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# REPLENISHING THE VALLEY

Coachella water district's sustainability award reflects a long history of conservation


PAGE 10



Carrie Oliphant  
Director of Engineering  
Coachella Valley Water District

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**ON THE COVER:** Coachella Valley Water District Director of Engineering Carrie Oliphant stands in her office overlooking the Palm Desert Ground Water Replenishment Facility she worked to build. The utility is reducing dependence on groundwater by recycling nearly 5.5 billion gallons of wastewater annually for irrigation use. (Photography by Matt Dayka)



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Published monthly by:

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PO Box 220  
Three Lakes, WI 54562



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Office hours Mon.-Fri., 7:30 a.m.-5 p.m. CST

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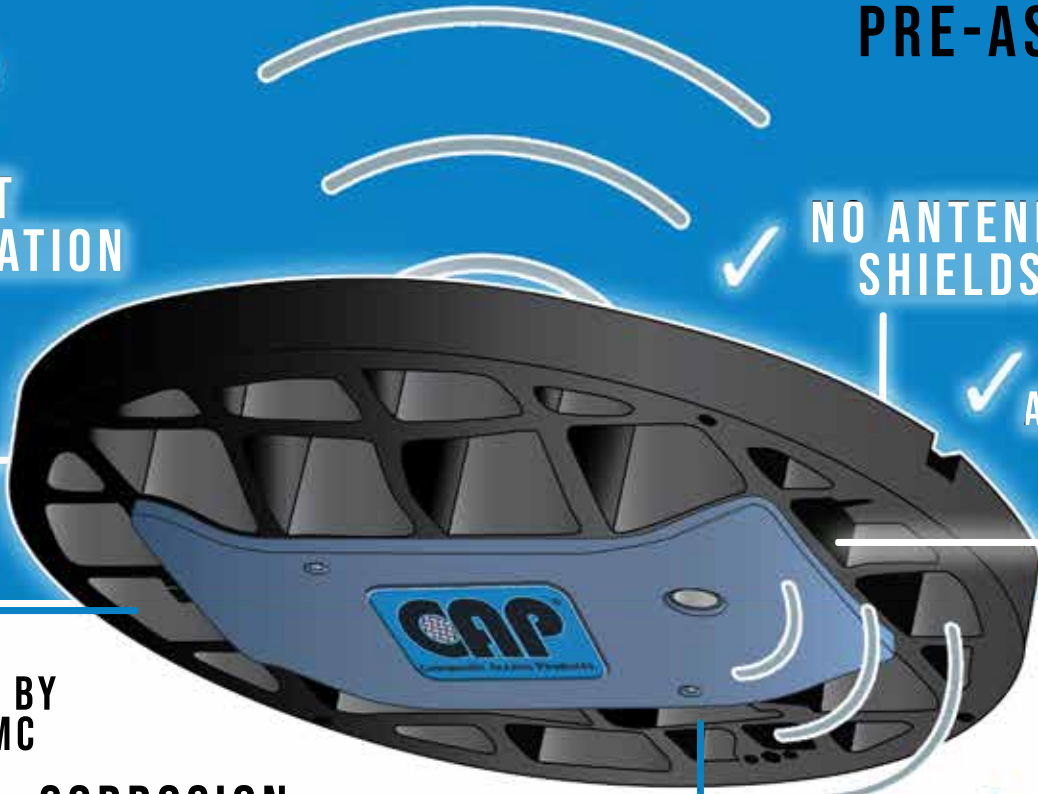


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Luke Laggis

# SERVING THE GREATER GOOD

Managing stormwater has a lot in common with overall community improvement

The theme of this month's issue of *Municipal Sewer & Water* is Stormwater Management. But there's another, deeper theme running through most of the stories in this issue: Community.

That theme is perhaps most obvious in this month's Human Side column, aptly titled "Community Matters." The Camden County (New Jersey) Municipal Utilities Authority used the success of a rain garden project 12 years ago to launch a broader community improvement effort.

That first project, performed under the auspices of a group the utility formed called the Camden SMART Initiative, united the utility with other public and private groups and agencies around the common goal of building "green" stormwater infrastructure projects that would help remediate the effects of urbanization on the area's waterways. That group morphed into the Camden Community Initiative, a solutions-oriented partnership with even bigger collective ambitions: improve the environment, health and quality of life for residents of Camden.

