aimed at getting people active.

The second thing you need to start is planning. This includes lining up funding sources and accessing the groups' resources. "You'd be surprised at what groups have to offer."

As another component to getting started, Green recommended municipalities have a green infrastructure manual to help make sure products meet the standards they want them to meet; additionally, it should include maintenance practices needed. "Have design specifications," he said, noting if you are working with a new entity —more unfamiliar with green infrastructure—you don't just want to put something in the ground. "You have to know the design."





The city of Athens, Tenn., partnered with the University of Tennessee, Tennessee Wesleyan College, McMinn Living Well, the EPA and lots of volunteers to retrofit an existing property that was owned by TWC. They built a community orchard with rain gardens that will help retain water and lessen flooding. (Photo provided)



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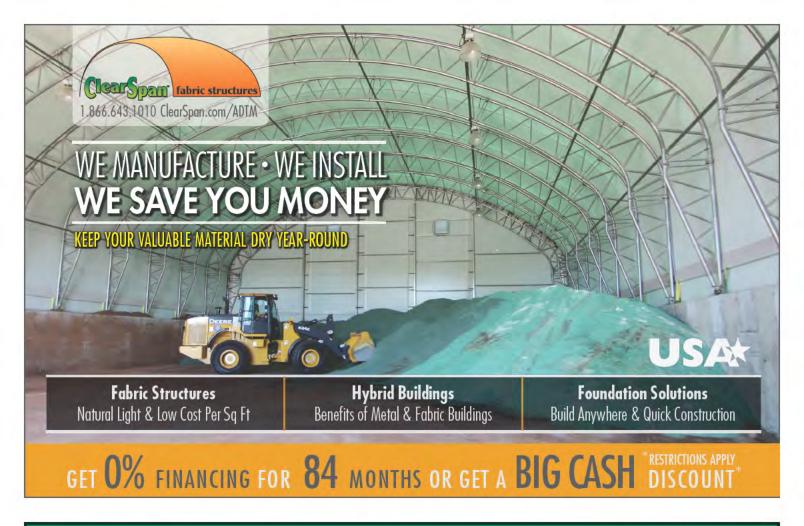
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Prescribed burns —

Does your area need them?



By BARB SIEMINSKI | The Municipal

Playing with fire—legally—is sometimes necessary and even beneficial. That fact has some communities contemplating prescribed burning in their areas.

In addition to interacting with other municipalities and state forestry departments for up-to-date information, communities may first want to ask themselves if such an endeavor is cost-effective. What kind of burning is desired? Do the sustainability benefits outweigh the cost?

Prescribed burning takes several forms:

- Agricultural waste and open burning: This consists of refuse on a farm, including crop and livestock items such as bags, cartons and dry bedding.
- Landscape waste and open burning: This is made up of leaves, grass, shrubbery cuttings and other materials.
- Commercial trade waste and open burning: This
 is refuse generated by business, industry and
 government institutions.
- Disaster debris and open burning: Usually it consists of tree limbs, brush and plant debris.
- Forestry burns: These reduce the accumulation of leaves and brush that could fuel a potential wildfire. A land and wildlife management technique, it produces a thriving ecosystem.

A crew member uses a drip torch in a prescribed burn at Cherokee National Forest. (Photo provided)

Knowing the difference between a wildfire and a prescribed burn is important. A wildfire is high, uncontrolled and can do great damage during its spread through the air and forest; a controlled burn is heavily pre-planned and is dependent on the weather, among other factors. Prescribed burning is beneficial to some native plants and trees that rely on fire to regenerate and grow.

Benefits of controlled burning are many when done correctly; incorrectly tasked, they are very dangerous. Before such burnings can be started, however, a burn plan should be created and a burn permit obtained, if required.

An essential fire management tool, the burn plan includes objectives such as what results are desired; it sets weather requirements, provides for smoke dispersal and creates contingency plans in case the fire escapes the designated area. Often the burn is created six months ahead of time since it requires coordinating training, personnel and equipment.

In the planned use of fire, the weather considerations—including wind direction, temperature and the amount of moisture in plant material—are predetermined and carefully monitored. Burn bans occur when the weather is dry or when the humidity is low. But a successful burn will benefit forests, landscapes and wildlife and also assist in reducing the impact of wildfire hazards.

Tools of the trade include power equipment such as sprayers. Always have one more sprayer on hand than you think you need; cattle sprayers and four-wheeler sprayers are viable options. Other necessary equipment includes a water pump, chainsaw and blower.

Hand equipment that will prove useful is a drip torch, which can cost around \$140 but lasts a lifetime; drip torch fuel, which is a mixture of gasoline and diesel; an axe, fire rake and a fire swatter, which costs about \$40 and is useful in swatting and smothering out fire; a shovel; and wire-cutting pliers.

Clothing and accessories can go a long way in minimizing personal injuries. Fire-retardant clothing such as Nomex, which is good, but expensive, should be considered; synthetic fibers such as nylon and polyester can burn or melt and cause critical injuries. Gloves, preferably leather or welding, footwear

Drip torches like this one are used by prescribed burn crews. (Photo provided)





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that protects feet from fire and abrasions, headgear, a face shield—like ones used with a cutting torch—and a respirator are minimum safety precautions that should be worn.

According to Brian Pinson, park manager of Highlands Hammock State Park in Sebring, Fla., almost every Florida state park does some degree of resource management; most use fire.

"But some resource managers may need to use other methods due to the required training and equipment needs," said Pinson. "As government budgets shrink, there are not always funds available for staff to get the training or equipment needed to be able to carry out these tasks.

"Most of the native plant life has adapted to fire and some even depend on fire to exist."

LEFT: Controlled burns happen regularly at Highlands Hammock State Park in Sebring, Fla. (Photo provided)

LOWER LEFT: A crew member monitors a prescribed fire in Cherokee National Forest in Tennessee. (Photo provided)

"Another possible hindering factor could be the intense urban interface; for example, does the property border a major road or highway, or is it next to a smoke-sensitive area such as a school or a hospital?"

Costs for a prescribed burn vary widely depending on the size and type of burn, in addition to the equipment, clothing and accessories selected. There's also training to consider and the pay of the crews who set and control the fire.

Marty Bentley, forest fire management officer for Cherokee National Forest in Tennessee, said his department estimates a burn will cost \$50-\$100 an acre to implement. But each state has a different window for fees.

Some of the advantages of controlled burning include keeping prairie grasses in check; and encouraging new underbrush growth, which stimulates the germination of some native forest trees, benefiting the wildlife and habitat in the area and keeping down undergrowth that could lead to wildfires.

"We are always eager to help get the word out on prescribed fire and really enjoy showing off our photos," said Pinson. His department has a "pretty aggressive" burn program. "The proximity to the urban interface is a driving force, because of the old saying 'good fires prevent wildfires'. Every time we write a prescription for an ecosystem the safety of the neighbors is always a top concern. By burning areas on a regular basis, it helps reduce volatile fuel buildup and greatly reduces the threat of a wildfire," he said.

"Since Florida is the lightning capital of U.S., most of the native plant life has adapted to fire and some even depend on fire to exist. We try to mimic the lightning-caused fires for the health of the ecosystems, by writing a prescription much like a doctor would issue a prescription for a patient with an ailment."

According to Julie Norris, a private lands conservationist in Missouri, prescribed burns have many complexities.

"The type of terrain and the type of fuel will change the type of flame seen, as well as weather and the state the burn is occurring in," said Norris.

"Burning is very different from one state to another. Some states require permits; some have burn laws. Also, burns are done for different objectives. In western states it may be done to reduce fuel loading while in Missouri it is often done to restore degraded habitats, such as glades."

The prescribed fire is managed with care as it burns, clearing invasive species and returning nutrients to the soil. When burned out the land may appear barren, but it is actually ideal for the seeding of new healthy native plants.



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Organizations join to write the book on municipal recycling contracts



By DENISE FEDOROW | The Municipal

tions in solid waste and recycling joined forces last year to compile comprehensive guidelines that they believe are mutually beneficial for municipalities, waste management companies and material recovery facilities.

The result of the collaboration between the Solid Waste Association of North America and the National Waste and Recycling Association was a document titled "Joint Advisory on Designing Contracts for Processing of Municipal Recyclables." Their guidelines are the culmination of a nearly yearlong process, during which experts from private industry and local government agencies met to address the need for consistent standards in contracting while also addressing the challenges faced by private industry and local public agencies that seek to improve and enhance residential recycling programs.

In a press release issued in April, the organizations stated that the "joint advisory aims for enhanced effectiveness of municipal

recycling, which reflect the economic realities of the market place."

Specific protocols directly address best practices for improving the quality and quantity of materials captured in the recycling processing stream, while also trying to ensure that recycling programs are economically viable for both local agencies and private industry.

"The potential changes in the quantity and composition of collected wastes combined with variability in prices for recyclable commodities create considerable uncertainties in today's recycling markets," said John Skinner, SWANA executive director and chief executive officer.

NWRA's view

Chris Doherty, director of communication and public affairs for NWRA, and Ann Germain, director of waste and recycling technology, spoke about the need for this advisory.

Germain explained that over the last several years the recycling industry has gone

over a few speed bumps. That created a lot of hand-wringing in the industry.

She said things were going really well for a while, but the economic downturn brought challenges with materials—both with the amount of material being generated and changes in packaging.

"People's habits have changed. Newspapers and other paper materials have declined dramatically and manufacturers have aggressively light-weighted packaging. So, for example, a 20-ounce can weighs much less today, but the cost to collect 1,000 cans and process them remains the same or higher."

The other thing driving change, according to both, is that the revenue stream has changed. China is the biggest exporter of U.S. recycled materials, and it has become stricter about the quality of the materials. This has slowed revenue streams for NRWA members and decreased revenues.

These situations and others make having a long-term contract with municipalities less viable.

"So this (guideline) is our attempt to make sure we're conveying what we think is important so that everybody understands and that it's equitable for all sides," Germain said.

The guidelines advise having contracts structured so they are based on market prices. When prices for raw recyclable materials are down, prices for service may be up; but when prices go back up, municipalities should benefit from that increase in revenue with decreased costs, whether they're locked into a long-term contract or not.

Quality of materials

One thing members of both organizations agreed on is that the quality of materials collected is the responsibility of all parties.

Germain said the move to closed bins was good, because it keeps materials dry: but a lot of people also throw trash in the bins, which makes its way to the material recovery facilities. There, process handlers have to pay to dispose of the waste.

LEFT: Specific protocols directly address best practices for improving the quality and quantity of materials captured in the recycling processing stream, while also trying to ensure that recycling programs are economically viable for both local agencies and private industry. (Shutterstock photo)

RIGHT: Workers in a material recovery facility keep their eyes on the recycled material going through the automation process to make sure no contaminated material gets through. (Photo courtesy National Waste and Recycling Association)

The move to single stream recycling has also caused more contamination of materials.

"It's definitely had its impact," she said, acknowledging that making it easier may have resulted in more people recycling; but more education of the general public is needed.

"There are things that come through that people are genuinely confused about, and others they can't possibly be: dirty diapers, for example," Germain said.

One issue a lot of NWRA members complain about is hypodermic needles. Germain said sometimes a person tries to be responsible and tosses the needles in an empty plastic laundry container, but then puts the container in recycling because it is recyclable.

"It is, but the needles have now contaminated it," she said. "The process is pretty

"We do have great processing capabilities, but they're not designed to receive stuff they can't handle," he said.

The joint advisory came about because of the issues NWRA members were having in getting the message across to mayors and town managers. Germain said a major member brought the issue to them, saying that when trying to discuss increased costs in the contract with municipalities he would hear, "I'm just a small town mayor and you're a big major company," and he just wasn't believed.

The NWRA decided to find out if this experience was isolated to one member company or if it was or more widespread.

"We talked to all of our member companies, and they said it was an ongoing, national problem," she said.

"Cities and counties don't have the ability to turn services on and off. We don't get to say, 'We'll pick it up this week but not next because it's not profitable."

automated, but the materials are sorted out at the beginning by a person and we don't want our workers subject to materials that can be a safety issue for them."

Chris Doherty said plastic grocery bags mess up material recovering facility machinery, so it's important to get the message out that they are recyclable through grocery stores. He also shared that the NWRA has a website called Begin with the Bin, www.beginwithbin.org, that addresses what should and shouldn't be recycled.

The percentage of contaminants in recyclables has doubled in 10 years, from 10 percent to 20 percent. If it still costs \$60 to process, but there are twice as many contaminants. That's a big reduction in revenue.

NWRA felt it was wiser for municipalities to have an equal say, so they sent an initial draft to SWANA, which tends to represent municipalities.

"We received substantial comments coming back so we put together a group of people who represented waste management companies and also representative's municipalities," she said. "We feel we came up with something that's genuinely fair for all parties involved."

One suggestion in the guidelines mentions taking periodic samples of the recyclables collected and using that sample to determine the cost of the contract over the next year based on the type, quality and quantity of materials.



SWANA's view

Sara Bixby, S.C., deputy executive director of SWANA, spoke about its role in this endeavor and why members felt the joint advisory was needed.

"Solid waste management and recycling management, in our opinion, is the responsibility of local government to ensure that it's happening and happening correctly," Bixby said. "Everybody has a role to play."

It stands to reason then, that if local government is going to be responsible, it should be involved and have a voice in the process. "Otherwise it could be unbalanced," Bixby said.

