

# THE MUNICIPAL

The Premier Magazine For America's Municipalities

August 2018

## Waste & Recycling



### INSIDE:

Global Environmental

The Municipal undergoes expansion, pg. 16

Weighing the pros and cons of privatizing waste collections



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# Departments



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# Problem-solving needed to address solid waste



Sarah Wright | Editor

**I** HAVE A DEEP APPRECIATION FOR those who work in the waste industry. During my junior and senior years at Purdue University, I got a small taste of the hard work performed by sanitation workers as a weekend student worker at Windsor Halls, the university's all-women residence hall. The job included clearing each floor's trash cans in all five of the complex's buildings, though the labor was divvied up between me and a fellow worker. We would cart the bags by hand or cart to the elevator — it could have starred in a period flick — before dumping them all in the Windsor Halls' dumpster. From there, it all went to the landfill.

It was hard work, but it was eye opening. Let it never be said college-age women are tidy — they are not! It was incredible to see what they had thrown out during any given week, particularly when some objects could

have been reused, donated or recycled. But they aren't alone, and for that reason, cities are encouraging citizens to reexamine their trash.

Landfills are hitting their capacities and procuring land for new ones is not always easy. For one, people often don't want new landfills in their "backyards." There are other factors, too. In Minnesota, the Twin Ports' Moccasin Mike Landfill will be closing in 10 years but replacing it is an uphill battle against public opinion and the Minnesota Pollution Control Agency, which, according to the Duluth News Tribune, "hasn't authorized a new municipal solid waste landfill in the northeast quadrant of the state since 1993."

But garbage has to go somewhere. To stretch out landfills' life spans, diverting material that could be recycled or reused has increased in importance. In this issue, feature writer Elisa Walker highlights Denton, Texas, landfill, which has been billed as the "first eco-friendly landfill in the world" because of its efforts to transform trash into renewable energy. But Denton hasn't stopped there as it also has material recovery, composting and recycling programs.

In addition to Denton's efforts, feature writer Lauren Caggiano will be sharing how Oak Ridge, Tenn., has been encouraging city

employees to recycle both at work and at home to do its own part in diverting material from landfills.

It is important to start examining waste and recycling operations now, not only because of finite landfill capacities. The U.S. is likely going to find itself in a bind, particularly as China carries forward with its "National Sword" policy, which will ban the import of most plastic waste. The University of Georgia calculated 111 million metric tons of plastic waste would be displaced by 2030 because of this ban. The U.S. alone has been sending nearly 4,000 shipping containers full of plastic recyclables a day to Chinese recycling plants.

Addressing these waste management challenges is no longer a matter for some future date; problem-solving and innovation is needed now to prevent a massive displacement of waste. **M**



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# Ready to invest in a cleaner planet?



By SEBASTIAN MENTELSKI

**Imagine a street sweeper that not only cleans your streets with a high-performance, heavy-duty sweeping system, but also does so with zero emissions. Global Environmental Products' M4 ZE-Series does just that; in fact, it is North America's first hydrogen fuel cell street sweeper and its only by-product is pure H<sub>2</sub>O.**

In addition to producing zero emissions, the Global M4 ZE Series is ultra quiet, extremely efficient and very powerful. Global Street Sweepers are purpose-built chassis that are designed from the ground up to be the ultimate sweeping machines.

The Global M3 front steer, three-wheel sweeper is one of a kind. Safe, quiet and comfortable, the equal-width pickup broom and elevator system eliminates choke points and improves sweeping speeds while offering unparalleled performance.

The M4 Series street sweeper utilizes the same equal-width pickup broom and elevator system, single engine design and short wheelbase. It is the only four-wheel mechanical sweeper that offers a 18-foot and 6-inches turning radius, 67 mph highway speeds and many standard features inherent to its purpose-built design that are not available on competitive street sweepers.

Global Environmental Products has always been dedicated to building affordable, reliable and innovative sweepers. It is now focusing on protecting the planet as well. Global Environmental Products believes that the future of the street cleaning industry is providing equipment that not only cleans local streets, but also reduces our environmental impact and lowers emissions.

#### **Alternative fuel: CNG was next step**

Compressed natural gas, or CNG, is natural gas under pressure that remains clear, odorless and noncorrosive. Although vehicles can use natural gas as either a liquid or a gas, most vehicles use the gaseous form compressed to pressures above 3,100 pounds per square inch. It is produced both worldwide and domestically at a relatively low cost and is cleaner burning than gasoline or diesel fuel. Natural gas vehicles show an average

## **On display**

Global Environmental Products will be displaying its M4 ZE Series street sweeper at the 2018 PWX, Aug. 26-29, in the Kansas City Convention Center. Swing by booth 2,013 to learn how the M4 ZE Series street sweeper can clean your city while exhausting zero emissions.

reduction in ozone-forming emissions of 80 percent compared to gasoline vehicles.

The Global M4 Series is available as a side or rear hopper discharge. The design provides a turning radius of 18 feet and 6 inches. The CNG upgrade doesn't affect the turning radius. The M4 CNG is the most maneuverable sweeper in the market, helping operators get into tight corners and cul-de-sacs.

The 8.9-liter ISL G uses stoichiometric cooled exhaust gas recirculation, or SEGR, combustion, leveraging Cummins' proven EGR technology to create a high-performance natural gas engine. "The best part is that the ISL G does not require active after treatment, such as a diesel particulate filter or selective catalytic reduction," according to Walter Pusic, CEO and president of Global Environmental Products Inc.



**LEFT:** The Global M3 front steer, three-wheel sweeper is safe, quiet and comfortable. Its equal-width pickup broom and elevator system eliminates choke points and improves sweeping speeds while also offering unparalleled performance. (Photo provided)

**RIGHT:** Natural gas vehicles show an average reduction in ozone-forming emissions of 80 percent when compared to gasoline vehicles. The M4 CNG is the most maneuverable sweeper in the market, helping operators get into tight corners and cul-de-sacs. (Photo provided)



Global Environmental Products is proud to offer the CNG option on its Global M3 CNG three-wheel sweeper, Global M4 Series purpose-built street sweepers and Global V6Air “air-recirculating” sweeper with VAST Technology.

Unfortunately, not all municipalities have access to CNG fueling stations; and to push forward with green, innovative technology and partnerships, the Global sweeper lineup now includes Electric Drive Street Sweepers. The M4 Diesel Electric Hybrid sweeper offers the same exceptional visibility, turning radius and low center of gravity, but uses an electric drive motor in lieu of a hydraulic drive system. With the diesel engine driving a generator that charges the batteries, the M4 electric-hybrid street sweeper offers fuel economy of 1.5 gallons per hour. With reduced carbon and NOX emissions of 58 percent and an additional 55 percent fuel savings over standard diesel-powered sweepers, the electric hybrid sweepers are a way of the future.

### Better way

Thomas Edison once said, “There is a way to do it better — and we must find it.”

Global Environmental Products has done just that with its electric hybrid street sweeper, which is the first hydrogen fuel electric street sweeper in North America. A hydrogen fuel cell system produces electricity from compressed hydrogen gas in a thermo-chemical process, then uses the electricity to power an electric system and motors that drive the vehicle. The fuel cell and hydrogen tank take the place of a battery-electric vehicle’s bulky and heavy battery pack. The diesel engine is no longer required. The by-product of electro-chemical reaction is energy and H<sub>2</sub>O. The water produced through this chemical reaction is diverted to the sweeper’s water tank system, providing an additional 43 gallons of water per shift to use for dust suppression.



The M4 CNG offers easy refilling. (Photo provided)

The Global M4 electric-hybrid sweeper currently being used in NYC delivers a 55 percent fuel savings and a 58 percent reduction in greenhouse gas emissions. The M4 ZE fuel cell model takes it to the apex of fuel efficiency with zero tailpipe emissions.

Ask yourself one question: Am I ready to embrace the “green initiative” and invest in reliable and innovative equipment that truly makes a difference? **M**

## At a glance

California Department of Transportation utilizes 170-plus street sweepers daily. Each M4 ZE produces 43 gallons of water per shift so that equals 7,310 gallons of water produced by operating street sweepers.

Become a Global Environmental Products’ partner and help save the planet. Learn more at [www.globalsweeper.com](http://www.globalsweeper.com), or call (909) 713-1600 and email [info@globalsweeper.com](mailto:info@globalsweeper.com).

# Largest Things Casey, Ill.

by RAY BALOGH | The Municipal

## Big Things<sup>®</sup> in a Small Town

CASEY, ILLINOIS

**T**HERE ARE — LITERALLY — SOME BIG THINGS IN CASEY, ILL. The mailbox can garage a school bus. The golf tee towers three stories above the clubhouse and a grown man could lie across the tee's head with neither head nor feet dangling over the sides.

The wind chime stands 56 feet tall, the birdcage can accommodate 10 persons and the 32-foot-long pencil could actually write if someone were strong enough to lift it.

Record-breaking creations are sprinkled throughout the town of 2,769 residents, and so many visitors gawk at the attractions the town council had to lower the speed limit on Main Street to 20 mph to avoid vehicle-pedestrian collisions.

Eight of the anomalies have been certified by the Guinness Book of World Records as the largest on the globe: the wind chime, mailbox, golf tee, rocking chair, knitting needles, crochet hook, wooden shoes and pitchfork. The 60-foot pitchfork is the first of its kind in the record books and by Guinness rules had to be at least 10 times larger than the average farm tool.

To qualify for certification the items have to be fully functional.

The 46,200-pound rocking chair actually rocks. The wind chime, with a robust pull of a rope, actually chimes. The door on the mailbox operates by a cable winch, and when a visitor slips a postcard into the receptacle inside the box, the oversized traditional red metal flag rises to alert postal carriers of outgoing mail.

The local post office has devised a special postmark for the mailbox and delivers up to 100 postcards a day.

Add a ninth record, albeit unofficial: The most world record items concentrated in such a small town.

Though not record setters, other larger-than-life structures include an ear of corn, yardstick, wooden coin, cactus, balsa wood plane and a Minion, the lovable character from the movie, "Despicable Me."

The creations are the brainchild of Jim Bolin, who grieved seeing his town's factories shut down and business owners shuttering their stores.

He pondered a way of attracting traffic off nearby Interstate 70, along which Casey is situated halfway between St. Louis and Indianapolis. His wife, Diane, had opened a tea shop in town and named it Whitling Whimsy after Jim's grandmother Whitling.

Bolin was looking for something unique, Grandma had always been a fan of wind chimes and there was plenty of material lying around the grounds of family-owned Bolin Enterprises, an oil and natural gas pipeline maintenance company. So...

*Casey, Ill., has registered the phrase, "Big Things in a Small Town." (Photo provided)*



*The wind chime was the first of the "big things" to be constructed in Casey, Ill. Jim Bolin crafted the record-breaking item to draw tourists from nearby Interstate 70. (Photo provided)*

He did his research and set about using the company's materials, tools and equipment to make the world's largest wind chime across from the entrance of the tea shop.





Up to 50 people can climb the stairs and look out over the town from the world's largest mailbox. (Photo provided)



Jeanette Huisinga, owner of The Yarn Studio, stands with the world's largest knitting needles and the stitches she muscled together at the local elementary school to qualify for the Guinness World Records. (Photo provided)



The world's largest rocking chair towers above the surrounding buildings in downtown Casey, Ill. (Photo provided)



Workers from Bolin Enterprises are dwarfed by the 60-foot pitchfork as they install it on a farm property just outside of town. (Photo provided)



Jim Bolin, mastermind behind the "Big Things in a Small Town," poses with the world's largest golf tee. (Photo provided)

The creation was unveiled in 2011 and immediately drew attention. Bolin constructed more items to promote tourism and help his beloved town.

"A lot of people came off the interstate to see the wind chime and shop," said Bolin. "After we'd seen what it was doing for the community, we started thinking about other things we could build to help our town."

Driven by his Christian faith, Bolin includes Scripture references on each creation appropriate to the item itself.

"It's not a self thing or a company thing," said the self-effacing Bolin. "We give our glory back to our God. We have faith in Him that this will help our small town."