Furthermore, the utility established a Green Ambassadors program, which provides five-week summer internships for 10 to 20 high school students who work on CCI green-infrastructure projects. It also established a PowerCorps Camden (an offshoot of AmeriCorps) that increases economic opportunities for up to 60

disadvantaged "at-risk" youths every year by hiring them to maintain various green infrastructure projects.

In Columbus, Ohio, one of the utilities profiled in this issue, stormwater management has been a big focus over the past 20 years. Improved maintenance and mainline rehabilitation have been part of the effort, but the biggest changes have come on the private side, where the utility is rehabilitating laterals on private property, free of charge, to provide people a better solution to a community-wide problem.

Instead of simply treating overflow symptoms with massive, time-consuming underground construction of tunnels that would cost billions, leaders in Columbus decided to eliminate inflow and infiltration at its source. Preventing overflows and basement backups not only served consent decree requirements, it made a positive change in overall community health and provided direct benefit to those whose laterals were rehabilitated.

And finally, our Safety First column highlights the importance of being part of the solution. Safety is often as much about what your coworkers are doing as it is your own behaviors. A good workplace is a little community of people working toward the same objectives, and if we're not looking out for each other and making decisions with our coworkers' wellbeing in mind, we're all at greater risk.

That's really the basis of community: serving the greater good, helping out where needed and thinking beyond ourselves. That's what brings people together and creates the bond of community.

You have a unique ability as utility leaders to work with diverse stakeholders, bring different groups together and make a significant difference in your communities. I hope you're embracing that opportunity.

Enjoy this month's issue. ♦

Comments on this column or about any article in this publication may be directed to editor Luke Laggis, 800-257-7222; editor@mswmag.com.



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# REPLENISHING THE VALLEY

Coachella water district's sustainability award reflects a long history of conservation

By *Ken Wysocky*



By implementing sustainable water strategies decades ago, including the use of recycled water for irrigation purposes and an aggressive groundwater replenishment program, the Coachella Valley Water District in Southern California has been able to carefully marshal its most valuable resource: The vast aquifer that lies beneath the valley floor.

The need for sustainable water-supply practices is amplified in the arid valley, which stretches from roughly Palm Springs south to the Salton Sea, because it receives an average of only about 3 inches of rainfall per year. As such, almost all of its drinking water comes from the Coachella Valley aquifer, which holds an estimated 39 million acre-feet of water.

To sustain the aquifer, the utility operates a groundwater replenishment program that effectively relies on two annual allocations of imported water from the Colorado River and the State Water Project. The latter distributes water from snowpack melt in

northern California to 29 different customers, including the CVWD, says Carrie Oliphant, the utility's director of engineering.

(Technically, because there's no physical connection between the southernmost SWP facilities and the Coachella Valley and it would be astronomically expensive to build one, the CVWD forged a water exchange agreement with an agency called the Metropolitan Water District of Southern California. The utility trades water it receives from the SWP for an equal amount of Colorado River water from the MWD.)

The utility also reduces dependence on groundwater by recycling nearly 5.5 billion gallons of wastewater annually for irrigation use, using a high-level treatment process at two of its five wastewater treatment plants.

"For decades, we've undertaken a very conscious planning effort to ensure we have enough water for the future, knowing we live in this very dry desert climate," Oliphant says. "Back when the CVWD was formed in 1918, the leaders of this

Crew Chief Joseph Bloch (left) and Senior Engineer Mario Zamora monitor their Coachella Valley Water District crew as they tie in the newly built Verano Reservoir to their water system.

PHOTOGRAPHY BY MATT DAYKA



**PROJECT:**  
Coachella Valley Water District, Coachella, California

- SERVICE AREA:**  
About 1,000 square miles
- POPULATION SERVED:**  
About 270,000 people
- WATER-CUSTOMER BASE:**  
Roughly 113,481 accounts
- PRIMARY DRINKING-WATER SOURCE:**  
Aquifer
- DAILY DRINKING-WATER DEMAND:**  
81.4 mgd
- DRINKING-WATER DISTRIBUTION:**  
91,230 acre-feet annually
- PRIMARY IRRIGATION-WATER SOURCES:**  
Colorado River and recycled wastewater
- AQUIFER REPLENISHMENT:**  
53,953 acre-feet in 2022
- RECYCLED-WATER PRODUCTION:**  
Nearly 5.5 billion gallons annually
- INFRASTRUCTURE:**  
94 aquifer wells, 67 reservoirs, 2,043 miles of water distribution pipelines, four groundwater replenishment facilities, five wastewater treatment plants (two of which produce recycled water for irrigation), 1,160 miles of sewer lines, 27 sewer-system lift stations
- EMPLOYEES:**  
About 570
- WEBSITE:**  
[www.cvwd.org](http://www.cvwd.org)

## “The more we can make conservation a way of life in the valley, the more everyone benefits for years to come.”

Carrie Oliphant

one of only four water utilities nationwide to win a Sustainability Water Utility Management Award from the Association of Metropolitan Water Agencies. The group advocates for water systems on federal policy issues and fosters programs for sustainable, innovative utility management.