SWANA's municipal members want to make sure the material is being collected and processed, so local government should want to be a business partner with collection companies and not leave it to the whim of the marketplace, she added. Local government is the stabilizer in the process.

"Cities and counties don't have the ability to turn services on and off. We don't get to say, 'We'll pick it up this week but not next because it's not profitable.""

Bixby and SWANA agreed that more education on what type of materials can be recycled and the process is critical.

"Part of the advisory touched on the fact that education has to be part of anything and should be addressed in the contract."

She believes that responsibility is everyone's, from companies that do the collection to municipal leaders to the individual who recycles.

"We can't assume people know what they should do. We have to keep providing quality education," she said. "And that's the piece we tend to forget."

The regular recycling resident has no idea what happens to their recycled material once it gets picked up. "And we haven't done a good enough job of telling them. Our recyclables are part of an international marketplace and subject to that market's fluctuations."

Bixby said SWANA members are becoming more aware that there are a lot of costs to picking up and processing recyclables.

"We have to find a way to make it work and to make it fair. There are very few places where trash collection and recycling collection are truly provided for free. When a homeowner is sent a bill, they realize they have to pay for this service."

The biggest goal with the joint advisory, she said, was to make sure that recycling continues to be available and viable for those who do the processing. The best way to do that is to be smart, educated partners in contracts for collections.

She acknowledged that not every city and county has private companies to do their collection. Some have their own, but they still need to be educated in order to do a good job.

"We believe recycling is an essential service, and we want to make sure it's provided and it's stable."

Key points of joint advisory

The following excerpt was taken directly from the "Joint Advisory on Designing Contracts for Processing of Municipal Recyclables":

"The purpose of the advisory is to provide both the public and private sector professionals in solid waste management with guidance, protocols and standards regarding contracting for processing of municipal recyclables. As such, the information in this Advisory is primarily focused on situations where recyclables are collected from the residential sector and delivered to a Material Recovery Facility for processing and preparation for sale.

"Prior to releasing a request for proposal or bid documents, the local agency could solicit input through public workshops from the recycling community, local haulers, elected



Cardboard—as shown on the automated belt of this material recovery facility—has nearly replaced newspapers as the No. 1 recycled Item. The change is due to people's habits: less newspaper reading and more online shopping and shipping. (Photo courtesy National Waste and Recycling Association)

officials and the general public. These workshops could help in defining the scope of work for the services requested and minimize confusion through the proposal/bid process. A pre-bid meeting with potential contractors could also be advertised and follow as part of the procurement process. Any questions, comments or concerns that are raised during



Contents of bid documents

It is recommended that local agencies work with their legal counsel when preparing bid documents. Bid documents should include standard contractual provisions and consider the following for recycling contracts: Fully disclose business risk allocation (e.g., who assumes the risk; or the percent of risk); who owns the recyclable materials; and those situations that may protect the contractor or procurement agency from breach of contract. Some of these may include:

- · Changes in law
- · Labor disturbances
- · Acts of God, etc.

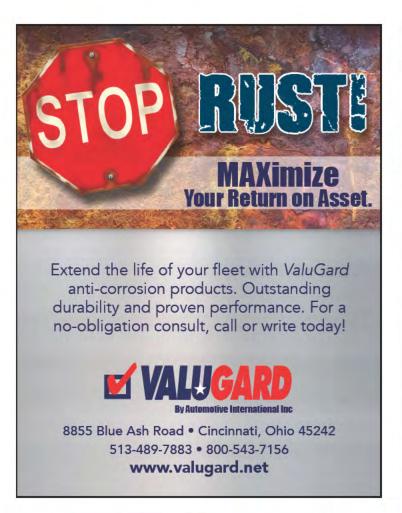
Very specific definitions need to be included in the bid documents to provide a level playing field for all bidders. Some provisions may be negotiated during the contract negotiations period.

Source: "Joint Advisory on Designing Contracts for Processing of Municipal Recyclables"

this pre-bid meeting can be dealt with through an addendum to the contract."

To sum it all up, Bixby said, "It's telling when both the public sector—SWANA—and the private sector—NWRA—come together and say, 'Here's something we both agree on. It's an important issue and we're willing to work together to provide this."









Boosting biogas, profitably



By LAUREN CAGGIANO | The Municipal



Sharon Thieszen, superintendent of the Sheboygan, Wis., Regional Wastewater Treatment Facility, believes in the merits of co-digestion, which in her words is "a process whereby energy-rich organic waste materials are added to wastewater or dairy anaerobic digesters with excess capacity. In addition to diverting food waste and fats, oils and grease from landfills and the public sewer lines, these high-energy materials have at least three times the methane production potential of biosolids and manure."

But why target food waste specifically? Put simply, the problem is too large to be ignored. According to the EPA, "food waste is the second largest category of municipal solid waste sent to landfills in the United States, accounting for approximately 18 percent of the waste stream. That is over 30 million tons

of food waste that the U.S. sends to the landfills each year. Of the less than 3 percent of waste currently being diverted from landfills, most of it is being composted to produce a fertilizer."

Food that is disposed of in landfills decomposes to create methane, a potent greenhouse gas that contributes to climate change. The gas is shown to have a warming potential of 21 times that of carbon dioxide: reducing it can mean a healthier planet, and the process starts with converting food waste into energy. In a study done by East Bay Municipal Utility District, it was revealed that food waste has up to three times as much energy potential as biosolids.

This transformation could be a gamechanger. According to the EPA, if 50 percent of the food waste generated each year in the U.S. was anaerobically digested, enough



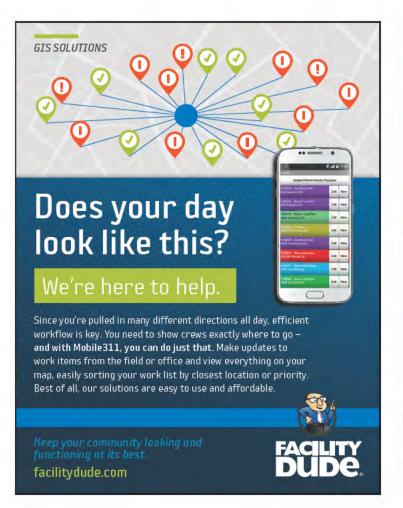
LEFT: A biosolids dryer is used to evaporate water from wastewater solids. The dried product can then be sold and used as fertilizer. (Photo provided)

ABOVE: The high-strength waste dock at the Sheboygan Regional Wastewater Treatment dock began to receive large amounts of HSW in 2005, with a significant increase in biogas observed over the following years. The plant is almost energy neutral, producing approximately 80–90 percent of its electrical and heating needs. (Photo provided)

electricity would be generated to power over 2.5 million homes for a year.

The facility first began to add large amounts of HSW in 2005, with a significant increase in biogas observed over the following years. The plant is almost an energy neutral facility, producing approximately 80–90 percent of its electrical and heating needs with savings of \$270,000 annually in 2013.

Thieszen cited a fact that illustrates the capabilities of this process. In California alone there are almost 140 wastewater treatment facilities that utilize anaerobic digesters, she said, with an estimated excess capacity of 15–30 percent. Such a facility would be considered energy positive. Other benefits











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LEFT: Food waste being applied as fertilizer after first being converted to a biosolid at a waste treatment plant capable of co-digestion. (Photo provided)

RIGHT: Treated biosolids can take the form of liquid, a cake or dried biosolid; each has three times the potential energy of the food waste in its original form. (Photo provided)



include greenhouse gas emission reductions, economic returns and diversion opportunities.

According to Thieszen, the California facilities are outliers, but that doesn't mean it's not feasible for other plants to become energy positive.

"Water Resource Recovery Facilities utilize 30.2 billion kWh per year, or 0.8 percent of the national electricity use," she said. "As a result, WWRFs are always looking to be more energy efficient and maximize their resources." She noted a few WRRFs have achieved energy neutrality or energy positive through a combination of energy efficiency measures and the addition of organic wastes.

The Sheboygan Regional Wastewater Treatment Plant was one of the "pioneers of high-strength waste addition for biogas production," Thieszen noted. The facility first began to add large amounts of HSW in 2005, with a significant increase in biogas observed over the following years. The plant is almost an energy neutral facility by producing approximately 80–90 percent of its electrical and heating needs, with savings of \$270,000 annually in 2013.

Thieszen is quick to point out this achievement did not happen overnight, nor was it painless or inexpensive. But the results speak for themselves. "Sheboygan Regional

Wastewater Treatment Plant has been able to achieve near energy neutrality due to a very skilled and dedicated staff. Energy is considered in every project and preventative maintenance is performed on off-peak demand time periods."

But before there was preventative maintenance there had to be the infrastructure in place. According to Thieszen, the Sheboygan Regional Wastewater Treatment Plant started its co-digestion program by using existing excess tanks to receive and store the high-strength waste. Grant funding provided a significant portion of the



"The plant is almost an energy neutral facility, producing approximately 80-90 percent of its electrical and heating needs with savings of \$270,000 annually in 2013."

capital funding for the combined heat and power equipment, she noted. Total costs for the capital investment was \$2.77 million, with \$1.1 million coming from a grant, which meant the city was responsible for \$1.6 million.

Although the initial costs may be significant, the digestion of food waste can be quite lucrative and the payback period can be less than three years depending on the existing infrastructure at the wastewater plant, according to the EPA. The potential ROI may be an incentive for treatment facilities to invest in this technology, but that doesn't necessarily mean that the up-front money is available.

Federal and state sources can provide financial assistance. The federal government provides grants, loans and rebates to municipalities. Such funding may be available to help fund the capital investments; however, Thieszen said "often the money saved by reducing the energy purchased justifies the capital investments provided there is excess infrastructure already in place."

Additional revenue may be earned through tipping fees for the high-strength organic waste. The Sheboygan Regional Wastewater Treatment Plant was able to use its excess digester capacity and grant funding to start the co-digestion and combined heat and power program. The energy

produced from the program provides enough financial savings to justify additional capital expenditure to rehabilitate the existing infrastructure and continue the program.

Savings may be part of the equation, but Thieszen cautions decision-makers they should take a big-picture approach to budgeting.

"While Sheboygan's HSW receiving program has generated a significant amount of revenue from tipping fees while offsetting more than 80–90 percent of the energy costs for the facility over the past 10 years, there are capital and operating costs associated with maintaining the receiving station and utilization equipment." For example, she said the re-purposed tanks used for storage show significant signs of corrosion and require rehabilitation in the immediate future. The microturbines will require rehabilitation in the next 5 to 10 years, and a need for HSW diversification is arising due to the demand for the materials.







Reinventing Racine Rust belt community comes back

By JULIE YOUNG | The Municipal

A strong industrial base established during the 19th and early 20th century in Racine disintegrated during the 1980s. The city struggled, but successfully invented a new identity as both a commercial center and a model of ecologic leadership. (James DeBoer / Shutterstock.com)

Lake Michigan between Milwau-kee and Chicago, Racine, Wis., is a Rust Belt community of 78,000 built on the backs of a diverse immigrant population that moved into the area during the late 19th and early 20th centuries. Right from the start, Racine established itself as a factory town and became known for a wide range of industrial campuses that dappled the landscape and helped the city flourish throughout the post-war era.

In the mid 1980s, globalization took its toll on the manufacturing industry and caused many corporations to move their operations south of the border and overseas. As a result, Racine fell on hard times and suffered an identity crisis.

"We were hit hard, and since then we've been struggling to reinvent the community — knowing the heavy manufacturing will never come back to where it was before," said Thomas Friedel, city administrator. "We've been looking for ways to bring in new employers and attract new businesses and at the same time improve the quality of life for our residents."

A lot to offer

It hasn't always been easy, but Racine is a city with a lot going for it. Not only is it the Kringle capital of the world — a Danish pastry primarily produced in the region - but it is still home to manufacturing giants such as S.C. Johnson Company; Case IH; Nestle, in nearby Burlington; and it has all of the amenities anyone could want in a municipality. Racine not only provides easy access to larger communities, but within an hour's drive, folks can enjoy the opera, outdoor recreation, fine dining experiences, the arts, shopping and waterfront activities at North Beach - the first beach in the state to be designated a Certified Blue Wave clean beach by the National Clean Beaches Council.

The riverfront is a huge asset for Racine. The city has worked tirelessly to clean up along the Root River and maintain the area so that it can serve as a destination for residents and visitors who may want to ride the 5-mile bike path alongside the water, swim, take the kids to play on the playground or walk to the beach and take in any number of special events like EVP Professional Beach Volleyball or the Ironman



70.3 Racine Triathlon, which draws national and international competitors each year.

"You have to create reasons for people and employers to want to be here, establish jobs and propel the economy," Friedel said. "When people have a job it makes them want to invest locally, so we are always looking for those incentives that make Racine an attractive place for businesses."

Another way it's accomplishing that is through the efforts of the Downtown



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Racine Corporation, a nonprofit organization dedicated to revitalization of the city's central hub. The DRC has been active for 35 years, and since its inception, it has added over 600 new residential units to the community, helped to add 50 new businesses to the area since 2007, has helped cultivate an arts hub and sponsors 20 events throughout the year.

"It would seem that we have turned a corner," Friedel said. "When the recession hit, the community suffered. We had a lot of foreclosures and unemployment was around 17 percent, but now we are down to a 7 percent unemployment rate, small businesses and industry are coming into the area so we are growing, and, of course, we continue to look for ways in which we can be a more sustainable community."