The pencil bears the inscription: "Let love and faithfulness never leave you; bind them around your neck, write them on the tablet of your heart," taken from Proverbs 3:3.

The knitting needles cite Psalm 139:13: "For you created my inmost being; you knit me together in my mother's womb."

In 2013 Bolin gave the 14-foot knitting needles and crochet hook to Diane's cousin, Jeanette Huisinga, owner of the once struggling Yarn Studio. The resultant foot traffic of visitors curious about the world's largest knitting needles has allowed her to expand her shop into a second room.

"If it were not for the gift of these knitting needles, I don't think I probably could have stayed," she said.

The town of Casey has donated money toward the installation and maintenance of the attractions and promotes them on its website, [www.cityofcaseyil.org](http://www.cityofcaseyil.org).

Though logistically challenged by the influx of tourism, the town is understandably thrilled about the resurgence of downtown activity.

"These big things have put Casey back on people's radar," said City Clerk Jeremy Mumford. "Before Jim Bolin and his company put up these big things, there was no tourism in Casey," he said, citing with gratification five out-of-state cars parked on the street outside his office window.

Bolin's daughter runs a website, [www.bigthingsmalltown.com](http://www.bigthingsmalltown.com), with information on each item and a map of their locations. **M**

For more information, call (217) 609-0017 or visit [www.visitcaseyil-illinois.com](http://www.visitcaseyil-illinois.com).



## Mount Pleasant, Mich.

The four emblems comprising the city seal of Mount Pleasant, Mich., population 26,313, represent the four pillars of its defining heritage.

In the upper left quadrant, the facial profile of a Native American with headdress represents the Chippewa bands from Swan Creek and the Saginaw and Black rivers who were relocated to the area pursuant to the Treaty of 1855.

The relocation occurred one year after the federal Graduation Act of 1854 permitted European-American settlers to purchase government land at a discount.

The presence of the tribal bands enticed an influx of non-native settlers who reckoned they could prosper from their relations with the Chippewa.

The upper right corner sports several growing plants blithely waving in the breeze, depicting the importance of agriculture in the town's growth. A diversification of crops still plays prominently in the local economy.

The role of education in the town's history is shown by the tassel-topped mortarboard in the lower left quarter of the seal.

Central Michigan Business School, a community-funded college, opened in 1892. The following year the federal government established an Indian boarding school, where Indian children were encouraged to abandon their native culture and adopt the ways of European-Americans.

The school operated until 1933. The deleterious influences of such schools have only recently been recognized. The original school building in Mount Pleasant was abandoned and subsequently purchased by the Saginaw Chippewa Tribal Nation.

The final image portrays an oil derrick and pumpjack, signifying a major oil strike in 1928 on a family farm near town. The oil well produced hundreds of barrels a day and made Mount Pleasant the state's oil capital at the time.

The town is surrounded by natural enhancements, including lakes, rivers, forests and fertile farmland. Its residents consider Mount Pleasant one of Michigan's most walkable communities.

Mount Pleasant was named by its founder, David Ward, a timber cruiser, surveyor, physician and teacher, who purchased land from the United States government in 1855 and platted the town along the Chippewa River.

He sold the plat to investors from New York, who promoted the location to attract settlers to form the community. Mount Pleasant was incorporated as a village in 1889.

For more information, visit [www.mt-pleasant.org](http://www.mt-pleasant.org).



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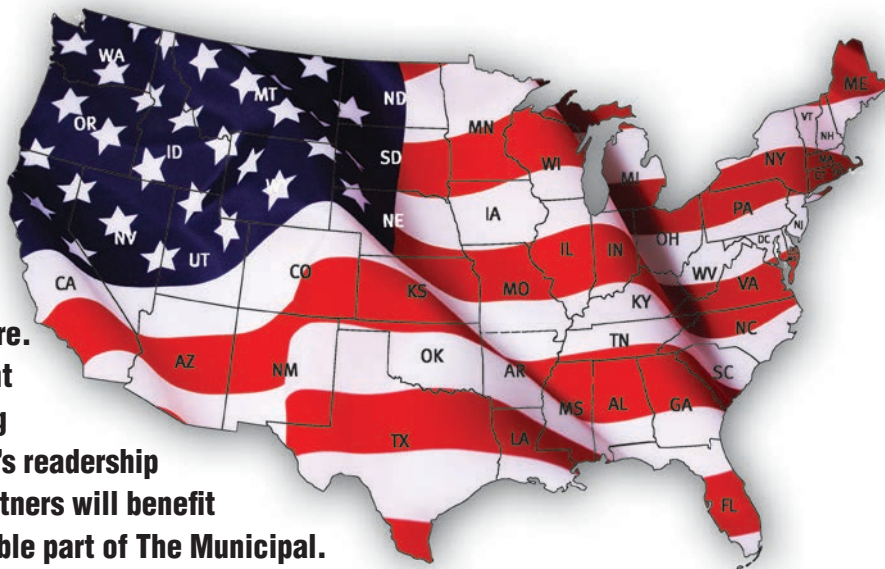
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**The Municipal, the premier magazine for America's municipalities, is excited to announce that we are strengthening our delivery network more than ever before. We are expanding our circulation footprint to all 48 contiguous states and increasing our distribution, enhancing our magazine's readership and market presence. Our advertising partners will benefit more than ever before from being a valuable part of The Municipal.**



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# Focus on: Waste & Recycling

**2**


The approximate number of months Parrish, Ala., had to deal with the smell of human waste after the “poop train,” which was carrying about 250 containers of biosolids from New York to an Alabama landfill, was parked in a nearby rail yard.



Source: [www.al.com/news/index.ssf/2018/04/last\\_of\\_the\\_new\\_york\\_sewer\\_slu.html](http://www.al.com/news/index.ssf/2018/04/last_of_the_new_york_sewer_slu.html)

**\$2.9 million**


While looking for ways to close a \$2.9 million budget deficit for the 2019 fiscal year, the city of Bloomington, Ill., considered outsourcing its waste management. Ultimately, it voted down the measure, preferring to keep waste management in house.



Cities share the pros and cons of outsourcing waste management on page 18.

**2.5 to 3 million**

Naples, Fla., saved this many gallons of drinking water by launching an alternative water supply program, which turned gray water into a money-saving resource.



Learn how cities are utilizing gray water in the face of climate changes and to save money on page 20.

**30,000 tons**

The amount of garbage Greenville, N.C., produces each year.



Meet Greenville's sanitation engineer Delbert Bryant in this month's personality profile on page 32.

**4,000**

The number of shipping containers of plastic waste that the U.S. used to ship to China per day. An estimated 111 million metric tons of plastic waste is expected to be displaced by 2030 as a result of China's ban on the import of most plastic waste.



Source: [www.usatoday.com/story/news/nation-now/2018/06/21/china-ban-plastic-waste-recycling/721879002/](http://www.usatoday.com/story/news/nation-now/2018/06/21/china-ban-plastic-waste-recycling/721879002/)

**300**

The number of volunteers who participated in the International Coastal Cleanup, which took place in Deerfield Beach, Fla. It is one of many cleanups that occur all yearlong in Deerfield Beach as part of an overall initiative called Cleaner Greener Deerfield Beach.



Read about Deerfield Beach's many initiatives that ensure it is a great place to live and visit on page 24.



# Talking trash: *The pros and cons of privatizing waste management*

By JULIE YOUNG | The Municipal

**They say that “haste makes waste,” and when it comes to outsourcing a community’s solid waste management department, it is not a decision that should be made lightly. Privatization is a complicated process, and it is not the answer for every municipality.**

According to a 2008 presentation by the Great Lakes Training Institute, there are a number of reasons why communities see privatization as a logical solution to their waste management needs. Outsourcing one’s trash removal can save the government money in terms of personnel and equipment while offering the same level of high-quality services that residents have come to expect. In some cases, it might even be necessary if the government

lacks the expertise or workforce necessary to execute the department properly, and above all, privatization can provide a community with innovative approaches and techniques that the government may not be able to.

While privatization can dissolve any unnecessary monopolies, be more effective and flexible than existing services, slow the growth of government and encourage competition between providers, it can also

lead to significant rate increases, diminished accountability for officials, compromised services due to the provider’s profit motivation and lower morale for municipal workers with an increased fear of layoffs and displacement. It all depends on what a community wants and what is the best for everyone involved.

## **Giving up control**

When the city of Stillwater, Okla., considered privatization in 2012, it prepared a request for proposals for contractors to bid on; however, the city also allowed its existing department to submit a proposal as well in order to see how it would stack up to the competition. While there was hope that the implied



**LEFT:** While privatization works for some cities, many others chose to keep trash pickup in house. Reasons can include everything from having more control over rates to satisfaction with city employees' efforts. Pictured is an energy-efficient garbage truck operated by the Chicago Streets and Sanitation Department. (Steve Hamann/Shutterstock.com)

**RIGHT:** Stillwater, Okla., decided against privatizing its trash service to better address any issue citizens may call about. Pictured is Chris Knight, waste management director and safety manager, meeting with city employees. (Photo provided by the city of Stillwater)



cost savings would justify outsourcing trash removal to a private contractor, ultimately officials decided to keep the city's trash removal in house and under the control of the local government.

Chris Knight, waste management director and safety manager for the city of Stillwater, said when the trash service is internal, the powers that be are able to take care of any issue citizens may call about. When a private company handles the service, they don't have as much control when issues arise.

"Even though the city is not performing the collection — calls for missed services and complaints will still come to the city and not the private hauler," he said. "Also, if a city sells out the trash service, it most likely will never have the money to buy back all of the equipment if officials decide having a private hauler is not working out."

These were the same issues that the city of Bloomington, Ill., faced when it drafted a privatization plan in January. The city council was looking for ways in which to close a \$2.9 million budget deficit for the 2019 fiscal year and thought outsourcing waste management may be the way to go. After exploring its options, the city council voted down the move the following month.

"There were examples of other communities that led us to believe there are times when a vendor will come in and get the contract, but the next time there is a contract to negotiate, the price goes up significantly. Then the municipality does not have a choice because

it has gotten rid of its equipment," said Jim Karch, PE, MPA, director of public works.

While this is not always the case, it can be enough of a liability to convince communities to reconsider their privatization plans. Another factor may be the community response, which can be for or against privatization depending on how much fees may be lowered and whether or not there are union workers who may be affected by it.

### **Organized opposition**

Karch said when the city council considered privatization, there were mixed feelings and strong emotions on both sides of the issue. While some people were keen to save money by contracting to a private company, others loved the service provided by city workers.

"They do an amazing job of customer service, and I think that is ultimately what swayed the decision by the elected officials. We have had workers of ours go viral with the positive interactions that they have had with citizens," he said.

These employees are ones who are represented by the American Federation of State, County and Municipal Employees, which was very vocal in its opposition to the idea of privatization. Its website is full of information about the dangers of privatization and encouraging taxpayers to be aware of what may be at stake when gambling with a contracted entity.

"Private corporations are very good at writing contracts that shift all risk to the taxpayer and keep any rewards for the company,"

claims one article. "Once a public service is outsourced or asset is privatized, taxpayers have little recourse if a contract was drawn up poorly or the drafters failed to anticipate all contingencies."

### **Is privatization ever a good idea?**

Knight said it is very important for communities to do their homework when it comes to privatization. Even when some cities think that their programs are more trouble than they are worth, he can't guarantee that the headache will go away if they choose a private hauler for its service. While a company may promise to take on all of the city employees in order to ensure that they aren't out of a job, there may be fine print in the proposal that says all employees must meet the company's hiring requirements, meaning that some employees might still face the unemployment line.

"The reality is that most privates work bare bones and don't want to take on the cost of your employees," he said.

Outsourcing one's waste management is not a one-size-fits-all discussion. A smaller community without the budget for a waste management team may find that outsourcing is the way to go. Others may choose to use their own team for waste management and contract out recycling services.