### Reducing groundwater use

The groundwater replenishment program dates back to the 1920s, when the utility built replenishment facilities designed to capture natural water runoff from the surrounding mountains and reduce groundwater pumping for agricultural use, Oliphant explains.

The utility now operates four replenishment facilities, which essentially are large ponds where water is delivered via open channels and pipelines. Water in the ponds naturally percolates through the sandy native soil and refills the aquifer.

Colorado River water, which is used for agricultural purposes, golf course irrigation and groundwater replenishment, is transported to the valley via the 123.5-mile-long Coachella Canal, completed in 1948.

In 2022, the CVWD received 339,000 acre-feet of water from the Colorado

organization had a lot of foresight to secure surface water supplies, knowing it would be something we'd need as the valley became more urbanized.

“For example, as an ever-growing population produced more and more wastewater, it just made sense to recycle it and use it as another source for irrigating golf courses,” Oliphant continues. “For us, necessity was the mother of invention.”

For its efforts, the district in 2022 was

River and another 6,918 acre-feet of water from the SWP for replenishment and irrigation purposes. (The utility is supposed to receive 138,350 acre-feet of water annually from the SWP, but the amount varies according to state water conditions, which are affected by droughts.) And on average, another 52,000 acre-feet of natural runoff from mountain streams also trickles into the aquifer.

Since 1973, the utility has supplied 4.56 million acre-feet of imported water for replenishment efforts, according to utility statistics. To put that in perspective, about 3 million acre-feet of water is sufficient to satisfy the annual water needs of 6 million families of four, the district says.

And the replenishment program is working; according to a 2020 report from the United States Geological Survey, the aquifer level has increased.

“Thanks to our conservation efforts and our recycled-water programs, we're no longer in an overdraft situation,” Oliphant notes.

### Recycled water is key

The utility's recycled-water program started in 1968 in an effort to decrease the use of groundwater for irrigation. Currently the district produces 5.47 billion gallons of recycled water via high-level treatment processes at two of the utility's five wastewater treatment plants.