An emerging leader

Although it may still have a reputation as a factory town, today Racine is emerging as a leader in sustainable practices and programs from which other municipalities can benefit. From a focus on forestry and beautification to responsible waste management and protection of wetlands, Racine leaves no stone unturned when it comes to ecological concerns.

When Wisconsin Partners for Clean Air expressed a concern about the emissions school buses were sending into the atmosphere, the city contacted the Department of Natural Resources and was successful in obtaining funding to retrofit buses with systems that would allow them to put out cleaner air than they take in. The city has also instituted a huge recycling program, installed solar panels on City Hall, LED lights on city streets, motion sensor lights in parking garages and public bathrooms, roundabouts to save money on traffic lights and timers on municipal water fountains so that they shut off at night when no one is in the building.

Friedel believes it's important for communities to be good stewards of the resources they have and says more cities should look into making small investments that mean big savings down the road.

"We are already seeing them pay off. Through our efforts, we are making lasting changes that can serve as a model for other cities. It's a great time to be part of this new and reinvented Racine." ■

ABOVE: A preoccupation with water quality has turned North Beach Park in Racine, Wis., into an award-winning destination and a source of pride for the community. It was the first beach in the state to be designated a Certified Blue Wave clean beach by the Clean Beaches Coalition. (Photo provided)

BELOW: Racine has every amenity residents could want in a community: arts and culture, festivals, outdoor recreation and so much more. One of the big draws is a lakefront that's a destination for residents and tourists alike and is the location of an annual Ironman Triathlon event. (Photo provided)















By AMY WENGER | The Municipal

We are living in the age of instantaneous information. Perhaps nowhere has this become more evident than in the proliferation and delivery of news. Everyone, everywhere, is racing to be the elite, the first. Sometimes that race can be compromised by decisions of judgment, particularly where politics is concerned. The line between personal and professional, between decorum and dalliance, can become ever more hazy.

But for many individuals in the public sector, social media has created a new echelon of preference in the distribution of breaking news. The key to success, users will freely admit, is in knowing when boundaries can or should not be crossed.

One such instance is where mayors and other elected officials are concerned. John McNally is the mayor of Youngstown, Ohio, and counts himself among advocates of the stream of breaking topical issues that can be announced via the Internet.

ABOVE: Twitter is attuned to use of its medium by public officials. It has compiled extensive recommendations to make communication between residents and their government representatives constructive and accurate, whether at the local, state or federal level. (Shutterstock photo)

RIGHT: Mayor John McNally of Youngstown, Ohio, pictured here with his family, is one of many municipal officials who communicate via social media with constituents. Keeping topics categorized and maintaining multiple, topic- or purpose-focused accounts helps him share effectively. (Photo provided)

"I am a big Twitter user, but I don't do much on Facebook or Instagram," McNally noted. "Twitter is easy enough for me to do throughout the day if I want, and I can attach pictures I want folks to see."

To help keep matters categorized where McNally feels the topics are best suited, he maintains separate accounts for various subjects.

"My account is @mayormcnally. I am the only one who has access to it, and I post all types of stuff, city-related and personal/family-related." He also has a personal account at @johnmcnallyiv as well as another one for campaigning purposes at @mcnallyformayor.

When the scope of interest has a broader, community-focused orientation, McNally has a civic-themed avenue he uses, @downtownyoungstown, and an active Facebook page. Those accounts have a shared access.

"The city has an account to promote downtown activities, and our downtown events director runs both of those sites," he noted.

McNally said that while he strives to be mindful of the discretion and etiquette that goes along with the privilege of availing social media, he believes that ultimately, the user is best suited to make that judgment call.

"I do have to think twice sometimes about what I post on my page," he admitted. "Some folks think it is city-run or owned, and I do get some complaints. I do tell folks it's my account, and if you don't like it, it is easy to unfollow."

Bearing that sentiment in mind, Twitter has taken a proactive stance about educating politicians on ways to become empowered through social media communication. The company has also provided basic guidelines that should be considered when posting.

Staff members at Twitter have composed a 137-page handbook, with insights shared by employees who have had specific experiences in politics, government and other civic-minded affairs. The manual is titled "The Twitter Government and Elections Handbook; 2014 U.S. Edition."

Some of those suggestions include making sure that Twitter is used as a means for listening to the constituency, not merely talking at them. It can be described as a "real time measure of public opinion," the book observes.

Furthermore, it offers words of wisdom on sharing the "real you," along with creative ways to be authentic and how to issue calls to action. Other chapters delve into ways to maximize tweet boosts through ingeniously crafted hashtags, analytics and notification filters; and how to launch a platform.

The guide's success has spun off into a Twitter-sponsored website where there's a range of information, spanning from the most basic details on how to begin a Twitter account to tales of success shared by



other notable users who specifically cite Twitter as an integral resource in the forward movement of their visions and goals. That website can be viewed at media.twitter.com/government.





Uber battles:

To share or not to share

By CHRISTINE BEEMS | The Municipal

tute, a public policy think tank that promotes free markets and effective government, "Upstart transportation-for-hire companies like Uber, Lyft and Sidecar have attracted millions of riders, rattled competitors and upended markets with the whirlwind forces of creative destruction. Their success has sparked heated debates in city halls across the country, as lawmakers grapple with antiquated transportation regulations and their many self-interested defenders."

A prominent example of the new sharing economy, wherein people rent beds, cars, boats, tools, bikes and other personal property directly from the owner via smartphone application, the free-market entrepreneurial objective is twofold:

- **Disintermediation** aka the removal of middle men
- **Disaggregation** the marketing of spare personal resources as consumable goods and services

Juliet Schor, professor of sociology at Boston College and Distinguished Visiting Professor at the Radcliffe Institute, Harvard University, in her article, "Debating the Sharing Economy," sees this app-enabled, peer-to-peer economy as a powerful new force of commercial exchange "centered on genuine practices of sharing and cooperation in the production and consumption of goods and services."

Regulatory oversight on ride sharing services, whether local or state, are essential to protect the public's safety and to establish liability in cases of accidents or abuse; but in addition, failure to direct attention to the issue can negatively affect local industry and commerce. (Nisarg Lakhmani / Shutterstock.com)

But, as she challenges, achieving that egalitarian potential requires "democratizing the ownership and governance of the platforms," which is where regulation comes in.

Mayor Paul Soglin of Madison, Wis., explained it this way in a blog last year:

"A major function of government is to bring equity to the market place and to ensure the health and safety of the public... Cities like Madison... have regulatory standards for taxi cab companies designed to protect the public... Uber and Lyft refuse to meet these standards... choosing to muscle their way into the Madison market... (and) have no ability to provide equal transportation to people with disabilities, which is inconsistent with our ADA and EO ordinance."

In response, Uber and other transportation networking companies assert that they are not, by legal definition, transportation companies. They are technology companies, and thus exempt from public transportation regulations.

State of Michigan Senator Rick Jones disagrees. In March this year he spearheaded Senate Bill 184 to regulate Uber drivers.

"MDOT has told Uber 'You are not licensed to operate in the state, that you are violating the law, and you need to stop all operations immediately."

"Applying an antiquated regulatory framework to this new industry is a backward-looking approach and will stifle innovation and economic growth in Michigan," countered Uber said in a March 15 statement to 24 Hour News 8. "These bills reflect a misunderstanding of our business model."

Yet things are rarely simple when matters of liability are involved. One of the most ▶

"Uber and other transportation networking companies assert that they are not, by legal definition, transportation companies."



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contentious issues of the ride sharing conundrum revolves around who covers what when accidents occur.

The city of Des Moines, Iowa, had no warning that Uber was launching its ride sharing service in September 2014.

Deliberating the issue, Des Moines officials took a chilling look at tragic circumstances in another state where an Uber driver, on the way to pick up a fare, hit and killed a pedestrian. Since the Uber app does not get activated until the passenger enters the driver's car, the commercial insurance that Uber provides was not in effect. However, since the driver was en route to pick up a commercial fare, the driver's personal insurance provider was also exempt from liability because the vehicle was, at that moment in time, being driven for commercial purpose.

In Akron, Ohio, as elsewhere, another bone of contention is surge pricing. Also referred to as dynamic pricing, transportation network company fares increase during peak demand. Municipalities have taxi regulations to protect the consumer, which require that rates be posted and can only change periodically. It is alleged that surge pricing encourages price gouging by unscrupulous drivers who can fabricate higher demand by intermittently turning the app off, thus fooling the system into upping fares because fewer drivers are available.

Still, TNC passengers are typically happy with the service.

Illustrating the turbulent regulatory sea, in January of this year Chattanooga, Tenn., adopted code spelling out requirements for all TNCs operating within its jurisdiction. By June, local ordinances were trumped by state laws that allow TNCs to operate statewide.

With
terms agreeable to
both the TNCs and
insurance companies, the Tennessee
legislation—which took
effect in May—was one of
the first collaborative nego-

tiations brokered by legislators. Tennessee State Senator Bo Watson, the primary sponsor of the bill, told media that he sometimes grabs rides with Uber or Lyft and believes

Places Uber is driving with no restrictions
 Places where Uber has legal problems,
 is in a legal dispute or threatened by a ban
 Places Uber has been banned
 Source: taxi-deutschland.net/wikimedia.org

that ride sharing "is representative of the new economy that we're all experiencing where business is done over a smartphone, business is done over a computer and government's trying to adapt to that."

Still, this win-win potential is not readily embraced by cab and limo companies.

Raleigh, N.C., is exemplary of the cities where TNCs thrive. The high population of college students and young professionals but lack of extensive mass transit makes it prime ride sharing territory. It's also



one of many states where little regulation exists outside of traditional cab and limo services.

"We're seeing all over the country that cities and states are taking interest in companies like Uber because what we're seeing is that consumers are flocking to these new technologies," said Rachel Holt, Uber's regional general manager for the East Coast, told North Carolina lawmakers. "We're very supportive of reasonable, commonsense regulations."

In Richmond, Va., new statewide guidelines took effect July 1 this year with high hopes of mitigating concerns and disambiguating considerations, which stem from long-held commercial ideologies that everyone who transports a passenger for a fee, no matter how that fee is collected, should be held accountable to the same standards and that to do otherwise is unfair to the taxi industry.

The new regulations mandate background checks for drivers, disqualify drivers with a history of driving under the influence or other serious moving violations, stipulate zero-tolerance policies regarding the use of drugs or alcohol, require all TNC drivers be 21 or older and to maintain at least \$1 million of liability coverage from the moment a trip request is accepted until the passenger leaves the vehicle.

Virginia Governor Terry McAuliffe has noted publicly that when the laws governing taxi services were originated, the concept of ride sharing services did not exist. Virginia, like other cities and states, is test-driving Oregulations that allow the such innovations to coexist with protections for users and the proper local and state oversight and remuneration.

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Frustrated customers or other members of the public may or may not escalate to violence and produce a concealed weapon. (Shutterstock photo)

Cause to pause

Reading body language in difficult situations

By JULIE YOUNG | The Municipal

typically have little to go on. They may have received a report that an agitated individual has gotten increasingly out of sorts, but until they arrive on scene, there is no way for dispatch to evaluate if the person is merely stressed, suffering from a mental condition or is carrying a concealed weapon.

Rather than go in guns blazing, to borrow a line, and make a bad situation worse, Jim Zalud gives police officers, dispatch and front desk personnel "cause to pause" in order to read body language, deal with crisis and spot danger. He said people are amazed to realize the affect they can have on a potentially difficult or violent situation.

"They can be the lightning rod to trigger someone who may not be capable of cooperating in a traditional way, and this kind of negligence can cost municipalities a lot of money when a situation is mishandled."

Zalud encourages review of the principles of customer service; he also introduces visual and video scenarios to enhance the understanding of service and perception, and offers methods with which to read people who are in a state of crisis. A list of Do's and Don'ts for crisis situations, tips on the use of intuition in response to perceived danger, a basic understanding of reasonable suspicion and techniques with which to recognize concealed carry are also useful tools.

"People don't realize that our words are only 13 percent of the way in which we communicate. The rest is dictated by our body language, our mannerisms, the sound of our voice, pitch and timbre, which sends a message louder than any spoken words," he said. "It's important for personnel to communicate effectively with those they come in contact with and to be able to understand the unspoken message that is being conveyed by individuals as well."

We've all seen that person who has been transferred to four different departments in search of assistance. By the time they reach that fifth office, they are stressed out, operating on a short fuse and ready to explode. Although they are not inherently dangerous, by taking a moment to sympathize with their frustration, rather than reacting to it, personnel can diffuse a bad situation instead of aggravating it.

"It's such a small thing really, but it makes a big difference," Zalud said. "When people go to Disney World, they don't talk about how great the rides were, but how clean the place is and how kind and courteous the staff was to them. When you exhibit good customer service, it can really add up to a more positive experience."

Another problem facing law enforcement and front desk personnel is occasional inability to differentiate between a neurotypical individual and someone with a recognized medical condition such as autism or other behavioral health issue. When called to deal with someone who is stimming, unable to maintain eye contact or having trouble with verbal communication, officers might respond inappropriately if they are



Both members of law enforcement and private-industry employees in gateway positions can protect others and de-escalate dangerous situations by recognizing indicators of extreme stress in an individual. Here, Zalud reviews some of those indicators during a seminar presentation. (Photo provided)

unfamiliar with behaviors that may be perfectly normal for someone on the spectrum. Zalud said they often come in expecting to confront a "madman" or "weirdo" and instead encounter an autistic mid-meltdown.