"Each (community) is different in terms of its needs and expectations," Karch said. "A community needs to consider cost, service level and customer service expectations when they go into the review process." **M**

# Gray water issues become black and white



*Pictured is Naples' ASR well No. 1 at the wastewater treatment plant. The purple arrows on the pipes indicate that gray water is being transmitted through the line. (Photo provided)*

By DENISE FEDOROW | The Municipal

## Droughts, wildfires and hurricanes—whether you “believe” in global warming or not—these climatic events seem to be increasing in severity, and they are having an effect on freshwater resources.

The term “gray water” brings to mind dingy, scummy water, but it is actually just water we constantly waste when showering, bathing, brushing our teeth, etc., and increasingly cities and towns are looking for ways to reclaim that wasted water and reuse it.

So, the gray water issue is becoming more black and white—those who are or aren't reclaiming water—and is spreading throughout the United States.

This is nothing new for California and other western states where continuous droughts have forced them to conserve water for decades. But extended periods of dry weather have been waking the rest of the country up to the need to be more conservative about this precious resource.

The Drought Management System report for June 2018 showed most of the Southwest and western states are experiencing severe

to extremely dry conditions while southern states were moderate to abnormally dry conditions—conditions that apply to some of the Pacific Northwest and parts of the upper Midwest.

A 2013 Government Accountability Office report showed that 40 out of 50 state water managers expect water shortages in some part of their states under average conditions through 2023. Fifteen of those states predict local shortages; 24 expect regional shortages; eight states reported no expected shortage; two were uncertain; and Montana is expecting statewide shortages.

Then a May 2014 GAO report showed 36 states were using reclaimed water; 19 out of 49 were recycling stormwater; 18 out of 50 were using desalination; and 43 out of 50 reported states have “enforced, required and/or provided incentives for water conservation.”

And in states where flooding is the issue, freshwater resources are at times becoming contaminated by salt water and storm runoff.

### Davis, Calif.

The city of Davis doesn't have a municipal system in place for reclaimed water, but its citizens are involved in doing so on their own.

“In the city of Davis, the wastewater treatment plant is over 4 miles from the city limits, so at this time it has been determined that it is not yet feasible to supply recycled water to current developments,” said Greg Mahoney, chief building officer and assistant director of community development and sustainability.

However, there is a citizen advocacy group in town called Cool Davis and city staff members participate in its events.

“Cool Davis is an active network of residents, community organizations, businesses and community institutions committed to implementing the city of Davis' Action and Adaptation Plan,” Mahoney said.





*Pictured is a branched drain gray water system being installed in a yard in Davis, Calif. It will provide irrigation to the lawn. (Photo provided by EcoAssistant)*



*Pictured is a reviving oyster bed in the Naples Bay in Florida. The city's alternative water supply program had an additional environmental benefit for the bay by keeping the ecological balance in order through the reduction or elimination of freshwater intrusion from the Golden Gate Canal. (Photo provided)*

“The most straight-forward use for gray water is sub-surface irrigation,” Mahoney said. “If recycled or gray water is used for above-ground irrigation, then it must be treated to specific standards. Some systems are designed to provide water for flushing toilets, but these systems have filtration, treatment and additional cross connection prevention measures and inspections are required.”

According to Mahoney, the city is reviewing a proposed ordinance that was provided to city staff by a group led by a certified gray water designer and installer who is active in a local water advocacy group. He said staff is still in the process of reviewing the ordinance, so it hasn't been brought to the public yet for comment.

The city does support its residents' installation of gray water systems. Mahoney said although the city doesn't have a system in its municipal buildings, any of the systems listed on its website could be used in public or office buildings, but he added, “Those types of buildings don't generate as much gray water as residences.”

The biggest benefit for cities and towns to promote and enact reclaimed water systems is the “reduction in potable water use for irrigation.”

He said if cities are considering implementing a program, he'd suggest “identifying sources of recycled and gray water and determine if it makes sense to offset the potable water use with these systems.”

#### **Naples, Fla.**

The city of Naples has had much success with its voluntary alternative water supply program. In parts of the city where the program has been implemented, a high percentage of residents have opted in.

Naples Utilities Director Robert “Bob” Middleton said the city started in 1988 by using reclaimed water to irrigate 10 golf courses. In the mid-2000s, Naples began working on a master plan.

“Rather than delay until resources were critically challenged, Naples took a proactive position, defying the fates and their consultants, and implemented an inventive alternative water supply program as part of their 20-year integrated water resource plan,” Middleton states in a report compiled about the program.

According to this report, Naples' per capita water consumption was among the highest in Florida at 373 gallons per day, 65 percent of which was being used for irrigation. With an anticipated population increase over the next 30 years, the city wouldn't be able to meet the projected water demand because of insufficient well supply and its water treatment plant nearing maximum capacity. In addition, the intrusion of fresh water from the Golden Gate Canal into Naples Bay was creating an environmental concern.

In 2008 the Naples City Council considered options “with proposals ranging from constructing a new water treatment plant using reverse osmosis technology with a

staggering price of \$67 million to a \$25 million alternative water supply program proposed by the utilities department, which had the potential to offer even more benefits than a new plant,” Middleton stated.

“The council decided instead of building the reverse osmosis plant to keep it as it was and expand the program to residential customers, but we needed more water,” Middleton explained in a phone interview. “So we went to the Golden Gate Canal to supplement our reclaimed water system.”

Middleton said as part of a feasibility study, the city conducted a survey of residents in particular areas and got “a pretty good response.”

“We targeted certain neighborhoods and looked at parts of town that were using excessive amounts of irrigation,” he said.

Those areas were already experiencing issues with water pressure, too. Running a dual-pipe direct to the reclaimed water system transferred the water demand, which saved 2.5 to 3 million gallons of drinking water.

“Without doing anything other than that, the water pressure in that area improved, and we had an 87 percent connection rate,” he said. “The simple fact is they'd be paying half of what they'd been paying for their water.”

Naples started infrastructure construction to those neighborhoods in 2006 and completed it in 2008. So far infrastructure costs have been around \$18 million.

The initial phase of the staff-initiated alternative water supply program had several objectives, including create a five-year ▶

alternative water supply; preserve aquifer water supply by reducing per capita daily water consumption; utilize water collected in the Golden Gate Canal; convert treated wastewater, or treatment plant effluent water, from a waste by-product to a resource; minimize capital investment in new treatment plant and wells; and stabilize or reduce customer utility bills by minimizing capital investment and operating costs.

Middleton stated that “addressing the water supply was the first order of business.” Capturing fresh water from the Golden Gate Canal and combining it with treated effluent water from the wastewater treatment plant would create a supply for an existing reclaimed water distribution system that provided the irrigation for the golf courses.

City officials quickly realized that they would need storage capacity for those times when demand was high and the water levels were low. After completing studies, they drilled the “deepest aquifer storage and recovery wells ever done in Florida, creating storage so far below ground — 1,000 feet deep — that it would not impact the drinking water supply.”

Middleton said because the ASR wells have a small footprint, workers were able to construct the wells onsite at the wastewater treatment facility where necessary infrastructure was already in place for treatment, disinfection, etc. Not only efficient, it also eliminated expensive land acquisition and capital expenditures and minimized operating costs. The only new equipment needed was a pump station and transmission main to bring the water from the canal 2.5 miles to

the wastewater treatment plant. When that was completed, the water distribution lines were extended to the highest potable water use areas.

Middleton said the use of these deep wells to store alternative water supplies was recognized as an “inventive and resourceful solution to a complex problem,” and the Southwest Florida Water Management District awarded Naples a \$9 million grant to fund the project.

### Benefits

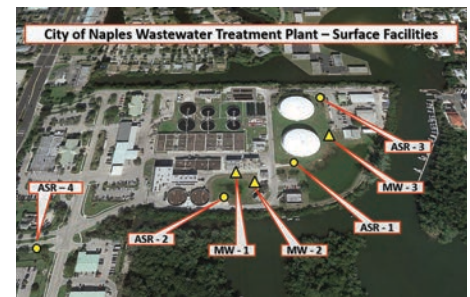
Middleton cited several benefits for municipalities to have a reclaimed water program. He said the environmental benefits are many, and specifically for Naples, the program eliminated effluent discharge into the river and Naples Bay, reducing the nutrient loading by 40 tons.

“We are a 100 percent reclaimed facility — 100 percent of the water goes right back out into the reclaimed system for irrigation,” he said. “The demand for potable water resources was reduced by 46 percent, saving 4 million gallons a day, and we continue to expand.”

The city expanded its plan to encompass four phases and 20 years. The latest phase of expansion was completed last year, and there are now 1,200 reclaimed water customers in Naples.

Middleton said the reclaimed water does have some nutritional value for plants as it contains a small amount of nitrogen and phosphorous.

Financially, the alternative water supply program has benefits to the city and to the customers. Not only did the city save millions



*This diagram shows the location of the monitoring wells and the aquifer storage and recovery wells at the wastewater treatment plant in Naples, Fla. The ASR wells were drilled 1,000 feet down so they would not impact the drinking water supply but allow for the storage of reclaimed water. (Photo provided)*

by implementing this system versus building a new plant, it also saved money by building the ASR wells onsite and extending the treatment capacity of existing water treatment plants indefinitely.

For customers who have the ability to opt in to the system, Middleton said they are paying one-third to one-half of what they were paying for their water previously. There is a connection fee and a base rate charge of \$10 per month, plus a cost of \$.66 cents per 1,000 gallons used, which is less than the cost for potable water.

Middleton said, “We put a little twist on it — if reclaimed water is available and they

## Types of gray water systems

- **Laundry to Landscape:** The most simplified type of gray water system, which typically doesn’t require a permit. Gray water is discharged directly from washing machines through a hose to outdoor landscaping.
- **Branched Drain:** Connects to other gray water sources besides washing machines, typically showers and sinks. It’s gravity driven and requires no electricity.
- **Pumped Systems:** Requires a temporary storage tank — less than 24 hours — that stores the water before it is pumped through tubing directly to landscaping.
- **Dual Drainage Plumbing:** Typically seen in new construction and major remodels. The gray water drains separately from toilets and kitchen sinks and enables access to all household gray water in one place.
- **Sand Filter to Drip Irrigation:** Flows by gravity to a temporary holding tank before being pumped through a sand filter to remove particles. A back flow prevention assembly must be installed on the municipal water level.
- **Manufactured Gray Water System:** Typically filters gray water for use in compacted gray water tubs. The manufactured system is typically lower in cost than automatic sand filter to drip systems. There are typically more components to maintain and replace. These can be used indoors for toilet flushing. It’s not a simple system and can be expensive for individual homes.

Source: [www.cityofdavis.org](http://www.cityofdavis.org)



don't connect, they're still charged a base charge of \$10 a month."

But this charge is only for those users who have the ability to connect or are connected, not other users.

#### Other Uses

Middleton said other uses for the reclaimed water aside from irrigation is for cooling water for HVAC systems, particularly by government and other large buildings that need a water supply for those systems. Street cleaning operations could also use reclaimed water.

Firefighting is another great use for reclaimed water, and Naples has fire hydrants on its reclaimed system.

"All the fire hydrants on the reclaimed system are painted purple, the international color for reclaimed water—the potable hydrants are painted red," he said.

All of the city's facilities are connected to the reclaimed system. Parks, medians and all landscaping at city facilities receive reclaimed water, according to Middleton.

He said because so many elements of Naples' plan use existing resources, he believes it can

be adapted by other Florida cities and possibly beyond the state. He added other cities and towns should compare their water resources to see what is available and come up with a 25-year outlook for their resources.

He does think this is a concern that is spreading inland, and if not right now, it will be in the near future. "I think cities and towns will be moving more and more to reclaimed water," he said.

#### Spring Hill, Tenn.

One inland city that has started a reclaimed water program is Spring Hill, which is located 35 miles south of Nashville, Tenn.

Wastewater Treatment Plant Superintendent Travis Massey said there are no city policies in place for reclaimed water. "Right now, we're only feeding it to the golf course," Massey said.

The golf course is King's Creek Golf Course, a privately owned course that opened for public play in December 2005.

Massey said there is a valve before the creek that he can open, sending the water through a gravity flow direct to the golf course. "I watch

what the level is in the ponds and open the valve," he said.