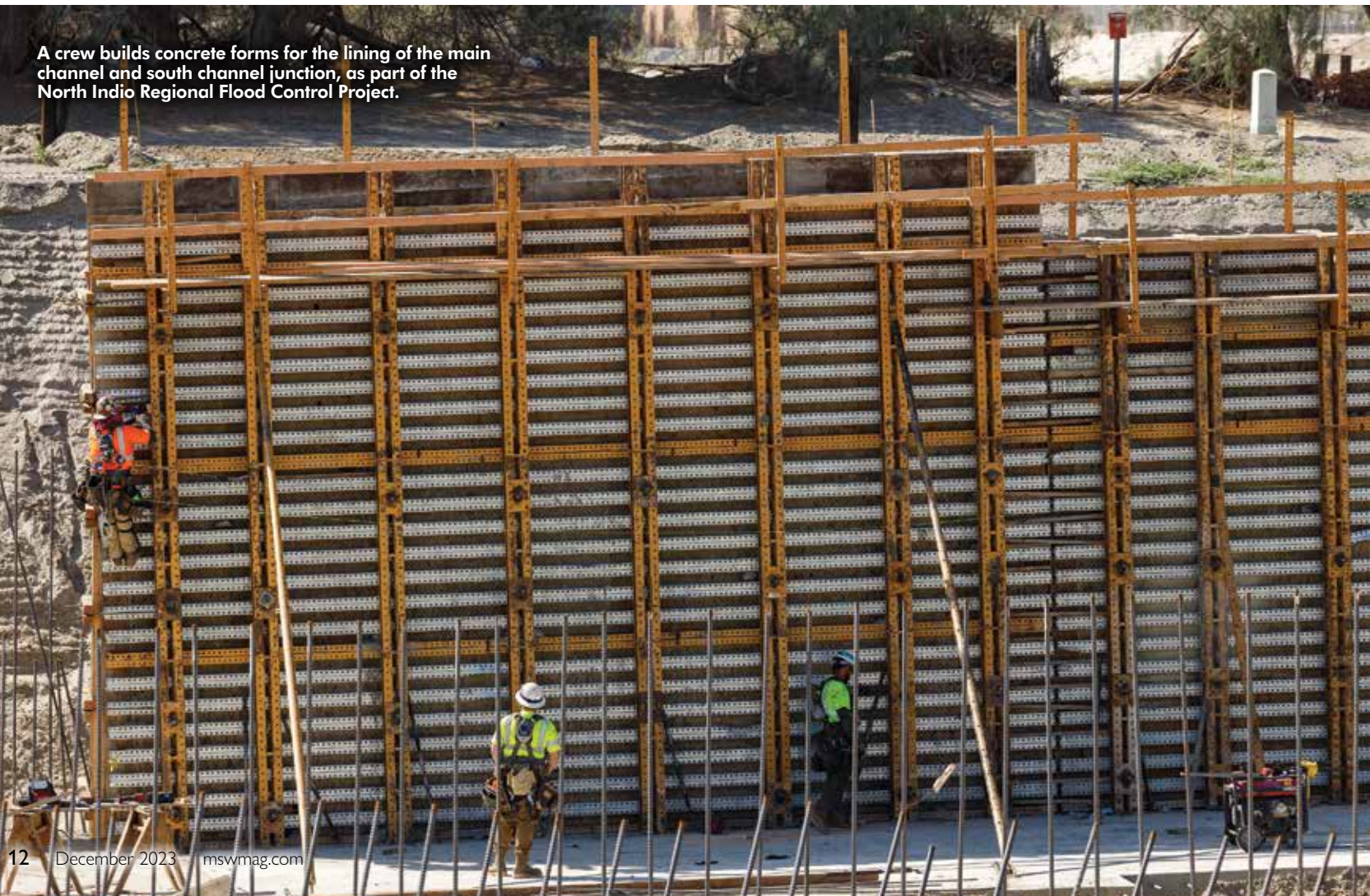
“The wastewater gets treated to a tertiary level,” Oliphant notes. “One of our larger wastewater treatment plants that serves a majority of the valley started recycling water in 1987 and another plant started producing recycled water in 1997.” (Another plant that recycled water was decommissioned in 2017.)

The recycled water is distributed to customers via 31 miles of pipelines.

Another 260,000 acre-feet of supplemental water for irrigation comes from the utility's allocation of Colorado River water, delivered directly to farmers and golf courses by the Coachella Canal and 485 miles of pipelines.

Furthermore, about two dozen customers — mostly golf courses and home-

A crew builds concrete forms for the lining of the main channel and south channel junction, as part of the North Indio Regional Flood Control Project.



## BRINGING SAFE WATER TO DISADVANTAGED COMMUNITIES

The Coachella Valley Water District is concerned about more than just protecting the aquifer that supplies drinking water to 270,000 people living within its service area in Southern California.

The utility also is striving to provide access to safe and affordable drinking water to more than 100 small historically disadvantaged, underserved mobile-home parks that currently rely on well water that sometimes contains unsafe levels of arsenic and/or are very expensive to maintain, says Carrie Oliphant, the CVWD's director of engineering.

The efforts are led by the Disadvantaged Communities Infrastructure Task Force, which includes the utility, nonprofit organizations and local, state and federal agencies. Established in 2016, the task force has developed short- and long-term goals and prioritized projects that eventually will bring clean water, sewer services and flood protection to about 100 mobile-home parks in the eastern part of the valley.

"They're mostly mobile home parks out in rural areas that might have anywhere from a couple hundred mobile homes to as little as 25 homes, mostly occupied by families working in agriculture," Oliphant explains.

The projects have to be funded by grants because the community residents aren't CVWD customers, so the utility can't use rate-payer revenue.

One such grant funded a study the task force performed about five years ago. That study identified the mobile-home parks that would be potential candidates for hooking up to the utility's services.

The task force subsequently developed a master plan that identified about 100 private small water systems and grouped them into clusters of six to 10 projects that make sense logistically for consolidation into the utility's services, Oliphant says.

The task force currently is working on the two top priorities: bringing CVWD water to a total of 16 mobile-home parks at a cost of \$40 million. The biggest components are a 5-mile-long, 30-inch-diameter "backbone" transmission pipeline that will cost \$30 million and initially serve three mobile-home parks and a 1-mile-long, 30-inch-diameter transmission pipeline that will cost \$10 million and serve 13 mobile-home parks.