"If the individual is unarmed and they are having a meltdown, then let them have it. They aren't going to hurt anybody: but startling them, grabbing them, trying to force them into behaving or even attempting to reason with them is not going to work," he said. "Treating them like a criminal is not helpful. The best thing an officer or front desk person can do is to call 911, get an EMT on the scene, clear the room and lower their volume in order to keep the individual as calm as possible."

Of course, not every situation is benign. Zalud recognizes that law enforcement officers and front desk personnel may find themselves facing a truly dangerous person at some point. Like the other situations, there are hints that can help them spot a person who may pose a real threat to a place of business. They may be wearing loose clothing or carrying a mysterious backpack or package away from their body, as if they don't want something explosive or dangerous near them. They may be sweating, have dilated pupils, tight muscles and their breathing pattern may be different.

Those who are carrying a weapon actually walk differently in order to accommodate the weight of the weapon. They may also absently pat the area where they are holding the weapon as if to make sure it is still there and secure.

"There are a whole host of behaviors that they will go into before they are about to open fire, and it's important for personnel to be aware of these behaviors, have a code red protocol in place and learn to trust their intuition when something doesn't feel right," he said.

Zalud said he tries to help law enforcement and other personnel put better customer service practices in place and to be aware of the what is truly a dangerous situation and what is not in order to have the best possible outcome.

"Education plus experience results in a better intuition, and when you have that gut feeling, you have to act on it. Human beings are the only animals that second guess themselves with logic, and sometimes you can't afford to do that." ■



Where do they wave?

Interest in municipal flags wanes even as technology makes small orders cheaper



By ANNE MEYER BYLER | The Municipal

Flying the flag is a priority for the nation and U.S. states, but at the municipal level the practice is more hit and miss.

Dennis Criscuolo, owner and manager of The Flag Center, said he's seen a slight decrease in interest on the part of cities in flying a flag. One of the reasons might be smaller cities trying to control costs. One theme he has seen in new flags created by cities that do maintain the practice, however, is the presence of a circle, representing the city seal.

In place of flags, Criscuolo has witnessed an increased interest in vinyl street banners being used to publicize local events and highlight aspects of community life. Avenue banners, or vertical signage, are popular, too. These are hung on lampposts and can highlight different events, points of interest or sources of pride. Similar imagery may appear on avenue banners as on a locality's flag.

But Jeffrey Shaaber, vice president of commercial sales at Valley Forge Flag Co. in Wyomissing, Pa., said not all the news has been bad for manufacturers of municipal flags. "For about the last 10 years, we have been able to produce small numbers of flags very easily given the digital technology. This differs from the old-fashioned screen printing, where you needed to do a much larger run at one time." Given the new technology manufacturers are getting more orders for traditional flags, albeit state and national. These are made of 200-denier nylon, the most commonly used flag material in the country.

The advent of this fabric and the design technology has made it much more affordable to place an order for one to six flags, so he has found that some small cities are doing it. Budgets are always an issue, but digital printing has made the effort much more affordable. The artwork required is electronic also.

Some city flags carry aspects of the state flag. As locales have anniversaries, flying the flag becomes integral. The Chicago flag has long been hailed as an ideal design. The stripes represent the sides of the city and its demarking bodies of water. The stars represent a founding event, the Chicago Fire, the World's Columbian Exposition and the Century of Progress Exposition. The image is flown all over the city today. (Shutterstock photo)

Nashville, Tenn.

Nashville had two flags in fairly short order. The first one was designed during a contest among local high school students. In the end, 122 students submitted designs in which the rules said, according to a newspaper article, "both color and design of the flag should bear a relationship to Nashville's origin, tradition and history."

According to the article, the flag adopted by the city council in 1961 included a central blue star, to signify the state capitol; a red background with a blue border, to represent the city's location within the state; a gold 'N' surrounded by a wreath, to represent the city's reputation as the "Athens of the South"; and white rays beaming from the center star.

The current flag dates to 1963. "It was changed then because the city of Nashville government and the Davidson County government consolidated," said Vicki Long, administrative assistant in the Metropolitan Clerk's office. The new entity became the Metropolitan Government of Nashville and Davidson County.

On April 2, 1963, the official seal of the Metropolitan Government of Nashville and the Davidson County was passed by the Metropolitan Council, as the first resolution adopted by the new governing entity.

The flag is the seal with a gold circle containing the words "Metropolitan Government of Nashville and Davidson County," plus blue and gold triangles pointing out on a blue background, with a vertical gold stripe to the far right. The blue and gold seal combined elements of the old seal with new elements symbolizing the consolidation of the Metro Government. The fleur-de-lis at the top is a



ABOVE: The flag of Nashville, Tenn., displays exclusively the seal of the Metropolitan Government of Nashville and Davidson County. The seal's images include Cherokee leader Chief Oconostota; tobacco, symbolizing a gift from Native American Indians; and an eagle above a United States' government shield, representing superiority, judgment and strength in the face of danger. (Image provided)

BELOW: Playing to both its commercial and literary histories, Nantucket, Mass., flies a flag honoring the whaling industry and the most famous whale of all time, the legedary Moby Dick. (Shutterstock photo)



stylized treatment

of an iris. The compass points signify the unlimited horizons of the opportunities ahead for the people of Metropolitan Government of Nashville and Davidson County.

In 1949 Mayor Thomas Cummings had made an effort to find the significance and origins of the design's Indian symbols. These were the results of his search:

"The Native American Indian was identified as the famous Cherokee leader Chief Oconostota, Great Warrior of Chota. Chief Oconostota holds a skull and implements of war that he and General James Robertson buried between them in a ceremony of peace. Tobacco symbolizes a gift from Native American Indians and the source of wealth and cultivation of our land. The eagle is the only bird that neither flees nor fights a storm but flies above it. The eagle above a United States' government shield represents superiority, judgment and strength in the face of danger."

Chicago, Ill.

The flag of the city of Chicago originated in 1917. The three white stripes of the flag represent, from top to bottom, the north, west and south sides of the city. The top blue stripe represents Lake Michigan and the north branch of the Chicago River. The bottom blue stripe represents the south branch of the Chicago River and the Great Canal.

The middle white stripe contains four sixpointed stars. An article on the stars stated that six-pointed stars are used because fivepointed stars represent sovereign states, and because the star as designed was not found on any other known flags as of 1917 when it was first designed.

Www.badablingchicago.com explains the symbolism of the four red six-pointed stars on the center white stripe:

- The first star represents Fort Dearborn. It was added to the flag in 1939. Its six points symbolize transportation, labor, commerce, finance, populousness and salubrity.
- The second star stands for the Great Chicago Fire of 1871 and is original to the 1917 design of the flag. Its six points represent the virtues of religion, education, aesthetics, justice, beneficence and civic pride.
- The third star symbolizes the World's Columbian Exposition of 1893 and is original to the 1917 design. Its six points stand for political entities Chicago has belonged to and the flags that have flown over the area: France, 1693; Great Britain, 1763; Virginia, 1778; the Northwest Territory, 1798; Indiana Territory, 1802; and Illinois, 1818.
- The fourth star represents the Century of Progress Exposition (1933–1934) and was added in 1933. Its points refer to bragging rights: the World's Third Largest City; Chicago's Latin motto, "Urbs in horto" — "City in a Garden"; Chicago's "I Will" motto; Great Central Marketplace; Wonder City; Convention City.

A fifth star has been proposed several times: first in the 1940s, when a letter to the Chicago Tribune asked that a fifth star be added to the city flag in honor of its role in getting to the nuclear age. A second time was to honor Harold Washington, the first African-American mayor of Chicago. A third time a star was considered came after the Chicago Flood of 1992. Most recently the city bid on the 2016 Olympic Games, and some suggested that it would be a reason for a fifth star, but the Olympic bid was lost to Rio de Janeiro.



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The changing role of the mall

By AMY WENGER | The Municipal

Analysts and consumers alike have expressed rationales as to why sprawling shopping malls are fast becoming retail relics. Although they have differing opinions on what precipitated the downward spiral, there is one common reason on which they agree—the explosion of Internet shopping. As buyers seek faster and more streamlined ways to shop from the convenience of home, brickand-mortar stores seemingly topple like dominoes.

At the opening of the 2015 calendar year, the New York Times published a study by real estate firm Green Street Advisors predicting that over the course of the next decade an estimated 15 percent of large-scale shopping centers nationwide would either close up shop entirely or be converted into noncommercial space. That was a jump of 5 percent over a predication the same company made just a couple of years prior.

PBS recently aired a news segment on this phenomenon, in which panelists proffered their perspectives on ways to salvage, rehabilitate and revive forgotten buildings, and how best civic leaders can face the evolving ways people shop and their breakneck pace of life. The documentary noted that enclosed shopping malls enjoyed a boon during the 1950s, when the allure of suburban life created the perfect shopping storm. In the 50

Policies put in place during the permit stage of mall's construction may prevent a community from having to sell or raze a failed development in the future. (Shutterstock photo)

years spanning 1956 to 2005, there were approximately 1,500 indoor malls created and built across the United States.

The number of new, similarly styled malls since 2006? Virtually none have been documented.

Len Schlesinger of Harvard Business School pointed out that the focus should now be on what can be done to enhance and functionally beautify these vast facilities, citing such successful ventures as conversion into storage facilities, bowling alleys and theaters. Architect Larry Grossman of ADD Inc. even described opportunities for a mix of

Did you know?

Practically nowhere is immune from having to deal with abandoned mall structures. A few of the many U.S. cities struggling with the problem are below, although some have successfully recruited new tenants or owners to the site:

FLORIDA: Colonial Plaza Mall, Orlando; Crystal River Mall, Crystal River; Miracle City Mall, Titusville; Seminole Mall, Seminole; and 11 others

GEORGIA: yrna; Macon Mall, Macon; Savannah Mall, Savannah; and five others

ILLINOIS: Washington Square Mall, Homewood; St. Charles Mall, St. Charles; One Schaumburg Place, Schaumburg; Jefferson Square Mall, Joliet; Colonial Village Mall, Rockford; and 22 others

IOWA: Duck Creek Plaza, Bettendorf; Park Fair Mall, Des Moines; and four others

MICHIGAN: Marquette Mall, Marquette; Northland Center Mall, Southfield; North Kent Mall, Grand Rapids; Summit Place Mall/ Pontiac Mall, Waterford; and eight others

MINNESOTA: Apache Plaza, St. Anthony Village; Brookdale Mall, Brooklyn Center; and four others

MISSOURI: Blue Ridge Mall, Independence; North Town Mall, Springfield; Mall at Wentzville Crossings, Wentzville; Metro North Mall, Kansas City; and seven others

NEW YORK: Dutchess Mall, Fishkill; Galleria at Crystal Run, Middletown; Hudson Valley Mall, Kingston; Kings Mall, Kingston; Mall At New Rochelle, New Rochelle; Nanuet Mall, Nauet; Orange Plaza, Middletown; and 35 others

NORTH CAROLINA: Salisbury Mall, Salisbury; Signal Hill Mall, Statesville; South Square Mall, Durham; Southgate Mall, Elizabeth; and 12 others

OHIO: American Mall, Lima; Beechmont Mall, Cincinnati; Euclid Square, Euclid; Northland Mall, Columbus; North Towne Square, Toledo; Parmatown Mall, Parma; Towner Place Mall at Carew Tower, Cincinnati; Woodville Mall, Northwood; and 19 others

PENNSYLVANIA: West Manchester Mall, York; Pittsburgh Mills, Tarentum; North Mall, York; MJ Mall, Carlisle; Gallery At Market East, Philadelphia; Century III Mall, Pittsburgh; and 23 others

Source: www.deadmalls.com/stories.html

continued from page 47

retail and business, all encompassed within the same structure.

In Chestnut Hill, Mass., developers have applied this principle with resounding success, converting a formerly decrepit complex into what is now known as The Street. The campus houses a series of upscale shopping avenues for refined interests, along with nooks for alfresco dining. A nearby Macy's has become a theatre known as SuperLux, which features the popular amenity of table service.

A winsome formula has made The Street well-received in the commerce landscape. Retailers that have taken root there have focused on offering options geared toward a family friendly environment.

For example, when the children's apparel franchise Rugged Bear selected a new region in which to unveil another store, it's 30th anniversary was chosen as the proper time to welcome guests to the The Street as well, even opting to herald the occasion with a birthday party to commemorate the occasion.

"We couldn't think of a better place to celebrate our success of opening over 30 stores in 30 years than here," announced Rugged Bear CEO Garr Larson in 2010. "Consumers are definitely more discerning and are thinking carefully about their purchases, especially when it comes to their kids."

WS Development, The Street's owning and operating firm at its inception, shared a similar sentiment. David Fleming, director of corporate marketing, said, "We're excited that both our new and longstanding retailers are doing well, that our recent updates are creating a positive impact and that the shopping center continues to be a community destination for shoppers."

Still other shopping malls have rebranded themselves in ways that replace the traditional "big box" appearance of grid-like corridors with a more open, airy design and of-the-moment retail options. Oakbrook Center in Chicago first opened in 1962, and underwent a \$30 million renovation in 2014 to rave reviews. The changes included an enlarged, more spacious common area, outdoor seating in a "prairie-like" setting and dozens of new stores and restaurants. An entertainment outlet space was created to host special events such as movie nights and car shows. Travelers to that destination will also find lodging space, thanks to the premiere of Le Meridian Hotel, along with unique features that are strictly exclusive to the Midwest - another draw for shoppers who desire an experience offered nowhere else in America.