Massey sends water to the golf course daily, and he has a flow meter so he can measure the amount he sends to it. He said by June 18 he had already sent 4.3 million gallons of water to the golf course.

The golf course is adjacent to the wastewater treatment plant, making it easy to do with the gravity flow and valve system. The golf course pays the city \$1 annually for receiving this reclaimed water.

A benefit to the city has been reducing the limits of nutrient pounds being released into the creek.

"Long term I hope we can find other resources to give the gray water to—to irrigate the parks or soccer fields or the agricultural center in town; it would have been great if the city could do that," Massey said but acknowledged to do so would probably carry a big price tag.

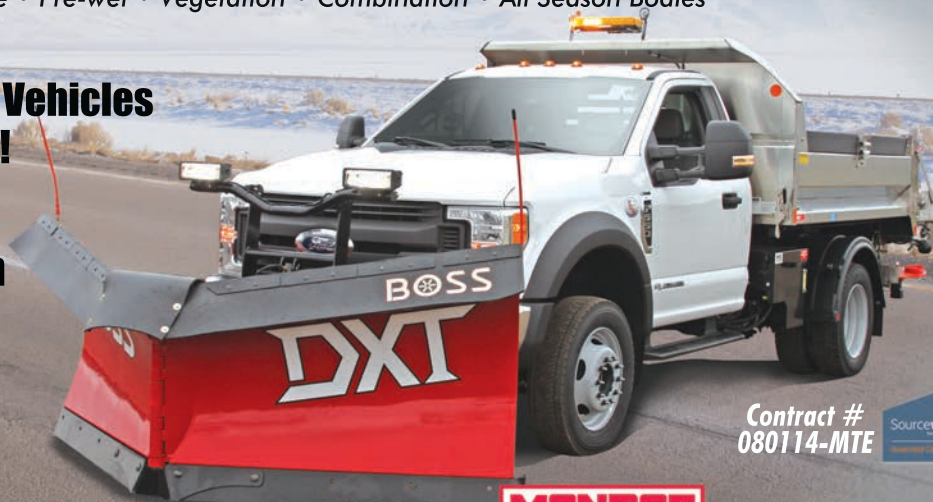
As to whether this is something that is spreading to inland states and cities, Massey predicted, "At some point in time, I'm sure everyone will be looking at it." **M**

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# Deerfield Beach boasts cleaner beaches

Shutterstock photo

By **BARB SIEMINSKI** | The Municipal

**Deerfield Beach, Fla., has proudly taken steps to keep its scenic community sustainable and trash free. Its approach has even successfully harnessed citizen action.**

The Cleaner Greener Deerfield Beach is an overall program that has been ongoing since the formation of the Department of Sustainable Management, according to David A. Miller, CPRP, director of parks and recreation.

“This endeavor was undertaken to make the city cleaner and greener and to educate the public on the importance of environmental sustainability,” said Miller, adding that the program includes Litter-Free Deerfield Beach, Adopt-A-Road, Beach Sweep Volunteering, composting and compressed natural gas garbage and recycling trucks.

The Litter-Free Deerfield Beach program came into being after last year’s Fourth of July celebration with the help of the JM Family Foundation, added Miller. Its focus is on keeping the beach clean versus Cleaner Greener Deerfield Beach, which refers to the entire city of Deerfield Beach and is collaborated mission of the sustainable management department.

“July 5, 2017, was a good time to begin these beach-cleaning efforts because the July 4 celebration annually brings more than 80,000 guests to our beach and with that comes a lot of litter,” said Miller, noting it is the busiest cleanup day.

“JM Family has been a wonderful partner and sponsor of the program, and we look forward to continuing this relationship — they’ve helped with supplying the weight-driven buckets of trash and the participant rewards (T-shirts, etc.). We host many cleanup events throughout the year, and we also host the International Coastal Cleanup where we have about 300 volunteers.”

JM Family Enterprises’ environmental sustainability manager Cristina Abboud Hicks said, “Since 1981, JM Family Enterprises has called Deerfield Beach home, and our commitment to this community, its families and the natural environment, which we all



*To maintain clean beaches, Deerfield Beach, Fla., encouraged citizen action through its Litter-Free Deerfield Beach program and Beach Sweep Volunteering. (Photo provided)*

share runs deep. It is for this reason that we are so happy to facilitate the creation of the Litter-Free Deerfield Beach campaign, which we are confident will raise awareness, promote environmental stewardship and protect our coastlines. We take great pride in our local beaches and are eager to help keep them clean so that we can protect the health of our oceans,



safeguard the well-being of marine life and contribute to a healthier and more prosperous Deerfield Beach.”

Cleanup kits provided by the city are placed at the Pier Bait Shop and made available for beach visitor checkout. Contents of the kit include a 2-gallon bucket for litter, gloves and a sifter for small things in the sand. Participants use the bucket to collect trash on and around the beach. After they are done, they return the items to the Bait Shop so the impacts of the program can be tracked. Participation will also be tracked, and first-timers will receive a cool sticker, with returning participants receiving a T-shirt after their fourth visit.

Residents and visitors have been very receptive to the cleanup efforts, said Miller, and local businesses are also interested in getting involved.

“During most cleanup events, elementary and middle school children have been the majority of the participants. We see this as a great way to teach environmental stewardship. This is also a way for students to earn community service hours,” Miller said.

He added, “As far as participation, Beach Sweep Volunteering continues to bring the most volunteers for each single event.”

The city is happy to provide cleanup materials to parties interested in hosting their own beach cleanup. Groups just need to return any unused supplies and to provide basic data on a supplied form.

The Adopt-A-Road program incentivizes civic-focused groups to each choose a section of roadway within the city of Deerfield Beach and commit to removing litter from that section a minimum of four times a year for two years. In return, the city will post signs with the group’s name at both ends of the section. The city provides all needed supplies and will pick up the bags of litter accumulated.

Composting is another program that benefits Ma Nature, and according to Miller, the city offers compost bins at its recycling drop-off center at a cost of \$50.

“We also conduct a monthly random raffle to all residents who recycle based on their (radio frequency ID) tag in each cart, and we provide a free month of service to 10 residents each month. We also offer a full year of free service quarterly to one lucky winner,” said Miller.

Deerfield Beach’s Community Redevelopment Agency is also connected with the Beach, but not the entire beach, as it is tasked with “utilizing tax increment revenue (TIR) to creatively partner with the private sector to increase investment in the CRA district as well as upgrade the area’s public infrastructure,” according to its website.

“The CRA has recently constructed/renovated the Deerfield Beach Café Building, which sits at the entrance to the International Fishing Pier and is LEED Gold certified,” said Miller. “The building uses energy from natural gas and electricity and uses water from a municipal potable water system. They are also in the process of redeveloping the North Beach Pavilion where construction is expected in the next fiscal year.”

It brings Miller great satisfaction to see local businesses and residents coming together through citizen action to maintain/keep their beaches clean for all to enjoy now and in the future.

Finally, the city of Deerfield Beach Recycling and Solid Waste Management fleet has switched to CNG as a means of reducing environmental impact and increasing efficiency. Additionally, the automated collection of trash allows the drivers to remain in the vehicles, which cuts down on work-related injuries and improves route efficiency. A third benefit is that overhead cost is reduced; this translates to lower customer pricing.



*For Beach Sweep Volunteering, individuals can pick up cleanup kits, which are provided by the city, at the Pier Bait Shop. There are incentives to encourage participation, such as cool stickers and T-shirts. (Photo provided)*



*Throughout the year, Deerfield Beach hosts several cleanup events, including the International Coastal Cleanup. (Photo provided)*

The carts are equipped with exclusive RFIDs tags, which are scanned by readers on the new collection trucks to collect data to aid the city in enhancing services and for rewarding residents who recycle.

According to Patrick Bardes, Deerfield Beach’s Coastal and Waterway coordinator/liaison to the Marine Advisory Board, the city’s new CNG-powered vehicles are certified by the Environmental Protection Agency. This enables exhaust air to be cleaner than what the truck inhales. Further, the trucks result in cheaper maintenance, faster service routes and lower poisonous emissions.

To Bardes, who is instrumental in the city’s beach cleanup initiatives, the biggest challenge in switching to CNG vehicles is the availability of this natural gas.

“We currently do not have our own fueling station,” said Bardes, “and one is not budgeted at this time.” **M**



# Good things come from trashy places



By ELISA WALKER | The Municipal

**Landfills are filled with questionable waste and are taking over large areas of land. It's unavoidable — everyone has something they have to dispose of. But what if there was a way to make that trash into an overall benefit for the community? What if there were other programs that had the ability to take a landfill beyond a basic dumping ground?**

Is an eco-friendly landfill possible?

A progressive town, Denton, Texas, has a variety of operations running in its landfill — from converting methane gas to energy, material recovery and processing asphalt and concrete to recycling. While some of the projects are still in the growing stages, Director of Solid Waste Ethan Cox commented that they all have merit at the root of the idea even though they're focusing primarily on recycling at the moment.

"We're taking a hard look at some of these operations. We want to do the sustainable thing and make sure we're diverting as much material from our landfill as we can," Cox explained. "If we're achieving those goals,

then I think the project is fulfilling its purpose. If it's not fulfilling that and costing us too much to manage, those are programs we have to reevaluate."

Denton was considered the first eco-friendly landfill in the world because of the strategies implemented to transform trash into renewable energy. It has been described as dry with a smell much better than the typical landfill. The methane gas created from the sun shining down on the mounds of trash is collected by gas wells, then used to generate electricity that powers a number of homes in Denton.

Collecting the greenhouse gas prevents it from harming the climate and atmosphere

**ABOVE:** Denton, Texas, has a lot of operations going on in its municipal landfill, some of which have been around since 2004 and are still being used today. (Photo provided)

but managing it is imperative. Collecting more methane than what can be transformed into electricity will create detrimental issues.

Becoming sustainable is more than just making as little of a footprint on the environment as possible — it's about gauging the marketplace and the surrounding community. For every good idea and intention pieced together, there are just as many issues to overcome for them to work. That doesn't mean the ideas should be written off, but rather one might work better than another for a particular municipality.

Many challenges in remaining sustainable on all levels stem from a finances. Even though some of the programs have the opportunity to grow and be further explored, the municipality has to be cognitive of what's going down in the industry. Though the Denton landfill is part of the municipality, it is still exposed to other market forces.



**RIGHT:** Denton's gas-to-energy generator powers homes within the community. Through community education, the solid waste department can work with citizens and businesses to reduce their amount of waste, diverting it before it even gets to the landfill. This can be done with programs such as composting. (Photo provided)

"I think for any landfill you have to do the responsible thing, which means trying to not just be sustainable with your use of virgin land and air space but also not putting things in the landfill that can't be easily reverted," he elaborated. "From a solid waste management standpoint, that's large with trying to get our citizens and businesses educated so they try to reduce their amount of waste."

"There are some challenges in the recycling market right now, specifically with China pulling out. Even though we don't sell directly to China, there's a ripple effect in the marketplace. They were taking a lot of the contaminated recycled material. That's something we're going to have to contend with, but that doesn't mean it's going to deter us. Now there's an emphasis on cleaner material and we're having to double down on that as we educate our citizens."

The Denton community has formed a good relationship with the solid waste and recycling service, displaying support for the programs taking place. With two universities, Denton serves a crowd that's receptive to big ideas, which prompts officials to ensure they're educating citizens to the best of their ability.

One of the priorities in educating citizens includes what recycling is and what it means to recycle responsibly. Denton officials make sure that citizens have the opportunity to understand the responsible way to recycle and how to do so effectively while also explaining the negative impact someone can have on a program by trashing objects that could be recycled.

Communication is key when it comes to education. Denton officials don't want to just propose an intriguing idea without explaining it, but rather they want to create a well-rounded program. To do so, they want its benefits and risks to be fully displayed so the community and city council have all the information needed before deciding to proceed.