"Smaller-diameter pipelines will run from the backbone pipelines to the various mobile home parks," Oliphant says.

Residents are consulted beforehand to be sure they want to be consolidated into the CVWD system and assume monthly water bills. So far, no one has rejected the offer.

In April 2022, the utility announced it had received a \$23.4 million grant from the California State Water Resources Control Board to fund part of the 5-mile pipeline, which eventually will be used to connect up to 35 additional communities beyond the initial three.

The task force also secured another \$7 million in state funds for the project.

Projects like this don't happen overnight, Oliphant says, noting that it can take several years to plan, design and build even a relatively short transmission pipeline. But the task force remains focused on its goal of completing about 45 consolidation projects.

"We still have a lot of work to do, but the task force is a very committed group that's intent on working through its established priorities," she says. "It's a very worthwhile effort and we've accomplished a lot in a short amount of time."

"The CVWD is fully committed to making sure all of the communities within our service area have access to safe and affordable drinking water as well as sewer services. It's a continuous commitment, not just a one-time effort, that starts with our governing board of directors and carries down into our staff."

Carrie Oliphant, director of engineering,  
Coachella Valley Water District



Contractors work to replace a water main on Adams Street, under the direction of CVWD.



A crew member builds concrete forms for the lining of the main channel and south channel junction, as part of the North Indio Regional Flood Control Project.



owner's associations — use a nonpotable blend of recycled water and Colorado River water for irrigation during summer, when demand outstrips the supply of recycled water, Oliphant says.

Golf courses also helped reduce demand for irrigation water by removing 165,420 acres of turf from 2015 through 2018. That saves more than 956 acre-feet of water annually, utility figures show.

Moreover, slightly more than half of the area's 105 golf courses use a nonpotable water source for irrigation.

### Conservation is critical

Aggressive and effective water conservation efforts also have reduced the region's reliance on groundwater. Since July 2020, the CVWD has invested more than \$19.5 million to fund rebate and incentive programs that encourage residents to swap out old, water-guzzling toilets for low-volume units; remove grass lawns from their yards; and install smart controllers and leak-detection monitors for irrigation systems.

The programs are making an impact. From 2013 to 2022, customers reduced water consumption by 13% — a decrease of more than 4.8 billion gallons of water. And since 2009, customers have converted more than 23.5 million square feet of grass into desert-friendly landscaping, spurred by turf-conversion incentive programs that have saved another 29,195 acre-feet of water since 2009, according to district figures.

Additionally, more than 13,000 customers have received rebates for outdoor conservation programs since 2006. That's important because nearly 70% of the water used by residents goes toward outdoor use, Oliphant says.

"These residential conservation programs are a high priority because overwatering outdoors is one of the most common causes of water waste in the Coachella Valley. The more we can make conservation a way of life in the valley, the more everyone benefits for years to come."

The utility also has taken other steps to conserve water. For example, it minimizes water loss by using pipes to deliver Colorado River water for irrigation and

by metering all properties served. This results in only a 5% system loss, low compared to industry standards, utility officials say.

The CVWD also lined a 49-mile stretch of the Coachella Canal, which prevents 132,000 acre-feet of water annually from seeping into the ground, according to utility figures.

### A rich legacy

The CVWD was established back in 1918. Their goal: Protect local water resources from outside interests and bring imported water to the area for agricultural irrigation and, later on, for groundwater replenishment. That led to building the Coachella Canal and securing Colorado River water rights.

Since then, the utility has evolved into a sophisticated, multipronged organization that supplies potable water, replenishes the aquifer, provides regional storm-water protection, operates sewer systems, practices water conservation and produces recycled water, Oliphant notes.

Yet despite all these efforts, programs and achievements, utility officials must remain alert to water issues, even though recent record snowfalls and rainfall have eased drought concerns.

"This year the snowpack was good and we received a lot of rain," Oliphant says. "But the fact remains that we're still reliant on imported water and there's always the possibility that drought conditions will impact that. "It's one of the major challenges we face.

"But our future water supply is in good shape, thanks to our long-term water management program — replenishing the Coachella Valley aquifer with imported water, reducing customer water use through conservation programs and increasing the supply and use of recycled water," she continues.