These will be the characteristics to ensure that while online shopping offers certain measures of convenience, there will always exist a certain charm to shopping in the traditional sense, and making memories along the way.

Online shopping has undermined mall business in cities everywhere, but the model was losing traction even before then. Some fast-thinking entrepreneurs are redefining malls for a new generation: Other cities find themselves stuck with large, abandoned eyesores. (Maltsev Semion / Shutterstock.com)









Nurse on board

Green Valley, Ariz., provides the services of an on-call nurse practitioner for patients who do not require emergency medical intervention: saving EMS, the health care system and patients thousands of dollars. (Photo provided)

By ANDREW BUSS | The Municipal

merican health care is continually seeing changes in legislation, technology and practice, both nationally and locally. Health care providers are ever searching for innovations that deliver services more efficiently and cost effectively. One example of that innovation can be found in two Arizona communities that are experimenting with how emergency services can create more value for patients and greater savings for their local health care systems through in-home medical care.

Green Valley is a retirement community in southern Arizona with a median age of 71. With an older population comes mobility issues that often make it difficult for residents to see their primary physician or to make it to an urgent care facility on their own. Their only option may be to call 911 when they need treatment for even minor issues.

Battalion Chief Dan Modrzejewski noticed this problem and began tracking the data for every call the fire department received. He

found that 25 percent of patients had medical complaints that could have been treated in-home by a nurse practitioner. In January of this year, the department began providing this service full time.

Mesa, part of the Phoenix metropolitan area, began experimenting in earnest with a similar program in 2011. Emergency department overcrowding, the economic downturn and the passage of the Affordable Care Act all contributed to Mesa's desire to modify the way it delivered health care to the community.

"Being a municipal fire and medical department where 80 percent of our 911 services are medical, we were a perfect fit, in a grassroots sense, to address what the spirit of the ACA is supposed to do," said Tony Lo Giudice, author and administrator of Mesa's project grant. "At the time, we viewed the ACA tenets of efficiency, improving patient health and lower costs to be in line with our Community Care model and the basic fibers of good municipal governance."

Both departments have similar proto-

nonemergency treatment or if the remedy falls within her purview. This way the cost of treating typical problems, such as dehydration, respiratory infections and minor lacerations, runs between \$300 and \$400, instead of \$2,000 for the same service plus a 30-minute ambulance ride to the hospital in Tucson.

In addition to offering these basic medical treatments, Mesa's department provides mental health services through a partner-

> ship with licensed behavioral health professionals. The Community Care Special Unit provides mental health evaluations, home

safety plans and alternative destination transportation to behavioral or substance abuse facilities.

"We identified through data that behavioral health patients were not getting the definitive care they needed in the 911 system, and the mid-level providers did not have the additional behavioral component to their licensure," said Lo Giudice. "More than 10 percent of the calls that come through the fire 911 system are behavior related. We believed we could improve efficiency and help these types of patients." ▶

"We were a perfect fit, in a grassroots sense, to address what the spirit of the ACA is supposed to do."

cols for dispatching nurse practitioners. In Green Valley, the fire department is sent to every 911 call. When emergency personnel arrive on scene, they assess the patient's condition. If the patients require emergency care, they head straight for the hospital. If they do not, the fire engine has an internal line to the department's nurse practitioner, Cynthia Smith, who can arrive on the scene within eight minutes. A formal transfer of care takes place, and Smith determines if the patient should be sent to the hospital for



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ABOVE LEFT: The independent program run by Green Valley EMS has had funding challenges, including becoming an in-network provider. The department is slowly making its way through a maze of requirements to ask insurance companies to pay for services. (Photo provided)

ABOVE RIGHT: Mesa EMS began experimenting in earnest with a nurse practitioner program in 2011. Emergency department overcrowding, the economic downturn and the passage of the Affordable Care Act all contributed to its desire to modify the way it delivered health care to the community. (Photo provided)

According to Modrzejewski, the first hurdle for Green Valley's program was finding out if the state board of nursing would consider a nurse practitioner to be an independently licensed health care provider.

"A nurse practitioner can practice at the level of a doctor in Arizona and can function without medical oversights. Some states don't allow that — you must involve a doctor somehow. There is about a 50-50 split right now as far as the states that allow it and those that don't."

That distinction can make quite a difference in malpractice insurance alone. According to Modrzejewski, this typically runs \$100,000 for a doctor: It costs just \$2,600 through the same insurance for a nurse practitioner.

Although the medical services that Green Valley and Mesa provide are similar, their organization and funding are quite different.

"There are other entities — fire departments, hospitals, clinics, home care agencies — that are doing house calls," said Modrzejewski. "But we believe we are the first fire department to be independently licensed to operate a mobile urgent medical care unit. We are not partnered with any hospital or run by grant money. The nurse practitioner works for us, and we are licensed to work on our own. Any program that currently does this collaborates

with a hospital, and the hospital gains the savings: The fire department doesn't recoup its costs for the program."

Mesa's Community Care service is being funded over a three-year period by a \$12.5 million grant from the Centers for Medicare and Medicaid Services. While that has helped the project get off the ground, it creates challenges in going forward, namely due to the stipulation that they cannot bill insurance companies for their services for the duration of their grant.

"We believe this type of service has not been widely attempted yet because the mechanisms to fund it for suitability are not firmly in place," said Lo Giudice. "One of our goals in the next two years is to work with the Centers for Medicare and Medicaid, insurance companies and other health care entities to develop sustainability mechanisms. Our hope is that by the end of the grant we will have successfully tested, developed and put into action a sustainable funding structure that will offset costs and allow for a continuance of Community Care services."

Green Valley's independent program has had funding challenges of its own. Part of that challenge involves becoming an innetwork provider.

"We're still battling with the insurance companies," said Modrzejewski. "No billing codes

exist for what we are doing. We're not insurance people ... we have had to learn the lingo, and it's a little overwhelming. We're slowly making headway toward insurance companies paying for services."

Chief Modrzejewski strongly advises knowing the potential funding sources before starting such a program.

"The end goal is to make sure that the program funds itself. For us, we will probably break even. Over the next few years, as we get more insurance companies involved, we expect to be able to reinvest more in the program. If we don't increase the number of insurance companies, it will become a line item in the budget that can be cut. The more people who know about it, the easier it will be to bring insurance companies around. At this point we need to keep moving forward, looking for little victories to help improve the program."

Even though both departments are still striving for financial success, they feel that these programs have helped them deliver better health care to their communities. According to their satisfaction surveys, residents agree. But as Mesa Assistant Chief Mary Cameli cautions, it doesn't mean this is for everyone.

"One of the greatest benefits of the program is handling calls with the most appropriate care possible. The success of the program is the number of calls we are dispatched to that we have the ability to treat in place and allow the patient to stay home and minimize the overall cost to the health care system. If a community doesn't have a high volume of low acuity calls, this program may not be as effective. Each community has specific needs, and it is important to identify them in order to put the most effective program in place."

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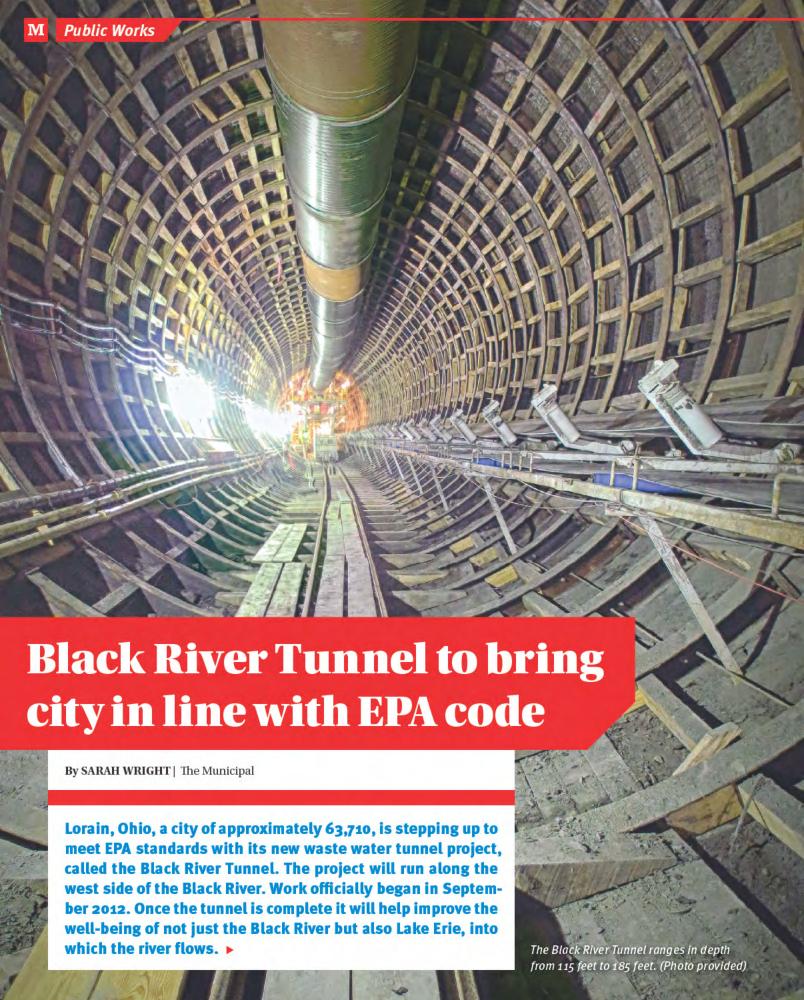




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The Black River Tunnel project of Lorain,
Ohio, consists of a 23-foot-diameter tunnel
bore with a finished inside diameter of
19 feet. The bore is 5,560 feet long and
ranges in depth from 115 feet to 185 feet.
(Photo provided)



"ARCADIS serves as the engineering consultancy firm on the \$62 million Black River Tunnel project for the city of Lorain," said Scot Pearson, senior resident engineer for ARCADIS, a global natural and built asset design and consultancy firm. "Lorain had been plagued by sanitary sewer overflows into the downtown and ultimately into the Black River during storm and wet weather events for more than 30 years. The Black River Tunnel project was initiated to address this issue and includes various engineered elements to divert, store, pump and treat sewage to eliminate overflows and stop the contamination of the Black River."

In addition to ARCADIS, NTH Consultants helped in the design of the Black River Tunnel project, while Walsh Construction and Super Excavators have been serving as joint contractors.

With a project requiring such extensive funding, Lorain had its work cut out for it. To get ready, Lorain Mayor Chase Ritenauer said, "From a financial standpoint, the city implemented sewer rate increases in 2009 through past 2020 in order to pay for the project. The funding for the project is through the Ohio Waste Development Authority."

Despite rate increases, he noted the public has been supportive of the project. In fact, it has had positive economic impacts within the community that include the creation of Work on the Black River Tunnel began in 2012 to meet EPA standards. Once complete the waste water tunnel will hold 11 million gallons of wet weather overflow as part of Larain's EPA-approved wet weather plan. (Photo provided)



both long-term and temporary local construction jobs.

Walsh Construction noted the project required the workforce to be 75 percent local residents.

"With only one tunnel in Lorain, tunneling safety knowledge among local workers was limited, so best practices have been taught to emphasize that a lack of safety can put everyone in danger," its website said. Representative Walsh also noted it had to train tunnel rescue crews, which consisted of its own employees since local fire and police had not been trained in tunnel rescue.

The construction effort itself proves to be rather impressive.

"Specific components are a 23-foot-diameter tunnel bore with a finished inside diameter of 19 feet," said Pearson. "The bore is 5,560 feet long and ranges in depth from 115 feet to 185 feet." It's designed to store approximately 11 million gallons of wet weather overflow as part of the city's EPA-approved wet weather plan.

Matt Carpenter, ARCADIS market manager in Ohio, described the project as being very typical when compared to other tunnel projects; however, he noted it does have some unique features, including a rain tunnel and vortex drop shaft. Of the vortex drop shaft, he said it will minimize odor and dissipate the energy from overflows, ensuring the project structure lasts longer. There is also a self-cleaning wet well that will help remove debris that might have lingered. Between it, the screening facility and the pump station, which dewaters the tunnel after wet weather events, debris will be screened out and water will then be taken to the waste water treatment facility.

"Other than that, it's pretty basic," Carpenter said. "The project has gone excellently," he added.
"We've had very good ground conditions, and there have been very few issues boring the tunnel." Weather has been a bit of a challenge, particularly last winter with the concrete not wanting to harden; but he noted that's expected with a multi-year construction project.

Carpenter explained the tunnel has been completely bored and work is beginning on its concrete liner, "the internal finished product in the project." Work is also ongoing when it comes to the project's external components: namely, the screening facility and pump station.

In the months leading up to the project's intended conclusion in October 2016, there will be a lot more vertical construction going on. "We will also be restoring the area around the tunnel shaft and pump and screening stations as well."

Since the project has largely occurred underground, there has been no significant impact to daily life in Lorain, according to Carpenter. When special events have occurred steps were taken to make sure construction was contain and didn't affect the plans.

"Lorain had been plagued by sanitary sewer overflows into the downtown."

From the city's perspective, Ritenauer said, the largest challenge was the location of the screening facility, which originally was proposed on a piece of property vital to the city's future economic development.

"In working with the contractor, engineer, state senator and EPA, we were able to relocate the building in a way that, while a significant cost increase, protected the city's future economic development and meant that we would not have to adjust rates upward."