*Pictured is an inside look at the household hazardous waste process in Denton. (Photo provided)*

"Make sure you have a good understanding of what the environment is around you and that you're confident on what this program is going to provide," advised Cox. "Make sure your citizens and council members are well educated and that everyone shares the same vision and direction."

"Everyone needs to understand what the risks are going into a program as well as what acceptable performance is. We have to make sure we've done our due diligence and that everyone knows what we're trying to achieve." **M**

### **When implementing new programs ask:**

- How is it going to be achieved?
- What will it achieve?
- Is it possible?
- Is it sustainable from a financial standpoint? From an environmental standpoint?
- Does it fit the community's desires?



Logo for COR Values: Recycling

# What does it take to get people to recycle?

By LAUREN CAGGIANO | The Municipal

## Cultivating a successful recycling program, whether among municipal employees or the general public, calls for a holistic view of sustainability, according to one expert.

“When most people think of sustainability, they usually think of only the environmental benefits for the planet, but it means much more,” said Amy Snyder, stormwater program coordinator with the city of Oak Ridge, Tenn. “Sustainability’s root word is to sustain, whether that be in terms of an organization, a growing economy or a culture.”

To that end, the COR Values: Recycling program represents what can happen when what Snyder refers to as a “balance between environmental protection and resourcefulness on a local government level” ensues.

“Every year, two AmeriCorps members serve with the city of Oak Ridge Stormwater Management Program,” Snyder said. “As stormwater technicians, they wear many hats,

but one of their main responsibilities is to provide water quality outreach and education to the community of Oak Ridge.”

In 2015, a pilot recycling program was launched at the Central Services Complex, which is the central hub for many city service divisions and totals approximately 150 people who use the building daily. Upon arrival in August 2015, the AmeriCorps team immediately noticed a need for a building-wide recycling program, and by December, they launched a pilot program called COR Values: Recycling. The Central Services Complex’s COR Values program recycles an average of 100 pounds each month, which is keeping approximately 1,200 pounds of material out

of the landfill each year, according to data provided by Snyder.

The program, which is still in effect today, aims to help Oak Ridge’s government buildings become more sustainable by making recycling easier, providing recycling education and increasing overall recycling levels, Snyder stated.

That education piece has been particularly critical, in part because of the execution.

“We trained all employees on the dos and don’ts of recycling and what makes this effort so important,” said Snyder. “We paired the educational sessions as prequels to the required monthly safety meetings so no one had to spend additional time attending separate meetings.”

She said the program was well received overall, especially since they provided incentives. And one of their main goals was to make it easy for employees to incorporate recycling



into their everyday lives. Those who were already recycling were the first to jump on board, she added.

Regarding program evaluation and incentives, Snyder said it wasn't sophisticated, but it was effective.

"We did this by performing trash audits, which simply meant that we would get down and dirty in the bins to see what people were throwing away and what they were recycling," she said. "It is definitely not a glamorous process. During the first year of the program, we performed these audits monthly and measured success in terms of percentages of pounds of material incorrectly recycled or thrown away."

In terms of incentives, Snyder said they wanted to keep things fun and lighthearted, to foster camaraderie. At the time of launch, the audits showed that roughly 40 percent of the materials in the trash bins could have been recycled. Each time the employees reduced the amount of recyclable materials in the trash by 10 percent, they earned a reward.

"In order for the employees to stay updated with their progress, the AmeriCorps members created Recycling Progress charts that were posted near the buildings' time clocks with the reward system displayed," she said. "The system was well received, and we often observed employees in the break room teaching other employees what to recycle so they can reach their goals."

Over the course of a few months, the employees earned a donut breakfast, free sandwich coupons at a local restaurant and a pizza party celebration when everyone reached the 10 percent mark. What made these incentives doubly effective was the fact that they were also donated to the city at no cost. Other intangible benefits included improved employee culture, she added.

Snyder said the program has evolved over the years, but the commitment is still there. The future of this program now lies in the hands of the trained employees. They still conduct audits, but they are less frequent.

In her words, "We found that we don't need to monitor as much because we continue to see improvement. The last audit revealed that only 5.8 percent of material in the recycling bins was not recyclable. We also no longer have an active incentive program, but we do celebrate America Recycles Day every year with a friendly employee recycling competition."

In reflecting on the program's success, Snyder said being open to risk helped their cause. Her advice for other municipalities looking to initiate a similar model comes down to seeing what sticks.

"You will make mistakes and figure it out as you go, but you have to start somewhere," she said. "We started by reaching out to other entities that already had successful recycling programs and building our foundation based on what we thought could work for us. Based on our results, it is a clear success story of how local government employees can help pave the road to a more sustainable future environmentally, socially and culturally."

### Encouraging recycling in public spaces

Alec Cooley, director of recycling programs at Keep America Beautiful, offered tips for public park managers in his July 2016 column in Parks & Recreation magazine. He said inaction on the part of the public is related at least in part to perceived barriers.



*Oak Ridge, Tenn.'s, COR Values: Recycling program built camaraderie as city employees worked to increase recycling. While audits were performed to track progress, the program itself was lighthearted and offered fun incentives to get everyone on board. (Photo provided)*

"While the 15-20 percent of people shown to have strong environmental beliefs will go out of their way to recycle an item correctly," he writes, "multiple studies have demonstrated the key to getting most people to recycle is to remove the two greatest barriers that prevent them from doing so: confusion about what to recycle and lack of convenience."

It also goes back to having systems in place to accommodate recycling. Cooley cites research conducted by Keep America Beautiful in 2009 that showed "only 12 percent of surveyed public locations had infrastructure to recover recyclable items. This lack of recycling opportunities is reflected in a separate national survey KAB conducted in 2013, in which 92 percent of respondents said they recycle at home while only 19 percent indicated that they typically recycle in public parks."

The antidote to this, according to Cooley, is paying attention to design and psychological factors that might influence participation. For example, using different colors to distinguish recycling from trash can help with compliance. Clear and simple messaging is another effective safeguard. For example, he noted the National Mall labeled its recycling bins with a few bold words: "RECYCLE" and "BOTTLES and CANS," along with a recycling symbol and images of cans and plastic bottles. Consistency across facilities can help people associate the bins with recycling.

"While there is no national standard for coloring, wording or listing of acceptable items collected for recycling, facility managers can minimize confusion by harmonizing these factors within a facility or park and with other recycling programs in the surrounding community," he said. **M**

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Winners of the “Keep the Green in Greenville” poster competition for young pupils in Pitt County pose with their paintings. Paintings were then enlarged and placed on sanitation trucks to increase awareness of environmental concerns. (Photo provided)



Delbert Bryant poses with one of Greenville’s sanitation trucks, which was part of Greenville’s student art contest. (Photo provided)

# From sanitation to fishing, Bryant balances work and play

By **BARB SIEMINSKI** | The Municipal

**If there’s one thing Greenville, N.C., Sanitation Engineer Delbert Bryant can do knowledgeably, it is talk trash.**

While he initially wanted to be a teacher and an animal/crop farmer simultaneously as a child, Bryant ultimately pursued a lifelong career in sanitation, starting in his hometown, Kinston, N.C. Bryant then came to Greenville — population of 67,453 as of 2016 — in November 2007 to advance his career and “work in a city that is growing very fast.”

He said, “I moved up the career path from 1986 in the city of Kinston, serving as vector control supervisor; sanitation supervisor; sanitation superintendent; environmental compliance officer/fire inspector; building and grounds superintendent; wastewater collections and water distribution superintendent up to my present position in Greenville, which I began in 2007.”

A graduate of Jarvis Christian College and Prairie View A&M University, Bryant received his Bachelor of Science degree in chemistry and numerous certifications in mosquito control, fire inspections, hazardous chemicals fire control, wastewater collection, water distribution and pesticide applications.

The biggest challenge of his current job in Pitt County is consistently meeting the daily demands of solid waste collection, Bryant said, adding that Greenville produces 30,000 tons of garbage a year.

However, his position does offer opportunities for fun interactions with the community. Bryant is one of the chief initiators, along with Public Works Director Kevin Mulligan and Recycling Coordinator Cheryl Tafoya, of a public art recycling program.



Delbert Bryant, sanitation engineer, city of Greenville, N.C.

“The city of Greenville has very responsive youth networks (and has) individuals and university students who regularly volunteer to participate in green activities and beautification projects all over the city,” Bryant said, adding that he frequently sees students practicing green efforts such as recycling, picking up trash, collecting bottles and other items.

This was the fourth year that Greenville’s public works department held its annual





A young artist signs her painting on the back of a Greenville, N.C., sanitation truck. (Photo provided)

“Keep the Green in Greenville” poster competition for young pupils in Pitt County. The idea behind this was to start kids early in life to be environmental watchdogs, such as habitually picking up litter and recycling — a conscientious lesson in life, no less. The contest winners had their artwork enlarged and colorfully painted on a sanitation truck for their friends and the city to see every day.

Recycling, for Bryant, begins at home. He and his wife, Clarice, who celebrated their 32nd anniversary this year, were blessed with five children — Dreneeé, Danielle, Devin, DeAndria and Donathan — and three grandchildren. The Bryants have instilled good habits in their progeny when it came to recycling at a young age, and the kids have served as good role models for their friends and others.

“Recycling, composting and reusing are common practices in our home,” said the proud parent. “Our grandchildren, when they were 2 and 3 years of age, knew the recycling container and what went in it. And Sanias, our other grandchild, is 11 now and is an avid plastic bottle recycler.”

Bryant was asked what other projects, if any, the sanitation department held to encourage residents to keep the city green.

“Feed the Bin, shred events, spring cleanup, (the) exchange learning program with East Carolina (University) Environmental Science Programs, Mosquito Control Tip and Toss, ECU Sustainability Committee and Sustainability Film Series: Landfill Harmonics,” said Bryant, adding that the city’s response has been very enthusiastic and positive for improving aesthetics throughout its neighborhoods.

What’s the Mosquito Control Tip and Toss?

“The ‘tip’ is focused on eliminating potential mosquito breeding sites around the home, such as emptying bird baths, flower pots, tarps, buckets and toys that hold water each week, and the ‘toss’ is throwing away items that hold water that have no use,” explained Bryant.

“The Landfill Harmonics features a children’s orchestra in Paraguay, which performs with materials recycled from a trash landfill near Asuncion, Paraguay. All instruments are made from items scavenged from the trash.”

**“All work and no play is certainly not the best formula for enjoying your family.”**

In addition to his role at the city level, Bryant has served as past president of the North Carolina American Public Works Association Buildings and Grounds Division and as past president of the North Carolina Mosquito and Vector Control Association.

Bryant is most proud of several components of his job as sanitation engineer.

“I am happy of my many positive relationships built with elected officials, city and public officials, citizens and co-workers from providing solid waste services over the past several years,” Bryant said.

He added, “Solid waste is rarely at the forefront, but it is vital to everyone in many more ways than most people acknowledge or give recognition to.”

Asked what was something most people were not aware of personally about Bryant, his answer was something of a surprise.

“I am a really good cook,” admitted Bryant, “and this is not just by my account but sentiments of many others. I am known best for my meats — grilled meats — whole hog barbecue, grilled chicken, ribs, fish, shrimp, burgers, chops and steak.

“The grill does figure in most of my cooking,” he added. “I usually

cook the meat dishes for family gatherings, holidays and birthday parties. I have many compliments for my eastern Carolina-style chopped barbecue pork, barbecue chicken and barbecue turkey. When time permits, my wife and I assist with a local catering company. My wife really gets the most

raves. When people eat her cakes and desserts after the main course, my delicious meats are an afterthought. Her cakes and desserts have won several baking contests. Many people prod her to consider a baking business when she retires. I don’t mind her taking center stage.”

Beyond barbecue, there is another subject he is hooked on: fishing. This passion has even involved deep sea time in 2016.

“The biggest fish I ever caught was a 40-pound wahoo, using ballyhoo for bait,” said Bryant, adding that the scombrid, a very large member of the mackerel family, was caught using a downrigger in the Gulf Stream/Atlantic Ocean.

“It took 30-45 minutes to land, and afterward, it was grilled and eaten with great pleasure.”