"Nonetheless, we have to remain vigilant and keep looking for innovative ways to reduce water use and maintain the existing infrastructure to ensure water for future generations." ♦

**“For us, necessity was the mother of invention.”**

Carrie Oliphant

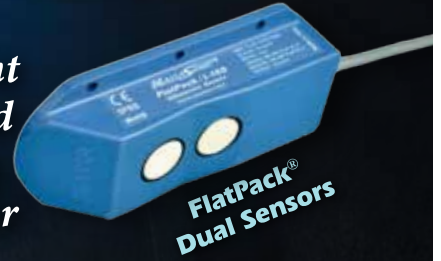


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# PRESERVING INFRASTRUCTURE

Long-term approach to pipe repair solves problems today and protects for tomorrow

By *Glen Steele*

**A** water main breaks every two minutes in the United States, famously spilling enough water each year to fill over 9,000 swimming pools.

Recognition of the need to renew North America's public infrastructure has grown, as reflected in the recent U.S. Infrastructure Investment and Jobs Act. However, the scale of the problem means that even with \$55 billion dollars in new federal funding for water and wastewater projects in the U.S. through 2026, an immediate end to frequent pipe bursts is nowhere in sight.

For now, amid constant emergencies, utilities may find it challenging to take the long view. Speed is of the essence when responding to pipe breaks, to avoid contamination of the system as well to deal promptly with public hazards and inconvenience. But a long-term solution to the endless game of whack-a-mole calls for long-term thinking. The challenges of continual pipe repairs will be with us for quite some time still to come, and each episode presents an opportunity to make choices that will stand the test of time. In many situations, one choice to consider is the use of a high-quality mechanical coupling system.

### Mix and match

For example, one clear challenge in pipe repair is the variety of materials used throughout the water distribution system. In a network that grew rapidly over time, during a period of great technological change, repair crews may find themselves confronted with any one of a wide array of pipe materials — and may not know which ones until they lay eyes on the damage.

Asbestos-cement pipes, also known as transite pipes, were in wide use from the 1930s until the mid-1970s. While asbestos-bearing materials are now banned for new installations, it is estimated that transite pipes account for about 18% of water distribution piping in the U.S. and Canada. Originally popular for its light weight and low cost, transite pipe tends to break very suddenly and completely, without any prior warning from small leaks as may be found with other types.

Repairs to these pipes are challenging at best, since any need to cut the material exposes the crew to risk. A long-lasting mechanical coupling that can connect the transite pipe to a section made of different material may be helpful, especially one that can connect sections aligned at an angle. Now available in an extremely wide range of sizes, modern flexible restraint systems can be installed with nothing more exotic than a torque wrench, and are also able to connect pipes of differing outside diameters.

### Play it as it lies

Stainless steel is another commonly encountered material, with challenges of its own. While not inherently hazardous to human health, breaches in the material are normally repaired through welding or flanging. These methods are costly and labor-intensive, and result in highly rigid connections that are vulnerable to ground settlement or dynamic deflection. Steel's excellent heat retention can also cause warping at high welding temperatures or distortion in the cooling process.

Similarly, joining is not always an ideal solution for HDPE pipe. Butt or electrofusion may produce excellent results, with joints that are actually stronger than the pipe itself. Fusion may not, however, be feasible if

## BETTER MOUSETRAPS

### PROBLEM:

Addressing broken water mains in an efficient, economical and lasting manner.

### SOLUTION:

MULTI/JOINT mechanical couplings from GF Piping Systems

### RESULT:

In the city of Apeldoorn in the Netherlands, MULTI/JOINT units uncovered 20 years after installation were still functioning perfectly and looked brand new.





**Each time a pipe bursts, a decision is made in some sense to repair it for now, or repair it for good.**

there is water in the line, if space is too constrained for a fusion machine, or if there simply isn't time.

In such cases, the right mechanical coupling can provide a long-lasting, flexible restraint connection in short order. Restraint systems that are engineered to allow deflection can join pipes at an angle when needed from the outset. Their flexibility can also help the line deflect rather than break when subjected to future changes in ground conditions.

**Crisis or opportunity**

Sophisticated mechanical restraint systems are a proven solution for water main breaks, and one that offers solutions to many common problems. Public utilities will always face budget pressures, and the highest quality choices will not be lowest in cost — on a short-term basis. But a recent natural experiment testifies to the staying power of wise investment.

The city of Apeldoorn in the Netherlands installed a series of MULTI/JOINT mechanical couplings from GF Piping Systems in its water and gas distribution networks 20 years ago. Recently, the city decided to execute a complete replacement of its piping infrastructure. When the MULTI/JOINT units used in Apeldoorn were uncovered by this project, they looked brand new: a testament to solidly engineered design and to the corrosion protection offered by their epoxy coatings. Having performed without incident for two decades, the MULTI/JOINT couplings were clearly in excellent shape to complete their expected service life of 50 years — or longer.