To prevent that potential additional increase in rates Lorain used a mixture of contingency funds and delayed payment a year, which during 20 years will allow it to save for the last payment order and make it possible to get this change made.

While work on the tunnel has yet to conclude, Ritenauer stated, "... When it is (operational), it will improve the quality of effluent into Lake Erie. Until then, the impact has been local jobs."



Rapid intervention for the understaffed company

Because failure is not an option

By DAVE TOPCZYNSKI | Firefighter, Newport News, Va.

Part I of 3

he topic of short-staffed operations is often overlooked, despite it being an issue that many municipalities deal with across the country. Understaffed fireground operations, specifically understaffed rapid intervention team operations, is an important topic to address for any fire department. Short-staffed operations change the way we operate and our safety on the fireground. Not being able to rescue a downed firefighter because the rapid intervention crew was not trained to operate understaffed is unacceptable.

Short-staffed RIT operations affect both volunteer and career departments, as more and more departments are facing cuts and staffing shortages. A volunteer fire department may find that it has every seat full for a structure fire on a Saturday afternoon, only to have three firefighters responding to a structure fire that comes in on Monday morning. This may actually be a little better then a career department, where units are always short-staffed. Although they know they will be short-staffed and can train and prepare for understaffed operations, it doesn't change the fact that they will always have fewer firefighters than they need. But we cannot fail to rescue a brother or sister because we were not prepared to operate on an understaffed RIT.

Short-staffed RIT operations affect both volunteer and career departments, as more and more departments face cuts and staffing shortages: but not being able to rescue a downed firefighter because the rapid intervention crew was not trained to operate understaffed is unacceptable.

(Suzanne Tucker / Shutterstock.com)

What is RIT?

Before getting too deep into understaffed operations, let's quickly refresh what RIT is. According to NFPA 1500, Chapter 6, RIT is defined as "Two or more firefighters assigned outside the hazard area 'to assist or rescue' at an emergency operation." Simply put, RIT is a team of firefighters assigned outside the IDLH with the sole purpose of preventing and rescuing missing or lost firefighters. A key point to remember is that an RIT needs to be proactive and try to prevent a mayday situation from occurring in the first place. This is one way that being assigned to RIT is more than just standing around and missing the fire. The RIT is an active part of the fireground. If you are standing around sulking or chatting, then you are not doing your job as an RIT.

A proactive RIT can be extremely beneficial to the overall operation. If the company assigned as the RIT crew is short-staffed, then most likely so is every other company on the fireground. By placing secondary egress, securing utilities, or helping force doors on the rear or sides the RIT frees up someone else to perform another assignment. Some things are simply out of our control and can't be prevented from happening, though. Firefighters will get into trouble and maydays will be called regardless of how proactive the RIT is: This is when any RIT, fully or short-staffed, must know what actions need to be performed and how to perform them flawlessly.

Training is crucial

Based on past events, it's recommended that there be at least six members assigned to an RIT. However, most departments do not have the staffing to do that. We've also learned that firefighters must train and prepare for RIT operations.

RIT training doesn't always need to be a complex drill. Since maydays are not planned events, RIT drills shouldn't always be either. Call a mayday during any company drill, regardless of the original topic, just be certain that all the instructors or safety officers are aware of the drill. When a company knows it has an RIT drill coming up, members review RIT policies and practice procedures to keep from performing poorly at the drill. Many departments hold annual RIT refresher training, but how are the crews being kept prepared the rest of the year? Calling a mayday during a random drill allows crews to react in real time, with their normal operations being interrupted and without time to rehearse what to do.

If you operate short-staffed, then training also needs to take place with short-staffed teams. Departments need to train like they are going to operate! If there will be only three firefighters assigned to the RIT, then training must be done in teams of three.

A perfect of example of this happens in my own area's recruit fire academy. While giving this class towards the end of the fire academy, the recruits were asked, "When you took the state Mayday/RIT class, how many people were in each of your squads?" The recruits answered, five in each squad and one with six. This came from a group that knew for sure they'd going to be operating with only three firefighters on RIT once they graduated.

RIT drills don't always have to be complex. The goal of any RIT training should be to challenge crews with as many different types of scenarios as you can create. Not every drill has to be an elaborate scenario with props and mazes. An example of a drill that often throws crews off is calling a mayday for a fall off the roof in the rear, or for a firefighter hanging from a window in the rear. A lot of time is spent preparing for entanglements and collapses or performing specific drills, such as the Denver or Columbus Drill, and rightfully so; but many forget that there is a lot of other ways that firefighters can get into trouble on the fireground.

Be sure that RIT training is giving students a "total package" that is performing size ups, making entry through different areas, searching for downed firefighters and removing them. Most important, be sure that RIT drills are keeping crews thinking, challenged and on their toes. Make training challenging and different. How often do you connect the RIT pack to a down firefighter with your hood over your face piece? A lot of firefighters can connect the universal air connection pretty fast on the truck bay floor with their hoods on backwards. But isn't it more realistic to have the down firefighter under a bed with their SCBA against the wall? Now the firefighter making the connection has to lie on their stomach, reach under the bed and make the connection with limited space to work, which is not only more challenging, but also more realistic than a down firefighter lying out in the open.

Train now, and train a lot to build your muscle memory of the simply things, like knot typing, harnesses and air connections so when a fellow firefighter is in trouble you can focus on how you're going to rescue them and not be focused on trying to remember simple, yet vital tasks like how to tie a harness.



Stay ahead of the game

Firefighter's always want to be ahead of the game, especially when they operate with short-staffed RIT's. Do not wait until a mayday occurs to make a plan. Have a plan in place on the fireground before a mayday occurs. This does not mean adding an RIT section to pre-plans. It means the RIT members need to have a plan for the fireground they are operating on that is based on what they are presented with at that time. RIT members need to know things like how they are going to get into the building if they can't use the front door, what they're going to do if they have a missing firefighter verse a lost firefighter, and who's going to carry what tools. This way, if a mayday is called, they are not standing there wasting time, trying to figure out who is carrying the TIC or who's taking the search rope or if they are taking the stokes baskets or leaving it behind.

One of the most important things for the understaffed RIT to do to stay ahead of the game on the fireground is to conduct a proper size up to identify risks, correct hazards and make a plan of action for a mayday with "what if" scenarios then pay attention to the scene and monitor the radio traffic to keep track of the crew's locations. Countless fatality and close call reports show that incident commands miss maydays being given on the radio. It is the RIT's job to be a second set of ears and eyes listening and looking for maydays on the fireground. Now, when a mayday is called by Engine 10, the RIT members already have an idea of where the company is because they know that Engine 10 was assigned to perform fire attack in the basement. The RIT can quickly locate the hose line and rapidly begin searching along the hose.

Know multiple ways to get into and out of the building by performing a good size up, and pay attention to the conditions. Are conditions getting better or worse? How many lines are in service, is the IC calling for more hose lines in the building? If more hose lines are being requested than the fire is growing and getting worse, not getting better. This means there can be weakening of the structure, the possibility of crews becoming cut off or overwhelmed by the growing fire, or the mode of attack switching from offensive to defensive, which can lead to someone getting separated from their crew while backing out.

Another thing to consider ahead of time is knowing where you'll get additional crews from. It might be calling for a second alarm or by calling for mutual aid. But you have to know this ahead of time so you are not wasting time figuring this out during a mayday. Set up mutual aid ahead of time and exchange RIT policies, know each other's expectations and train together.



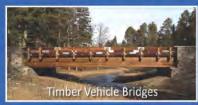


TOP: Be sure that RIT training is giving students a total package that includes making entry through different areas, searching for downed firefighters and removing them. (Mishella / Shutterstock.com)

ABOVE: Performing size ups is not an unimportant part of RIT drills, which should keep crews thinking, challenged and on their toes—just as they'll have to be on the fireground. (Suzanne Tucker / Shutterstock.com)

Dave Topczynski has been a member of the fire service since 2004. He has served in both career and volunteer departments on Long Island, N.Y., and in Virginia. He is a state fire instructor with the Virginia Department of Fire Programs and is a contract instructor. He is a member of the Honor Guard and Live Burn Training team and holds a degree in fire science. He has taught at conferences around the country.





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Patriot Day message: Remember and reach out

*** ***

By JULIE YOUNG | The Municipal

INCE 2001, 9/11 IS A DATE SYNonymous with tragic attacks that claimed the lives of nearly 3,000 men, women and children in New York; Washington, D.C.; and Pennsylvania. However, in the years that have followed, Sept. 11 has come to stand for so much more. Through the institution of Patriot Day and the National Day of Service and Remembrance, Americans are called to remember the lives that were lost and to live up to the example of those who gave selflessly of themselves during the nation's most critical moment.

For some organizations, Patriot Day is not the day to make a difference in the lives of others, but simply another day to continue the work they perform all yearlong. They are the ones who are constantly reaching out to assist their communities and to build a better world. Without their donations of time, talent and treasure, budget strapped municipalities may not be able to make ends meet, improve area amenities, beautify public spaces or provide help for those in need. They are the heroes who make Patriot Day every day.



The play's the thing

When Superstorm Sandy slammed into Island Park, N.Y., in October 2012, the south shore village saw more than its fair share of devastation and destruction. Homes were flooded. Possessions lost and relief supplies were hard to come by. Municipal funds were also scarce after the storm, and one of the projects put on the back burner was the replacement of a children's playground at Francis X Hegarty Elementary School. The original structure flooded and was structurally compromised during the storm, and there was no money for a new one.

Thanks to a partnership between East Meadow Barnum Elementary School and Kiwanis International, this September kids will once again have a place to play.

"Sandy was really tough on all of us," said New York District Kiwanis International Foundation Chair David Rothman. "We were the kind of people who would ordinarily be out volunteering to help others rather than accepting assistance ourselves. East Meadows adopted the Hegarty School and raised \$18,500 through fundraisers, but then Kiwanis came through with a \$25,000 grant and made Hegarty part of its 100th Anniversary Tour."

A groundbreaking ceremony for the new playground was held April 25 with more than 100 people present.

Rothman said its opportunities like this that unite people from all walks of life.

"So often we take things for granted, do our own thing and assume nothing bad can happen. and we all have the ability to reach out and help one another get back on our feet."

NEVER FORGET

Beyond housing

The Normandy 24:1 Club is part of Kiwanis and its partner, Beyond Housing, a community development initiative designed to solve problems in a comprehensive but focused way. The club works to combat the significant challenges facing communities within Missouri's Normandy School District, now known as the Normandy Schools Collaborative.

"There are 24 small municipalities in that one area and they all share one vision, which is to create strong communities, engaged families and successful children," said Barbara Thompson, a club counselor with Normandy 24:1 who sits on the Kiwanis International Board of Trustees.

"The area has gone through some rough times in recent years because the school district lost its accreditation and is being taken over by the state. Students have transferred to other districts, which placed a hardship on the Normandy School District because it must pay the transportation for the students who have transferred."

To help alleviate the struggles facing those schools and their students, the club



BOTTOM LEFT: The Kiwanis Normandy 24:1 Club sponsors a number of events throughout the year to help kids in the 24 municipalities that comprise the Normandy School District in Missouri. This fishing derby is just one of the ways the club supports kids; it has also held school supply drives, literacy campaigns and more. (photo provided)

BOTTOM CENTER: In the wake of 9/11, Patriot Day continues to remind Americans of the price at which freedom must sometimes be purchased. In the New York metropolitan region and beyond, community leaders donate their time and effort engage in projects that keep alive the spirit of unity and compassion that arose from that day's tragedies. (Photo by Deb Patterson)

BELOW: A statue of Stephen Siller, a NYFD firefighter who died in the towers. A foundation is named for him. (Photo by Deb Patterson)

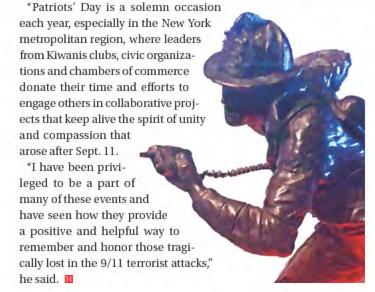
"We all have the ability to reach out and help one another get back on our feet."

has organized back-to-school supply drives, sponsored tutoring and literacy programs and even helped fund a chorus trip to Carnegie Hall.

"The Normandy 24:1 Club collaborates with other community organizations such as Beyond Housing for the good of the school district and all the communities that it serves," said Andrea Flynn, the club's president. "We seek to help out the community in whatever ways we can, but as part of Kiwanis International our aim is always to serve children and to improve the world one child and one community at a time."

Inspired service

Hempstead, N.Y., Senior Councilman Anthony Santino said service and civic organizations play a substantial role in helping make communities a great place for neighbors to live, work and raise a family.





Defeat of Jesse James Days

Northfield, Minn.

In the short span of seven minutes a century and a half ago, the small town of Northfield, Minn., created some hometown heroes, foiled a bank robbery, precipitated the downfall of a notorious outlaw gang and provided historical fodder for an annual celebration that draws several times its current population in visitors.

Welcome to The Defeat of Jesse James Days, held the first weekend after Labor Day. This year's five-day event will take place Sept. 9-13.

The festival is a commemorative mainstay for Northfield since 1948. It revolves around several reenactments of that historic event, when the townspeople drew arms, thwarted the bank raid and drove the gang out of town, leaving two robbers dead and critically wounding two others.

Included in the festivities are a carnival, classic car show, tractor pulls, professional rodeo, parades, hog roast and vintage baseball match.