Bryant is a member of St. James African Methodist Episcopal Church and also enjoys pastimes such as traveling — with trips spanning up and down the East Coast, from New England to Florida — and watching high school and college sports.

Finally, Bryant shared some of his personal philosophy.

“The truth is that there is nothing noble about being superior to someone else,” said Bryant. “As civil rights leader Whitney Young said, ‘The only real nobility is on being superior to your former self.’ Being able to look at yourself, your actions and your reactions and modify them when needed to bring joy to others is a wonderful characteristic to possess, especially when done without causing harm to anyone, including yourself.”

Admitting that the mistreatment of others and wasting resources easily moves him to tears, Bryant shared the best piece of advice given to him:

“All work and no play is certainly not the best formula for enjoying your family.” **M**

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By SARAH WRIGHT | The Municipal

**T**HE STEADY DEPLOYMENT OF ELECTRIC vehicles — along with the increased availability of many EV types — has municipalities welcoming them into their fleets; however, before taking the plunge, thorough research and groundwork can save a lot of headaches down the line and prevent a failed pilot program. Joseph Cannon, director of EV solutions at AeroVironment; Tom Brotherton, CALSTART regional director; and David Peterson, director of fleet solutions at ChargePoint, addressed the considerations fleet managers need to make prior to EVs joining the fold in their NAFA Institute & Expo presentation, “All Charged Up: Planning Your EV Infrastructure” in Anaheim, Calif.

“When you are thinking about a (EV) fleet solution, you really need to think about how that vehicle is going to be used holistically,” Peterson said during the presentation. “For example, if you have a return-to-base fleet, then you will want to focus on the depot solution. Mixed use — if you are going to install infrastructure that’s going to be used by all types of users, then you are going to want

that construction to have certain types of features so that you can manage that access. If it’s a take-home vehicle, then you are going to want to think about how you track fuel and how you reimburse fuel... especially if they are charging at home.”

On-route charging will, of course, be an important consideration, requiring attention in regards to what types of charging are needed. In most cases, fleets will want plenty of fast charging solutions available. DC Fast Charge, a Level 3 charger, provides the quickest recharge, with 30 minutes often providing a good boost to the vehicle’s range. Level 2 chargers, meanwhile, are the most common and take about four hours to fully charge a 30 kWh battery car.

Peterson noted most fleet managers are already skilled at managing the life cycle of vehicles and all other aspects of their operations; however, with EV infrastructure, managers will need to wade into a whole new level of management.



*Level 2 chargers, pictured, are the most commonly used chargers. They can fully charge a 30 kWh battery car in about four hours. Pictured is a charging station for Chevy Volts in Bowling Green, Ky. (James R. Martin/Shutterstock.com)*



**LEFT:** To successfully launch an electric vehicle pilot program, cities need to critically look at their fleets to determine what segment of it is ripe for electrification. Going hand-in-hand with that is having an infrastructure plan in place that accurately gauges future electricity needs. Pictured is one of the EV charging stations that line the perimeter of San Francisco's city hall. (Dan Schreiber/Shutterstock.com)



“You are dealing with a whole other set of stakeholders, many of them on the facility side,” he said, noting fleet managers need to ask themselves: “Who is managing that parking lot? Who manages the utility relationship and actually pays the electrical bill? So, these are a new set of stakeholders, and in our experience at ChargePoint, this is really required and a lot of fleet managers get out of their comfort zone as now you are working across departmentally. You may be involving finance, other departments — certainly anyone managing capital investments that year at your company, or government or agency.

“It’s easier to work with them at the outset of a project rather than waiting to the last minute, thinking now I need infrastructure for these vehicles that are going to be arriving in six months, three months, whatever it may be.”

In addition to getting the ball moving on infrastructure, fleet managers need to closely examine their fleet and determine which segment of it is right for electrification; this would include completing a suitability analysis to ensure electric vehicles will be able to perform the duties demanded of them. Workflow is an important factor as fleet managers don’t want to set up vehicles to fail. How much electrical capacity is available is also a must, and managers should also begin to think of when capacity upgrades might be needed. And as any governmental employee knows, the economics have to make sense.

### Networked vs non-networked

Once the suitability analysis is completed, focus shifts to what types of charging stations make sense for the situation in addition to what other services — whether connected services or support services — will be needed.

“There are different power levels of chargers — there are also levels of data and control capabilities of those chargers,” Cannon said, noting he will often discuss the difference between networked and non-networked stations with his clients.

With a networked, or connected, station, fleet managers will be able to see the live status of the station as they are connected to a network. Thanks to being connected, fleet managers can take advantage of advanced features and get updates remotely. Managers can also use built-in reporting and analytics on EV charging usage, energy costs and environmental

Hybrid electric buses have been a popular addition to cities’ downtowns. Fleet managers should check for state and federal funding that can make the purchase of buses and trucks more affordable. (miker/Shutterstock.com)



Fleet managers will have to step out of their comfort zone and speak with stakeholders in other departments, such as facilities, while the project is still in its infancy. It will be important to know who manages the parking lot where you want to install EV chargers. (Shutterstock.com)

savings. Non-networked stations, meanwhile, don’t have as much functionality built in; however, the trade off is it doesn’t have subscription fees.

“One of the things you are going to be doing is assess what level of capability is appropriate for you,” Cannon said, noting managers will want to consider what level of cloud service fits their needs, too. “A lot of times the trade off is going to be that you are looking at potential installation savings with the utilization of a load management software application.” Cannon added for smaller EV rollouts, a non-network station is a prudent option.

Cannon noted, “You have to look at things like having a cellular access or network access for this station. So, there are tradeoffs that you want to make around that. Then you are looking at your operating cost savings. You can reduce your demand charges with load management, your cost of electricity by delaying (the charge) — although a lot of vehicles have that capability. You want to wave those potential savings against the cost of the network.”

He added, “Also you have to look at if you are going to be revenue collecting or if you have to restrict access — so looking at your individual lots. Is this an area that can be accessed by people who are not fleet drivers? In which case there (are) ▶

controls that you may be wanting to put in there or the opportunity to collect revenue if you're going to be using these as dual-use stations."

With a networked solution be aware of any restrictions. Can you switch network providers after the initial period wraps up or are you locked into a contract? Additionally, check on whether or not you are stuck with particular hardware solutions if you go with a certain provider.

"You want to make sure you have that flexibility," Cannon said, "especially in the early stages of the industry. Now, there is a lot of change and lot of new things coming out, so you want to make sure you have that flexibility for down the road."

### Managing what you have

Once infrastructure is in, it is important to use it efficiently by managing how vehicles are charged. Peterson said, "Think of this scenario where all your vehicles are coming back at 6 p.m., plugging in and they are all starting to charge at the same time. What I mean is they are getting a big peak in terms of your electricity usage... It's most likely going to drive your electric utility bill way high."

Spreading charging out over 10 hours can help prevent peaks, and in some localities, municipal fleets can take advantage of lower electricity costs during nonpeak hours. Peterson explained depending on location, energy rates can be flat or vary by time of day—meaning cheaper electricity during off-peak periods, more expensive electricity during peak periods.

Demand charges factor into that with, Peterson saying, "The reason these exist in most utilities is they want to manage how much capacity they have to provide you. And they are looking for efficiency on their end... and so they charge you for capacity, and capacity is usually measured in kilowatts. If you use a really large amount of kilowatts in a monthly period that's measured differently by different utilities. But within a billing period, your maximum usage of kilowatts is typically what you are billed for. So you want to bring that down as much as possible."

Since not all utilities are the same, fleet managers will want to investigate further.

When it comes to service upgrades, Peterson said, "You are going to want to minimize



*EV stations have a 10-year or more life span and are pretty low maintenance. With a networked station, there are over the air upgrades that occur throughout the life of that station. Pictured is a solar-powered EV station in a public parking lot in San Diego, Calif. (Joshua Rainey Photography/Shutterstock.com)*

the transformer upgrades and the general distribution upgrades for your electrical. New service can be costly, so we want to minimize that as much as we can. But also, you want to plan for it"

Fleet managers need to forecast future electrical demands, especially when putting together those five-year plans. "Why? Because when you go in to make improvements or sign up for a new service with your utility, you're usually going to want to make that one-time investment because going back and upgrading every single year is costly and inefficient."

Adaptive load management can also help fleet managers prioritize certain vehicles via software, allowing them to prioritize certain stations over others.

### Can be a long process

It should be noted that it can be a long process between deciding to go electric and actually building EV infrastructure. Peterson said, "Permitting depends on the jurisdiction; it can go a couple of days to months depending on the size of the project."

Other time factors include site design and engineering, which can take another month or more. Then there is the need to line up the installation/construction. Peterson noted, "So, the whole thing can take six to 12 months."

He added, "I think the No. 1 thing we run into is: Great, I've got my 10 (Chevy) Volts and 20 Volts coming... and they're coming in two months—six months. And now they're

thinking about the infrastructure. And they probably should have been thinking about it (beforehand)."

At the end of the session, each speaker provided one piece of advice.

"I'm going to focus on truck and bus, where I've done the majority of my work. I'm going to say: Really look into incentives, especially if you are here in California. If you are thinking about deploying trucks or buses, it can be a lot cheaper than you think it is going to be," Brotherton said.

Peterson said, "One, identify the stakeholders early. Get out of the fleet manager world and start to think about who are you going to need to engage on this project and start having those conversations. No. 2, don't think about charging to the maximum charging capabilities of that vehicle. Think about charging to the operational needs of that vehicle."

Finally, Cannon said, "The piece of advice I would say is enlist people like David and myself. Reach out to a number of EV providers early in the process because we can help you out through the process. We know about the expenses, we've gone through asking the questions of different fleet operators and we can help you with those bits of information. And the more people you talk to in our world, you'll get different viewpoints, and you can kind of find the best path for you through those different bits of feedback. For the most part, it's capitalizing on the free information." **M**



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# Moving beyond gut feelings to plan for the future

By CATEY TRAYLOR | The Municipal

**As cities grow, technology expands and demands for quality of life from residents shift, it has proven difficult for cities to keep up with ever-changing standards of what makes a “good” place to live. To make matters more difficult on city officials, what might work in one location, like lots of green space for community fellowship, might not in another.**

That’s where benchmarking enters the equation. City benchmarking is the practice of surveying key innovations, service improvements and trends that contribute to the positive standard of living in the area. The ultimate goal is to improve services for residents and decrease costs for local governments. One of the largest factors of city benchmarking is noting what other cities across the country are doing in order to create some sort of standard for what works well and what needs improvement.

Companies and consulting firms across the nation have taken note that cities are in need of standards by which to compare one another and have in the last decade

begun observing, surveying and collecting data to back up their claims.

One such company is KPMG, a popular auditing company that often leads benchmarking studies in large cities. According to Stephen Beatty, KPMG International’s global head of cities, this practice is crucial for community leaders to make educated, important decisions that will impact their communities forever.

“Very few cities have the data or the insights they require to make smart, value-based long-term decisions. And that means that city managers are often left making major decisions — often with significant intergenerational impacts — based on little more than experience, outdated models

and ‘gut feel,’” Beatty said in KPMG’s 2017 benchmarking guide.

Companies like KPMG lead cities through the benchmarking process, from initial planning to deployment of surveys and synthesizing of results.

Anne Westra, Sioux City, Iowa’s, communications and public engagement specialist, said the city is in the strategic planning portion of its updates, but the use of an outside firm to get the ball rolling was immensely helpful.

“It was helpful for us to have a facilitator at our first few sessions — someone who was an outside resource who came in as a new set of ears, to keep things moving and on track,” she said. “We were able to brainstorm big ideas and then collectively decide what our priorities were. I would recommend cities looking to start this process look into getting somebody in to help them out and keep them up to date on current trends.”

However, facilitated sessions aren’t the only way benchmarking can happen.