The right action — right now — can be surprisingly effective in preventing bigger and more expensive problems down the road. Where water infrastructure around the world is concerned, the bill from past decisions more focused on present than future is now coming due. Water main breaks challenge the budgets, ingenuity and foresight of public utility managers each and every day. But this struggle calls for reflection rather than frustration, including reflection on what we owe to future generations.

Each time a pipe bursts, a decision is made in some sense to repair it for now, or repair it for good. The more we invest in long-lasting solutions, in the face of very real pressures to the contrary, the more we invest in a legacy we can be proud of. ♦

*Glen Steele is market segment manager, mechanical couplings at GF Piping Systems Canada. He can be reached at [glen.steele@georgfischer.com](mailto:glen.steele@georgfischer.com).*



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# BEING PART OF THE SOLUTION

When it comes to workplace safety, you can be part of the problem or part of the solution

By *Ronnie Freeman*

Each day we make decisions that can affect our safety. It's no secret that almost 90% of incidents are caused by unsafe acts. The things we do or don't do can lead to an injury or property damage that can be devastating. Since safety comes down to that decision, we each can be a part of the problem or a part of the solution.

The following are some examples of being a part of the problem:

- Taking shortcuts during tasks to get the job done quickly
- Ignoring safety procedures
- Deciding not to speak up when hazards are present
- Having a poor attitude about workplace safety
- Encouraging other employees to not follow safety procedures
- Supervisors looking the other way instead of dealing with safety concerns
- Allowing yourself to become easily distracted
- Removing safety devices on tools and equipment
- Using equipment you were not trained to operate
- Not paying attention during safety training

There are many more examples of employees being a part of the problem. Negative attitudes in regard to safety can create some serious workplace hazards or at least allow them to exist. Even if the poor choices we make do not end in an injury, it can influence others to make those same poor choices that can eventually end in an injury.

The following are some examples of being a part of the solution:

- Taking responsibility for safety in your area or tasks
- Being willing to speak up when you see a hazard or potential hazard
- Being willing to follow safety procedures even if they are inconvenient or take extra time
- Being willing to challenge a co-worker you see working unsafe
- Setting a good example for other co-workers, especially new hires
- Attending safety training with a good attitude and being willing to learn
- Staying focused on the task at hand
- Wearing the necessary personal protective equipment when you are faced with a hazard
- Taking the time to mentor others when it comes to working safely
- Staying alert and aware of your surroundings, being watchful for potential hazards

Each and every employee makes the decision each day whether they are aware of it or not to be a part of the problem or a part of the solution. If you have been a part of the problem, the good news is that it just takes deciding on your part to start being a part of the solution. It takes effort to be a part of the solution, but it is well worth it when the injuries don't happen, and every employee can go home healthy each day to their families.

Bottom line: Remember the three "A's" to safety. Awareness — being aware of your surroundings. Attitude — have the right attitude about safety. Action — taking the necessary actions to correct hazards. ♦



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# A HOLISTIC APPROACH

Columbus goes against the grain and includes residential lateral lining to reduce I&I and fulfill consent decrees

*By Suzan Chin-Taylor and Mary Shafer*

**T**he story's familiar: The EPA issues consent decrees to a municipality for sanitary and combined sewer overflows, forcing rehabilitation of existing underground infrastructure to protect the public and environment from raw sewage spills. The city of Columbus, Ohio, is no exception.

In a concerted effort among many midwestern state EPAs to reduce increasing water pollution and residential backup complaints, Ohio EPA issued Columbus two consent decrees in 2002 and 2004, for SSOs and CSOs, respectively. This became a catalyst for the city to develop a wet weather management plan in 2005.

This plan included plant upgrades, construction of relief pipes/tunnels, pipe upsizing, mainline pipe and manhole rehabilitation, all of which reduced inflow and infiltration into the system. The city also added aggressive preventive cleaning and root removal to its existing CMOM program to reduce basement water backups.

## Going with the flow

The Public Utilities' Sewerage & Drainage Division, which is responsible for sanitary sewers and storm-water management, knew their first task was measurement. They needed hard data to confirm their biggest problem areas, and the actual extent of the issue. They decided to launch some combined flow monitoring and sewer modeling pilot areas.