"We celebrate the townspeople, not the outlaws," said T. J. Heinricy, Northfield's streets and parks supervisor.





Every year the organizing committee presents the Joseph Lee Haywood Award to an outstanding citizen for his or her volunteer efforts or other contributions to the city of 20,000, which has ever since sported the slogan "Jesse James Slipped Here." The award is named for the bank cashier who refused to open the safe and lost his life in the process.

The Defeat of Jesse James Days is the largest all-volunteer festival in Minnesota and ranks third in size in the state after two Twin Cities annual events. Up to 150,000 visitors attend.

An army of volunteers works hand in hand with the municipality within a system designed to minimize snags. Event organizers are required to fill out a

LEFT: Each year in Northfield, Minn., actors re-create a foiled bank robbery attempted by the Jesse James gang in the city in September 1876. The 30-minute reenactments are staged eight times during the five-day festival at the location of the original bank. Spectators may stand behind barricades or sit in bleachers to watch the action. (Photo courtesy Defeat of Jesse James Days Committee/Bridgette Hallcock, photographer)

LOWER LEFT: The entertainment center is one of the signal venues of the Defeat of Jesse James Days festival. Hundreds of revelers crowd into its confines for each of the six concerts held during the five-day run. (Photo courtesy Defeat of Jesse James Days Committee/Bridgette Hallcock, photographer)



comprehensive application that is reviewed by the police, fire, public works, street and parks departments and the city clerk. Any requests to sell alcohol get an additional looksee by the city council.

The procedure "puts in our mind what to focus on in advance," said Heinricy, who serves a dual role by also chairing the festival committee. "It brings it to the eye of the council."

Departments review their respective duties, assess their costs and submit numbers to the council, which decides whether and how much budget money to appropriate.

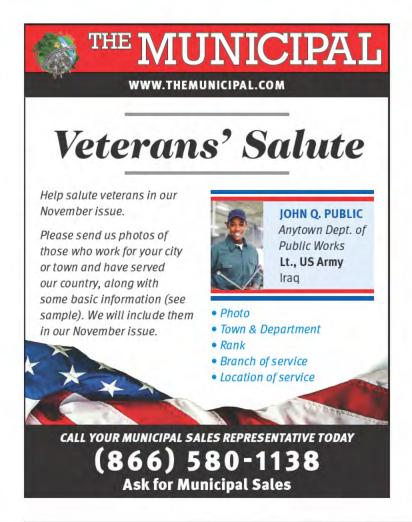
Sometimes fees are imposed on festival organizers, and sometimes nonspecialized work is performed by volunteers to save municipal expenses.

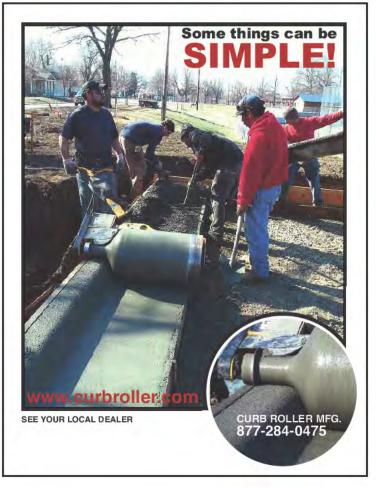
"Overtime is our biggest cost," said Heinricy. "But we budget for that annually." Street closings are posted in advance on the city's website.

The festival ends Sunday with a chaos of trash and refuse, according to Heinricy. That's when his department and some volunteers go to work. Starting around midnight, they remove barricades and scour the downtown area. "By Monday morning,

scour the downtown area.

"By Monday morning,
people could ask, 'Was
there something that went
on here this weekend?"





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Wooden Boat Show Georgetown, S.C.

Many municipalities are blessed with both a rich history and a beautiful geographic setting. Some, like Georgetown, S.C., a harbor town on Winyah Bay, work hard to make the most of that propitious combination.









The town of 9,099 will hold its 26th annual Wooden Boat Show Oct. 17–18, drawing a comparatively sizable throng of visitors from "a multi-state region," according to Paul Gardner, the city's police chief since 2007.

The festival was expanded to two days last year. It features a boat-building contest and race, yacht club and children's regattas, exhibits, live music, museum tours, knot tying demonstrations and other nautically related activities.

"This is the premier special event of the city, which contributes a lot to business," he said, commending the festival as "extremely well organized by a committed committee."

About 15,000 to 20,000 revelers attended last year's event. At least as many are expected this year.

Part of the festival's growth is attributable to the city's steadfast, albeit behind-the-scenes involvement. Gardner articulated the rationale behind the successful municipal-nonprofit collaboration.

"We asked what the city could do and offer to make it easier and leave a better feeling for everyone who attended," he said. "We thought about providing sanitation and other services to make the festival easier to throw, and so the committee could focus on growth." Georgetown's standing policy is events must financially stand on their own. "But there are certain events like the Martin Luther King and Christmas parades and the boat show that the city council endorses and provides in-kind services," said Gardner.

The biggest challenge is crowd control. But with the well-behaved multitudes who customarily attend the festival, his department doesn't mind the work.

"From a law enforcement standpoint, it's just a great couple of days to meet and greet people. We're just there for emergency responses."

The Wooden Boat Show was started by a group of business people motivated to improve business in downtown Georgetown. The event's fiscal success spawned the Harbor Historical Association and the South Carolina Maritime Museum.

Sally Swineford, volunteer for the event since its earliest days, chronicled the event's recognition.

"Last year we won the Charles A. Bundy Award presented by the state's department of parks, recreation and tourism, and for the last three years we were voted one of the Top 20 October events by the Southeast Tourism Society." The society's deliberation area comprised 12 states. LEFT: Taking advantage of the area's natural beauty, much of the Georgetown Wooden Boat Show takes place near the confluence of Winyah Bay and the Samplt River. (Photo courtesy of Georgetown Wooden Boat Show)

CENTER: The Wooden Boat Challenge, dubbed "The Superbowl of Boatbuilding," involves teams of two working against a four-hour time limit to build a seaworthy vessel under the watchful eyes of hundreds of spectators. Teams are judged on speed, quality of workmanship and their finishing position in the ensuing rowing race. (Photo courtesy of Georgetown Wooden Boat Show)

RIGHT: Contestants race their just-built wooden boats along the Sampit River, though not all of the vessels stay afloat. Cash prizes are awarded to the top three finishers. (Photo courtesy of Georgetown Wooden Boat Show)





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To list your upcoming conference or seminar in The Municipal at no charge call (800) 733-4111, ext. 2392, or email the information to **imagallanes@the-papers.com**.

SEPTEMBER

Sept. 15–17 National Recreation & Parks Association Annual Conference

Mandalay Bay, Las Vegas, Nev. www.nrpa.org/Conference2015/About

Sept. 15–17 North American NGV Conference & Expo

Colorado Convention Center, Denver, Colo. www.ngvglobal.org/events

Sept. 15–19 EMS World Expo & World Trauma Symposium

Las Vegas Convention Center, Las Vegas, Nev. emsworldexpo.com

Sept. 16–18 Michigan Municipal League 2015 Convention

Downtown Traverse City, Mich. www.mml.org/home.html

Sept. 17–19 Illinois Municipal League 102nd Conference

Hilton Chicago Hotel, Chicago, Ill. conference.iml.org

Sept. 20–23 Missouri Municipal League Annual Conference

Sheraton Kansas City Hotel at Crown Center, Kansas City, Mo. www.mocities.com

Sept. 21–25 Fire Department Safety Officers Association Annual Safety Forum

The B Hotel, Fort Lauderdale, Fla. www.fdsoa.org

Sept. 21–25 Emergency & Municipal Apparatus Maintenance Symposium Ohio Fire Academy, Reynoldsburg,

Ohio

Ohio

www.oaevt.org

Sept. 23-24 Midwest Green Fleets Forum & Expo

Greater Columbus Convention Center, Columbus, Ohio www.cleanfuelsohio.org/midwestgreen-fleets-forum-expo

Sept. 23–25 lowa League of Cities Annual Conference

Cedar Rapids Convention Complex, Cedar Rapids, Iowa www.lowaleague.org

Sept. 26-30 Water Environment Federation Annual Technical Exhibition & Conference

McCormick Place, Chicago, Ill. www.weftec.org

Sept. 27–30 ICMA Annual Conference

Washington State Convention Center, Seattle, Wash. Icma.org/en/Icma/events/conference

Sept. 27–29 American Road & Transportation Builders Association National Convention

Hilton Philadelphia at Penn's Landing, Philadelphia, Pa. www.artba.org/news/training-events

Sept. 28–30 FIERO Fire Station Symposium

Sheraton Ridge Raleigh Hotel, Raleigh, N.C. www.fierofirestation.com

Sept. 29–Oct. 1 2015 Indiana Association of Cities & Towns Annual Conference & Exhibition

French Lick Resort, French Lick, Ind. www.cltiesandtowns.ora

Sept. 29-Oct. 1 International Construction & Utility Equipment Exposition

Kentucky Exposition Center, Louisville, Ky. www.icuee.com

Sept. 29–Oct. 2 Kentucky League of Cities Conference & Expo

Owensboro Convention Center, Owensboro, Ky. www.klc.org

OCTOBER

Oct. 4–6 Virginia Municipal League 110th Annual Conference

Richmond Marriott, Richmond, Va. www.vml.org/education/ conferences/2015-annualconference-richmond

Oct. 4-7 American Public Transportation Association Annual Meeting

Hilton San Francisco Union Square, San Francisco, Calif. www.apta.com/mc/annual

OCTOBER

Oct. 6-7 Sustainable Cities Network Growing Sustainable Communities Conference

Grand River Center, Dubuque, Iowa www.gscdubuque.com

Oct. 9-10 lowa Fire Service Instructors Conference

Scheman Building at Iowa State Center, Ames, Iowa www.lasfsl.org

Oct. 11–13 North Carolina League of Municipalities Annual Conference

Benton Convention Center, Winston-Salem, N.C.

www.nclm.org

Oct. 11–14 National Procurement Institute 47th Annual Conference & Products Exposition & 20th Annual Achievement of Excellence in Procurement Awards Presentations

Tuscany Suites, Las Vegas, Nev. www.npiconnection.org

Oct. 12-14 Sweeper Summit

Pointe Hilton Tapatio Cliffs Resort, Phoenix, Ariz.

www.sweepersummit.com

Oct. 15–18 International Association of Emergency Medical Services Chiefs 2015 Leadership Summit

The Renaissance Dupont Circle Hotel, Washington, D.C. *laemsc.org*

Oct. 20–23 ISSA/Interclean North America

Las Vegas Convention Center, Las Vegas, Nev.

www.issa.com/trade-shows

Oct. 20-23 Association of Metropolitan Planning Organizations Annual Conference

Westin Las Vegas, Las Vegas, Nev. www.ampo.org

Oct. 21–23 Ohio Municipal League 64th Annual Conference

Renaissance Hotel, Columbus, Ohio www.omlohio.org

Oct. 21-23 GIE+ Expo

Kentucky Expo Center, Louisville, Ky. *gle-expo.com/gleexpo*

Oct. 24–27 International Association of Chiefs of Police

2015 Conference

McCormick Place West, Chicago, Ill. www.thelacpconference.org

Oct. 26-29 Campus Fire Forum

Sheraton at the Falls, Niagara Falls, N.Y.

www.campusfiresafety.org

Oct. 28–30 League of Wisconsin Municipalities 117th Annual Conference

Hyatt Regency, Milwaukee, Wis. www.lwm-Info.org

Oct. 29-Nov. 1 Association of Fire Districts of the State of New York 44th Annual Mid-year "Fall" Workshop

Honors Haven, Ellenville, N.Y. https://firedistnys.com/ cms/?q=conference/fall

NOVEMBER

Nov. 2-4 2015 WaterJet Technology Association-Industrial & Municipal Cleaning Association Conference & Expo

Ernest N. Morial Convention Center, New Orleans, La.

www.wjta.org/wjta

Nov. 2–6 Florida Government Finance Officers Association School of Government Finance

PGA National, Palm Beach, Fla. www.floridaleagueofcities.com

Nov. 3–6 Specialty Equipment Managers Association Annual Conference

Las Vegas Convention Center, Las Vegas, Nev.

www.semashow.com

Nov. 3–6 Fire Findings Investigation of Gas & Electric Appliance Fires

Fire Findings laboratory testing facility, Benton Harbor, Mich. www.firefindings.com/seminars/Info/qas-electric

Nov. 4–7 National League of Cities Congress of Cities & Exposition

Music City Center, Nashville, Tenn. www.nlccongressofcities.org

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Product Snapshots

Mankato, Minn.



Settled 1852

Pop: 40,641 (2013)

Government type: City manager, mayor and city council www.mankatomn.gov

As municipal flags go, Mankato's is just a youngster: It was chosen in 1991 from among dozens of entries in a contest held in the heart of Blue Earth country just for that purpose.

The flag's design includes a white star, indicating that Mankato is a Minnesota Star City—one that has successfully reversed a previously distressed economy. The star is imposed at the convergence of two rivers and over the colors of green and blue, representing the central role that agriculture and local water resources have played then and now in the city's economy. More soybeans are grown in the Mankato area than in any other area in North America.

The city carried this affection for its natural resources to its logo, which is also drawn in environmental colors.

The image of the steamboat is a nod to the vessel's central role in travel in that region during the settlement's early years. One in particular, the Henrietta, had special significance because it was the last excursion paddlewheeler to frequent the river town.