**LEFT:** Comparing benchmarking data across cities can result in improvements and innovations in roadways, enterprise development, transit, recreational facilities and spaces, waste management, emergency services and water quality. Pictured is downtown Sioux City, which is in the middle of strategic planning using benchmarking data. (Photo provided)

**RIGHT:** Parks and recreation factors into benchmarking efforts as cities aim to provide ample entertainment opportunities for residents, both current and new. Pictured is Sioux City's Saturday in the Park Music Festival. (Photo provided)

Housed at Michigan State University, the Michigan Local Government Benchmarking Consortium brings city leaders from across the state together on an annual basis to learn about new and innovative ways to satisfy residents while remaining fiscally responsible. Similar organizations exist across the country.

"The Benchmarking Consortium gives us the facts we need to implement a transformation of processes that is needed to serve our constituents better," said Michael Norman, county administrator and controller of Branch County, Mich.

Westra said Sioux City's mayor is involved in the Iowa League of Cities — another state-level organization that compares benchmarking data from across the state and identifies new ideas and innovations.

"These meetings happen on a quarterly basis, which gives community leaders across the state an opportunity to share best practices, talk out challenges they're facing and come together to pool resources to handle a variety of situations," Westra said.

In addition to gathering leaders, benchmarking can take a variety of forms: from observation of local events to surveys distributed to residents. Often, the creation of strategic plans is the outcome of benchmarking efforts.

"Sioux City is currently in the process of updating our comprehensive plan, a blueprint for the future, with the assistance of an outside organization," Westra said. "We've held visioning workshops with the



*The Sioux City Art Center draws in visitors to the downtown area. (Photo provided)*

community and have encouraged participation in an online survey for resident engagement. The plan is a community vision that will guide growth and development of the city for the next 20 years."

Factors that contribute to quality of life — including roadways, enterprise development, transit, recreational facilities and spaces, waste management, emergency services and water quality — are taken into consideration during benchmarking

practices. Westra said all of these factors have been acknowledged in Sioux City's efforts.

"The creation of the strategic plan will help guide city leaders with making decisions related to land use and development; housing and residential, commercial and industrial areas; transportation and infrastructure; parks and recreation; open space and environmental features; and community facilities and services," she said. **M**





# Shrinking roads bring safety and challenges

By CATEY TRAYLOR | The Municipal

**According to the National Association of City Transportation Officials, surface streets comprise more than 80 percent of all public spaces in cities. Street placement has the potential to foster business activity, encourage car travel alongside bikers and pedestrians and can greatly influence the connection between residents and their communities.**

However, each year nearly 40,000 people are killed in traffic crashes in the United States, and that number continues to rise annually. This staggering statistic has led cities across the nation to examine ways to make streets safer for everyone traveling.

One popular solution, according to NACTO Strategy Director Kate Fillin-Yeh, is to narrow street widths.

“The larger the lane, the less the driver has to work to remain safe,” she explained. “What cities have been realizing is shortening

the width of lanes requires more awareness from drivers. They have to go slower in order to stay in their designated space, which reduces the harm of a crash in and of itself. On top of that, sidewalks and bike lanes have the ability to be wider for alternative methods of travel. The slower cars go and more street space you have, the better you’re able to ensure safe and spacious crosswalks for pedestrians in urban settings.”

Minnesota Department of Safety State Traffic Safety Engineer Brad Estochen has seen the positive impact of narrower streets



**LEFT:** Sidewalks across the country are expanding to improve pedestrian safety while roadways shrink. These smaller roads improve drivers' safety, too, by encouraging them to pay more attention. (Photo provided)

firsthand and says there is a misconception by the general public that bigger is always better.

"In general, when accidents happen people want to make things bigger with the mindset that people won't hit each other if they have more space to maneuver around situations," he said. "However, that additional room often promotes bad habits like distracted driving and speeding by allowing more space on the road to overcorrect. If you command a driver's attention with a narrow lane, they have to pay attention in order to avoid making poor choices. If you're in bumper-to-bumper traffic, you're less likely to be on your cellphone because you need to focus more."

Estochen said Minnesota has explored narrowing street widths and the results have been positive.

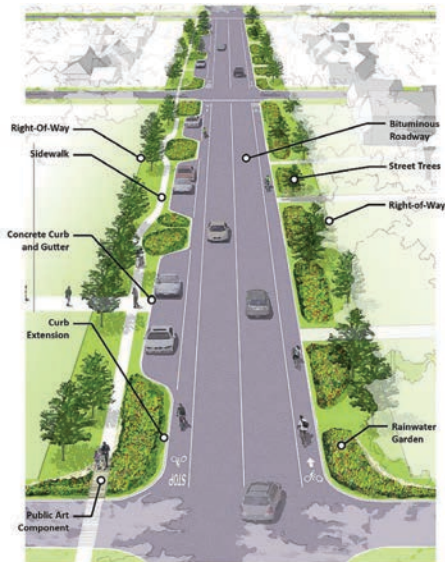
"We're narrowing up the lanes of traffic and that provides an opportunity to do something more counterintuitive, but the outcome is fewer crashes and reduced speeds," he said. "Even if a crash does occur, injuries are minimal as opposed to life threatening"

While narrower streets sound like a positive solution all around, not everyone is convinced that this is the safest approach. One of the public worries of narrower lanes is how EMT vehicles will maneuver the streets.

A traffic safety engineer by day, Estochen serves as a firefighter and EMT in his spare time. Having firsthand experience with both sides of the equation, he's able to offer unique insight.

"One of the biggest threats to people when responding to emergency incidents, be it police, fire, EMS or roadway workers is they need adequate space to do their job," Estochen said. "If there's a crash, your work is defined by where that happens, and it could vary from the shoulder to the ditch or the middle of the road. When things get narrower, that work space becomes more constrained."

Estochen said there are a number of measures EMTs are trained to take to accommodate for narrower roads, including



*Pictured is a case study that showcases efforts to create a multiuse street that includes stormwater measures, bike paths, sidewalks, parking and street trees. (Photo provided)*

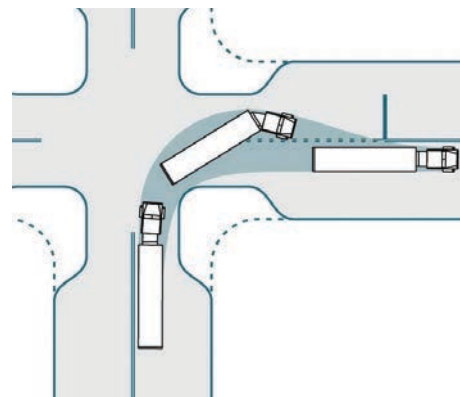
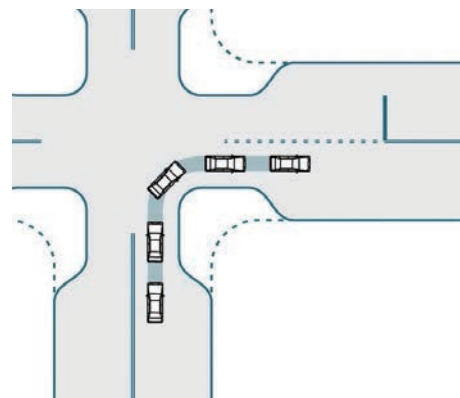
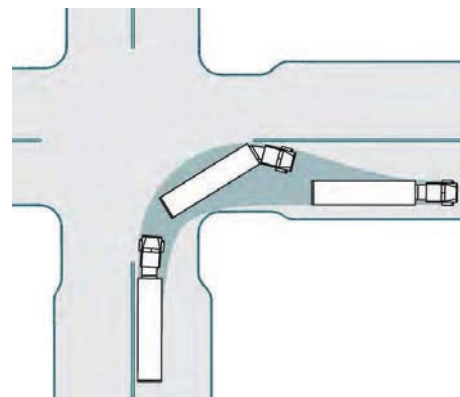
securing a safe workspace by positioning vehicles a certain way to create a barrier, setting up flagging operations and guiding traffic.

"We do everything we can to make sure our workspace is secure and gives us enough room to do our jobs, but some of that burden lies on the general public as well," Estochen said. "Be aware and alert while driving—don't put yourself in a place where you'll be in the way."

In terms of planning, Fillen-Yeh said NACTO works with cities to provide technical advice and guidance, but most cities have a great working relationship with emergency technicians and take their needs into account when designing streets.

"Cities are always communicating internally," she said. "EMTs and fire departments are involved in the planning process, and often there is some sort of community education that occurs when major changes are made. That conversation is definitely happening; nobody is setting out to design a road that wouldn't work for everyone who needs it."

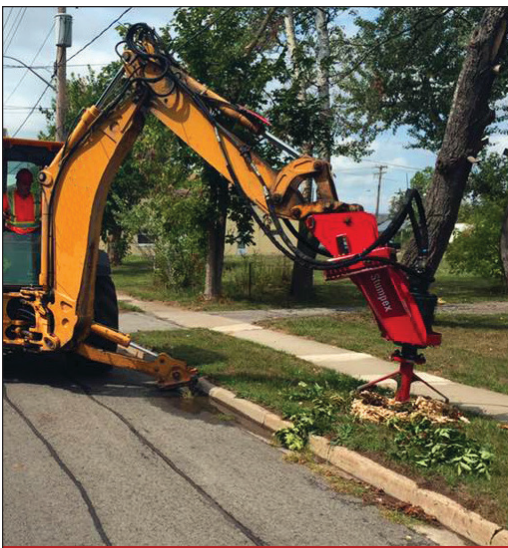
A number of solutions, including smaller emergency vehicles, are being explored by emergency responders across the nation, but the bottom line, according to Estochen, is that drivers need to be aware and courteous.



**ABOVE:** These diagrams show the difference in turning radii between cars and semi-trailer trucks and how they can be impacted by streetscape changes. (Photos provided)

"Look at your surroundings. When you see an emergency vehicle approaching, it's probably on route to help someone who is having one of the worst days of their life," he said. "Give them the opportunity to do their job efficiently and make somebody's worst day a little better by giving them the care they need. It's a few second delay in your trip, but those few seconds could save a life." **M**





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## AUGUST

### Aug. 8-11 Fire-Rescue International (FRI 2018)

Kay Bailey Hutchison Convention Center, Dallas, Texas  
[www.iafc.org/events/fri/about](http://www.iafc.org/events/fri/about)

### Aug. 12-16 StormCon

Hyatt Regency Denver, Denver, Colo.  
[www.stormcon.com](http://www.stormcon.com)

### Aug. 14-15 Midwest Security & Police Conference/Expo

Tinley Park Convention Center, Tinley Park, Ill.  
[mspce.com](http://mspce.com)

### Aug. 16-18 Florida League of Cities Annual Conference

The Diplomat Beach Resort, Hollywood, Fla.  
[www.floridaleagueofcities.com](http://www.floridaleagueofcities.com)

### Aug. 19-22 NIGP Forum

Gaylord Opryland, Nashville, Tenn.  
[www.nigp.org](http://www.nigp.org)

### Aug. 20-23 ITE International and Midwestern/Great Lakes Districts Annual Meeting and Exhibit

Minneapolis, Minn.  
[www.ite.org/annualmeeting/default.asp](http://www.ite.org/annualmeeting/default.asp)

### Aug. 21-23 AAMVA 2018 Annual International Conference

Philadelphia Marriott Downtown, Philadelphia, Pa.  
[www.aamva.org](http://www.aamva.org)

### Aug. 22-24 WasteCon 2018

Nashville, Tenn.  
[swana.org](http://swana.org)

**Aug. 26-29 American Public Works Association's PWX**  
Kansas City Convention Center, Kansas City, Mo.  
[pwx.apwa.net](http://pwx.apwa.net)

### Aug. 27-31 Heartland Emergency Apparatus Technicians Association (HEAT2018)

Overland Park Fire Training Center, Overland Park, Kan.  
[www.heatevt.com](http://www.heatevt.com)

### Aug. 27-30 Florida Recreation and Park Association 2018 Conference

Orlando, Fla.  
[www.frpa.org/conference/confgeneral](http://www.frpa.org/conference/confgeneral)

### Sept. 12-14 Iowa League of Cities 2018 Annual Conference and Exhibit

Mid-America Center, Council Bluffs, Iowa  
[www.iowaleague.org](http://www.iowaleague.org)