Originally the flag didn't include the city's name. It was added a short while later and now sits above the city's charter year.

Mankato's flag flies proudly over city offices, council chambers, the public safety office and private residences. The city encourages identification with it by providing a link to the design and an explanation of its symbolism on its website homepage, www.mankatomn.gov. M

Information provided by the city of Mankato.



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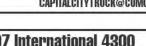
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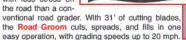


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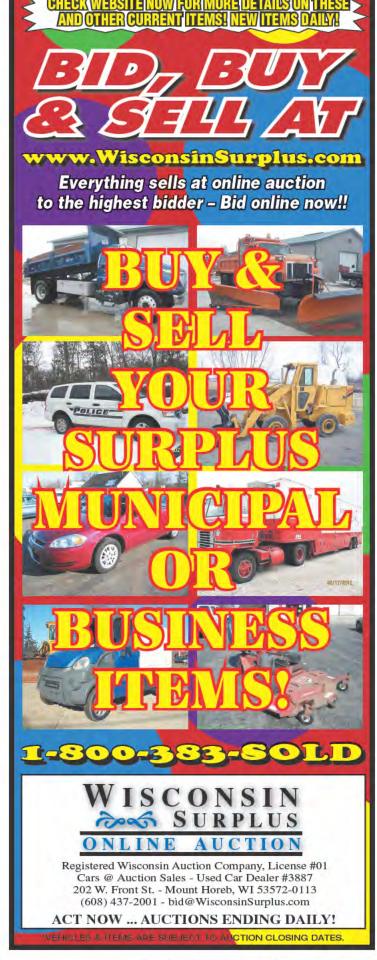


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NTEA announces dates for North America's largest work truck event

Farmington Hills, Mich. - The Association for the Work Truck Industry will host The Work Truck Show 2016 and The Work Truck Show 2017 in Indianapolis, Ind. Vocational truck fleet operators of all sizes, manufacturers, truck dealers and equipment distributors can attend North America's largest work truck event during the following dates:

• The Work Truck Show 2016

March 2-4, Indiana Convention Center; educational programming, including the Green Truck Summit, begins March 1

The Work Truck Show 2017

March 15-17, Indiana Convention Center; educational programming, including the Green Truck Summit, begins March 14

The Work Truck Show features the newest vocational trucks, vans, vehicle components and equipment on a trade show floor covering more than 500,000 square feet. The event includes a robust educational conference with more than 60 sessions designed to help attendees improve their operations.

Registration for the 2016 show opens in October. For additional information, visit worktruckshow.com.

NTEA report explores advanced vehicle technologies

Farmington Hills, Mich. - NTEA, in conjunction with its Green Truck Association affiliate division, recently released the "2015 Work Truck Electrification and Idle Management Study," showcasing directional industry trends on commercial vehicle efficiency, system electrification and idle reduction. The report highlights recent productivity developments, as well as expectations for future industry shifts.

This 20-page study covers: use of engine-off electrification techniques, application of auxiliary battery pack systems, primary power generation systems in operation, key voltage considerations, business factors driving idle management efforts, strategies to reduce engine idling and optimal payback periods.

The study is free to NTEA members and offered in print or downloadable PDF. It is available upon request to nonmembers for \$199. To order a copy, visit Shop NTEA on ntea.com or call (800) 441-6832.

Seven public works professionals earn **Certified Stormwater Manager Credential**

Kansas City, Mo. - The American Public Works Association announced in July that seven public works professionals from North America recently earned their credential as Certified Stormwater Managers. The APWA CSM certification is intended for water experts in both the public and private sectors who coordinate and implement stormwater management programs for city, county, state, provincial, and federal agencies. These professionals assist in administering drainage, flood control and water quality programs.

The seven new APWA Certified Stormwater Managers are: Bryan Aragon, CFM, CSM, PE, Los Alamos County, Los Alamos, N.M.; Juliana Archuleta, CSM, city of Brighton, Denver, Colo.; James Barse, CSM, city of Alameda, Alameda, Calif.; Michael Hunt, CSM, Metro Water Services, Nashville, Tenn.; Amy Murray, CSM, city of Goodlettsville, Goodlettsville, Tenn.; Sheila Thomas-Ambat, CSM, city of Raleigh, Chapel Hill, N.C.; and David West, CFM, PE, CSM Mohave County Flood Control District, Kingman, Ariz.

For information about APWA's Certified Stormwater Manager program, visit www.apwa.net/certification.



Greater Cincinnati Police Historical Museum's move complete

The Greater Cincinnati Police Historical Museum, for years a guardian of law enforcement history, equipment and uniforms, completed a move to more comfortable surroundings this past winter. The museum's new address is 308 Reading Road, 2nd Floor, Cincinnati.

A ribbon-cutting ceremony took place at the new location. Doing the honors was Forest Park Police Chief Phil Canon. Attendees included Hamilton County Sheriff's Office Chief Deputy Mark Schoonover; sales chairperson and Cincinnati police officer Charles Klug, ret.; HCSO Sheriff Jim Neil; Cincinnati officer Tom Otten, ret.; Cheviot officer Ken McDowell, ret.; Boone County Sheriff Ken Jansen; and Cincinnati Police Chief Ieff Blackwell.

One of the missions of the Greater Cincinnati Police Historical Society and museum is to foster understanding and support for law enforcement. There's never been a more opportune time for this than now, when police officers around the country are under intense scrutiny for doing their jobs.

For more information about the society or the museum, or to register to receive a periodical newsletter, visit www.gcphs.com or call (513) 300-3664.

APWA rebrands annual conference as PWX

Kansas City, Mo. - The American Public Works Association announced recently that major changes are in store for the annual conference and equipment show, which will be known as PWX.

"You can expect real changes with PWX that will take the APWA annual conference into the future workplace," said APWA Meetings Director Dana Priddy. "Our vision is to have an annual event that engages all generations by incorporating new learning methods that encourage more collaborations, and use technology to allow more people to access the conference in a variety of ways."

"We are already reviewing the latest meeting and event strategies, technologies and formats, and incorporating new ideas for learning into PWX 2016 in Minneapolis," said Priddy. "We want attendees to walk away excited about the experience and ready to put what they learned into practice when they get home."

For more information about APWA, visit the website at www.apwa.net.

News releases regarding personnel changes, other non-product-related company changes, association news and awards are printed as space allows. Priority will be given to advertisers and affiliates. Releases not printed in the magazine can be found online at www.themunicipal.com. Call (800) 733-4111, ext. 2392, or email jmagallanes@the-papers.com.



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MATT WITTUM | Guest columnist Public Works Supervisor, Village of Spring Grove, Ill.

imagine this scenario: All of your equipment is tested and ready to go; deicing products have been ordered and delivered; and your staff has been through its pre-season meetings and dry runs of its routes. You're just where you need to be. Then it happens: You receive communication from your local and state EPA representatives, who would like to set up a meeting to discuss your past salt usage, review current operations and practices and possibly identify area(s) in your community where they would like to monitor chloride levels in the water and groundwater systems. Then they would like you to present a plan to them on how you'll lower your salt usage in winter maintenance operations. To put a cherry on top, they may even tell you what you are going to be reduced to.

Are you thinking "This can't happen to us," or "This won't ever happen in our area"? Put those thoughts on hold, because it is happening. Although that exact scenario may not be playing out, some agencies are already facing the challenge of having to reduce chloride impacts during winter maintenance operations, from the East Coast through the Midwest. Think it still isn't possible? Recently, I have been made aware of two instances where farmers have sued the respective DOT in their areas for salt damage to their crops and loss of property value. One is in Canada, one is in Michigan.

Surprising? Maybe not... until I tell you the courts in Canada (Ontario, specifically) sided with the farmer, who

was awarded a \$100,000 settlement. The DOT in this case was considering an appeal, but I do not know if one was ever filed. In the Michigan case, the courts sided with the DOT.

The topic has become popular enough that an operator certification class was developed in Minnesota and has been branching out since, including a supervisor class through the APWA. The class has made its way to McHenry County, courtesy of former Main-

tenance Superintendent Mark DeVries. One of the basic thoughts behind the class was: In our respective agencies you have to be certified to spray pesticides and be a flagger, but not for applying a chemical that can cause some serious environmental damage. The phrase used at the beginning of the class says it best: We need to manage ourselves before someone manages us.

McHenry County sits on heavy sand/gravel deposits left behind from glacier movements, making groundwater contamination a very real issue. Prompted by this information, monitoring wells throughout the county verified what was feared: Chloride levels briefly spiked to unsafe consumption levels after a winter event in certain areas. To further hit home, the municipality in which I work, the Village of Spring Grove, sits in McHenry County, and we have been notified that total maximum daily limits for chloride levels in our groundwater system may be monitored very soon.

The operator certification class in McHenry County, which I have the pleasure of co-instructing, features our county groundwater resource manager reviewing groundwater protection and winter maintenance and how they go hand in hand. He will also tell you that one tablespoon of salt will contaminate 5 gallons of fresh water. Forever. Equate that to your average 5-yard plow truck and what that is capable of contaminating. Multiply that out and you get the picture real quick.

This day-long course also offers a handful of best management practices that agencies are encouraged to embrace and adopt. First and foremost—and free—is calibration. Do you and your operators know what they are putting down? Is setting two on the salter the right one

for the current situation, or are you overapplying? Is setting two what we have always used? Overapplying adds up to wasted time, money and, in the end, increased environmental damage.

The basics of weather are taught, reiterating that air temperature has nothing to do with snow and ice operations. It's all about pavement temperature. That's teamed up with application rate recommendations, route cycle times and charts distributed as examples.

Class attendants are told that the majority of the time, 300 pounds per mile is enough; and that dry salt should not be applied any time pavement temperatures go below 15 Fahrenheit. How does that compare with what you are spreading? It's also mentioned repeatedly that it can take

up to four times the amount of material to break a pavement/ice bond than to prevent it. That stat alone should be a jump-start in the proactive department. Another point driven home is that salt should never be used to "burn off" snow accumulations from pavement surfaces. Plowing removes the accumulation; the salt put down during and after is just to prevent the bond from re-forming.

We then take a look at policies. What is your agency trying to achieve per your policy? Is it realistic? If you are not using liquids and live in a region where pavement temperatures are routinely around 0, for example, does it make sense to have a bare pavement policy? Next, material storage is discussed for both dry materials and liquids,



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as well as the good housekeeping practices associated with each. The use of abrasives and the true costs of using them are discussed both monetarily and environmentally.

Vehicle and equipment cleaning is touched on, and in the end the class splits between a hands-on calibration demonstration and exercise that presents different scenarios for application rates. Finally, an exam is passed out to all participants. Upon getting an 80 percent or better, they receive their operator certification sticker.

To further raise awareness on the issue, the Salt Institute created the Safe and Sustainable Snowfighting Award. The award heavily focuses on environmental impacts of an agencies operations. I would encourage all readers to check it out and apply.

So you may be asking, was I concerned when I was notified about potential monitoring in our area? The answer was yes, to a degree. However, we have taken steps over the last 10 years to reduce our salt usage without compromising our level of service. Has it worked? I would say yes. Did it all happen overnight? Most certainly not. Budgets did not allow having everything at once, so programs and ideas were prioritized and put in place as we were able.

Our efforts have gained us two Excellence in Snow and Ice Control awards, through the APWA, and a Safe and Sustainable Snowfighting Award in recent years. How did we get here? In a nutshell, we added liquids to our winter maintenance operations. We started at first with a very simple brine production system and have grown to an in-house production and blending system. We pre-wet and anti-ice, all of our front line equipment has pavement temperature sensors and the majority of the trucks have computer-controlled dispensing systems. All of our progress and reductions have been documented, and all of our staff has been certified. I'm confident that I can show we have made a very strong effort to do our part.

To the best of their abilities, all agencies need to start taking a proactive approach to the issue of environmental concerns, damage related to our winter maintenance activities and how much of an impact those activities can have.

The balancing act used to be budget vs. level of service. Those two still must balance, but environmental impacts are starting to become a heavy weight on the balance beam. Look at your current practices. What can you improve on? Are you ready using liquids? Look to expand if possible. The options for treated materials and liquids, both straight and blends, have grown so fast in recent years that agencies have many options to choose from.

Want to get started, but you're not sure how? Contact someone who has done it. Many will readily share their experiences, both good and bad, with their programs. And in the end, remember to manage yourself before someone manages you.



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Best small towns



In April, Smithsonian.com compiled a list of "The 20 Best Small Towns to Visit in 2015," which it defined as towns where a visit would inevitably turn into a lovely vacation.

This fourth version of the list was compiled by taking geographical information provided by Esri to "sort the nation's small towns (those with a population under 20,000) according to their number of cultural attractions, historical sites, nature opportunities and food-and-drink destinations, then researched to find the places commemorating important anniversaries, openings, renovations, recoveries and other milestones" this year.

The Municipal feels that the list is also a compliment to the planning and development efforts of local officials who have made their towns interesting, attractive and affordable places to live. The 10 highest-ranking towns that sifted out are above.

The rest of the list consists of:

- 11. Edenton, N.C.
- 12. Bayfield, Wis.
- 13. Nashville, Ind.
- 14. Put-in-Bay, Ohio
- 15. Whitefish, Mont.
- 16. Thibodaux, La.
- 17. Custer, S.D.
- 18. Stowe, Vt.
- 19. Homer, Alaska
- 20. Vernal, Utah

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