### Sept. 16-19 Southeast Governmental Fleet Managers Annual Meeting

Embassy Suites & North Charleston Convention Center, North Charleston, S.C.  
[www.sgfma.org](http://www.sgfma.org)

### Sept. 16-19 Missouri Municipal League Annual Conference

Branson Convention Center, Branson, Mo.  
<https://mocities.site-ym.com>

### Sept. 19-22 North Carolina League of Municipalities' CityVision 2018

Hickory, N.C.  
[www.nclm.org](http://www.nclm.org)

**Sept. 20-22 Michigan Municipal League Convention**  
Holland, Mich.  
<http://blogs.mml.org/wp/events/>

**Sept. 20-22 Illinois Municipal League Annual Conference**  
Chicago Hilton, Chicago, Ill.  
[conference.impl.org](http://conference.impl.org)

### Sept. 23-26 ATPA Annual Meeting

Omni Nashville, Nashville, Tenn.  
[www.apta.com](http://www.apta.com)

### Sept. 24-26 2018 Midwest Green Fleets Forum and Expo

Marriott University, Columbus, Ohio  
[www.cleanfuelsohio.org](http://www.cleanfuelsohio.org)

### Sept. 24-26 NCSFA 2018 State Fleet Managers Workshop

Astor Crowne Plaza, New Orleans, La.  
[www.ncsfa.wildapricot.org/event-2878465](http://www.ncsfa.wildapricot.org/event-2878465)

### Sept. 24-26 F.I.E.R.O. Fire Station Design Symposium

Sheraton Raleigh Hotel, Raleigh, N.C.  
[www.fierofirestation.com](http://www.fierofirestation.com)

### Sept. 24-28 Ohio Association of Emergency Vehicle Maintenance and Repair Program

Ohio Fire Academy, 8895 E. Main St., Reynoldsburg, Ohio  
[www.oaevt.org](http://www.oaevt.org)

### Sept. 25-27 NRPA 2018 Annual Conference

Indiana Convention Center, Indianapolis, Ind.  
[www.nrpa.org/conference/](http://www.nrpa.org/conference/)

### Sept. 29-Oct. 3 WEFTEC 2018

Ernest N. Morial Convention Center, New Orleans, La.  
[www.weftec.org](http://www.weftec.org)

### Sept. 30-Oct. 2 Virginia Municipal League Annual Conference

Hampton Roads Convention Center, Hampton, Va.  
[www.vml.org](http://www.vml.org)

### Sept. 30-Oct. 3 IEDC 2018 Annual Conference

Atlanta, Ga.  
[www.iedcevents.org/Atlanta/index.html](http://www.iedcevents.org/Atlanta/index.html)

### Sept. 30-Oct. 3 ARTBA National Convention and Dr. J. Don Brock Transovation Workshop

Westin Times Square, New York, N.Y.  
[www.artba.org](http://www.artba.org)

### Oct. 2-3 Sustainable Communities 11th Annual Conference

Grand River Center, Dubuque, Iowa  
[www.gscdubuque.com](http://www.gscdubuque.com)

### Oct. 4 Southeastern Wisconsin Fifth Annual Outdoor Public Works/Parks/Building and Grounds Expo

5151 W. Layton Ave., Greenfield, Wis.  
[www.ci.greenfield.wi.us/564/Public-Works-Expo](http://www.ci.greenfield.wi.us/564/Public-Works-Expo)

### Oct. 4-6 Pennsylvania Municipal League Annual Summit

Pittsburgh Marriott North and RLA Learning and Conference Center, Cranberry Township, Pa.  
[www.pml.org/summit](http://www.pml.org/summit)



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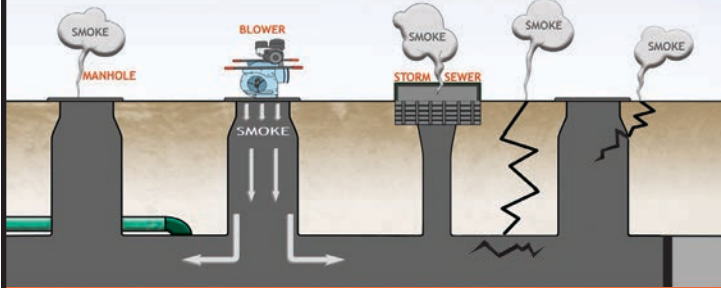
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## National Joint Powers Alliance is now Sourcewell

**STAPLES, MINN.** — National Joint Powers Alliance has announced the launch of its new brand name, Sourcewell, to better reflect its purpose and to position itself for ongoing local and national growth. Founded as an Educational Cooperative Service Unit for its five-county region in 1978, the organization's core focus on education and schools has continued as it has expanded to serve other government entities and nonprofits in Minnesota and across the country.

This year, as it celebrates its 40th anniversary, Sourcewell is a self-funded agency with \$3 billion in annual cooperative purchasing volume, making it the largest government purchasing cooperative of its kind in the country. Its nearly 20 percent increase in contract purchasing volume in 2017 translated to continued reinvestments in its member communities. Dr. Chad Coquette, executive director and chief executive officer of Sourcewell, anticipates that the organization's contract purchasing volume will triple over the next five years, all of which will be dedicated to the public service work of its members.

"Our story is a true win-win-win for our members, our service providers and the community members where we serve," said Coquette.

In a world filled with acronyms, the name Sourcewell stands out and begins to describe the organization's purpose and mission. The name change also better positions the organization for future growth. For members, vendors and partners the name change is the only change. Sourcewell's mission, vision, values and nationwide cooperative purchasing program remain the same.

"Our ability to bring such diverse resources to our members in a cooperative purchasing structure reflects our commitment to be a trusted partner and the best solution source, as reflected by our new name," said Coquette.

## Sourcewell recognizes industry leaders at annual forum

**STAPLES, MINN.** — Sourcewell recognized several leaders in its industry as part of its 11th annual H2O Vendor Forum on June 6 at Madden's on Gull Lake in Brainerd, Minn.

Those recognized included:

- **Gold Star of Business Innovation & Excellence Award:** City of Toronto
- **Pioneer Awards, with four awardees:** MJ DuBois, president at Atlantic Machinery; Tammie Hinds, managing director at UPS; Mike Sampson, senior government sales manager at Grainger; Tom Staves, large account sales manager at Johnson Controls
- **Legendary Leadership Award:** Steven Perlstein, Mohawk Lifts
- **Legacy Award:** Grainger

To learn more, visit [sourcewell-mn.gov](http://sourcewell-mn.gov). 

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](http://www.themunicipal.com). Call (800) 733-4111, ext. 2307, or email [swright@the-papers.com](mailto:swright@the-papers.com).



Division Head and General Manager of Fleet Service Lloyd Brierley (second from right) accepted the Sourcewell Gold Star of Business Innovation & Excellence Award on behalf of the city of Toronto. Brierley is pictured with, from left, Sourcewell Executive Director and CEO Dr. Chad Coquette, Sourcewell Manager of Contract Administration Tom Perttula and Sourcewell Director of Operations and Procurement Jeremy Schwartz. (Photo provided)

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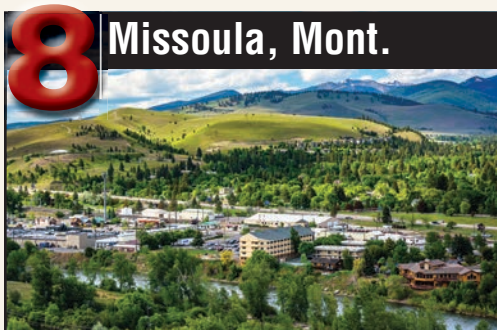
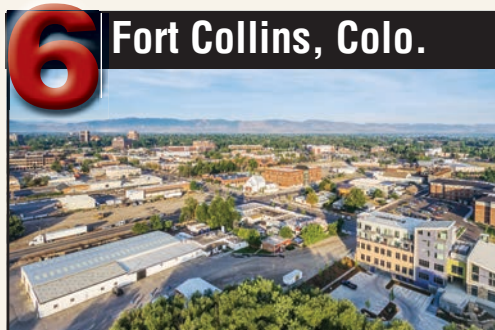
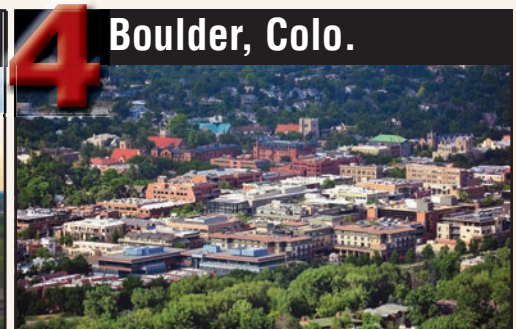
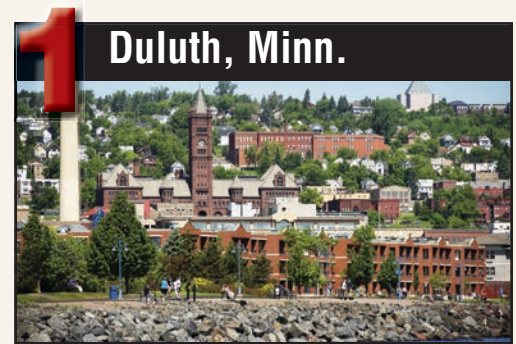
# The least-stressed cities in America

Everyone can do with a little less stress, right? Well, SmartAsset compiled a list in October 2017 of the least-stressed cities in America. As for the process, SmartAsset says on its website, “In order to rank the least-stressed cities in America, we gathered data on nine factors. We looked at average hours residents work per week, average commute times, percent of residents who are getting sufficient physical activity, density of entertainment establishments, unemployment rate, bankruptcy rate, housing costs as a percent of income, average amount of sleep per night and the divorce rate.”

Some of its key findings found that at a state level, Colorado might be onto something. It had two cities in the top 10, and according to SmartAsset, Boulder and Fort Collins “score well on physical activity rates, perhaps due to the abundance of local outdoor activities.”

Not faring so well was New Jersey, which had two of the five most-stressed cities and four of the 16 most-stressed cities. Boosting its stress levels, says Smart Asset, is the long commute times. It states, “In cities like Jersey City and Newark, residents spend an average of almost 40 minutes getting to work.”

Without further ado, here are the top 10 least-stressed cities.





**A**

Aladtec, Incorporated ..... 45  
 Alunitank ..... 54  
 Andy Mohr Ford ..... 49  
 APWA, Public Works Expo ..... 55

**B**

Best Management Products ..... 31  
 Bonnell Industries ..... **Back Cover**  
 Buyers Products, Inc. .... 2

**C**

Calhoun Super Structures ..... 35  
 Cargill Deicing ..... 30  
 Clearspan Fabric Structures ..... 15

**D**

Da-Lee Group ..... 8

**E**

Ebac Industrial Products, Incorporated ..... 51  
 ECM Performance ..... 45

**F**

4 State Trucks ..... 49  
 Fecon, Incorporated ..... 44  
 Franmar, Incorporated ..... 31

**G**

Global Environmental Products ..... **Cover, 10-11**

**H**

Hotsy ..... 39

**I**

Icom America Incorporated ..... 5  
 Imel Motos ..... 51  
 International Baler Corporation ..... 31  
 International Code Council ..... 3

**L**

Land Pride ..... 14  
 Leadpoint ..... 7

**M**

Mile-X Equipment, Incorporated ..... 51  
 Monroe Truck Equipment ..... 23  
 Mutual Industries ..... 39

**N**

National Construction Rentals ..... 34

**O**

Ohio Association of Emergency Vehicle Training ..... 30  
 Omega Industrial Products ..... 34

**P**

Proemion Telematic Systems ..... 39

**R**

RPM Tech ..... 9

**S**

Superior Signal Company ..... 49  
 Syntex Industries ..... 30

**T**

Trail King Industries ..... 35  
 Trinity Highway Products, LLC ..... 45

**V**

Varco Pruden Buildings ..... 15  
 Ventrac ..... 44

**W**

Wisconsin Surplus Auctions ..... 50

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