The division has its own in-house flow monitoring crew, and permanent flowmeters installed throughout the system allow continuous recording of operation. Crews also install temporary flowmeters in areas where they want to identify specific hydraulics for more tailored solutions.

## Groundbreaking decision

City Council came up with an integrative, holistic approach to rehabilitation efforts.

Instead of simply treating overflow symptoms with massive, time-consuming underground construction of tunnels that would cost billions, they asked the more direct question: Why not invest that money in eliminating the actual source of I&I? Everyone knew from location patterns of their worst overflows and basement backups that a significant percentage of that I&I was coming from private residential laterals.

Repairing those laterals from the foundations to the main was the most simple, direct strategy. But first, city leaders had to be convinced that it was a good idea to spend public money repairing private property. Then there was the logistical challenge of the sheer scope of work they were certain would be needed. Finally came the highest hurdle of all: getting citizens on board, because the strategy couldn't succeed without their support.

It was a legally tricky jurisdiction issue, but not impossible. Council members were determined. Blueprint Columbus was established in 2012 and continues successfully today, solving a critical issue facing nearly every American city.

## Old pipes

With a current population of just over 915,000, Columbus is the 14th largest city in the country. The public utilities department serves 906,000 customer accounts — city residents and businesses, as well as contracts with surrounding suburbs — and its S&DD is responsible for both.

Sewer and water infrastructure dates back, in some parts, to the 1880s. The majority, however, was put in the ground post-Great Depression through the 1960s, when the city — like many in the Midwest — experienced its greatest

Matt Wagner, Bryant Bailey and Dan Bokros (from left) of BLD Services prepare to line a junction of a residential sewer lateral for the Columbus Department of Public Utilities, part of a program to address inflow and infiltration from private properties.  
PHOTOGRAPHY BY JAMES DECAMP



**PROJECT:**  
City of Columbus, Ohio,  
Public Utilities Department

**ESTABLISHED:**  
1812

**AREAS SERVED:**  
Columbus and 30 surrounding communities

**POPULATION:**  
915,038

**GEOGRAPHIC AREA:**  
223 square miles

**EMPLOYEES:**  
392

**COLLECTION SYSTEM:**  
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columbus.gov

growth. This puts the average age of the collections system at about 75 years, with some a bit younger and much of it significantly older.

Central Ohio is relatively flat, but Columbus's 4,500-plus-mile collections system was designed to take advantage of gravity flow as much as possible. The system feeds into two wastewater treatment plants. The Jackson Pike plant is designed for 68 mgd and can handle 150 mgd peaks, while the Southerly facility was designed for 114 mgd with 330 mgd peaks.

### Confirming data

Columbus's combined collections system had its mainline and manhole I&I

issues, but all decision makers involved were sure that if they could effectively stop what was flowing in from the laterals, they could meet the demands of the consent decrees.

As part of the original 2005 WWMP, the city's Clintonville and Linden areas had gotten their mainline sewers lined previously, in response to the original consent order. That meant any I&I still coming in had to be from the laterals, so a pilot flow metering project was set up there. This was done with a limited number of residential laterals lined on a voluntary basis, until City Council could come up with a way to broaden their legal access to private lines.

This would show a contrast between sewers that had been lined only on the



**“A lot of these people are grateful it’s being done, because it’s a real benefit to them.”**

**Nick Domenick**



Dan Bokrors, Matt Wagner and Bryant Bailey (from left) feed an inflatable bladder into a manhole while lining a sewer lateral.

## “SILICON HEARTLAND” POSES INFRASTRUCTURE CHALLENGES

Unlike most upper Midwestern cities, significant areas of Columbus, Ohio, are being redeveloped. As in most places across the nation, Columbus is feeling an acute housing shortage. Google, Facebook and Amazon are all building data storage and distribution facilities there, and the recent kickoff of a new Intel semiconductor chip plant has turned the city into part of an area dubbed “Silicon Heartland,” in a book of the same title by author Rebecca Fannin.

Neighborhoods that used to hold tiny apartment buildings with maybe four units are now being converted into six- or seven-story buildings holding 50 apartments. This rapid growth is one of the city’s biggest challenges, says Project Manager Nick Domenick, and existing wastewater infrastructure that ties into the main is sometimes getting upgraded in the process.

“They keep building new apartments and homes, both within the city proper and redevelopment of outlying parcels. This is altering the land use, changing it from what was once more suburban type, single dwelling areas and putting multistory apartment complexes on them. It changes flows within the sewer.”

The city must constantly adapt to those changing flow conditions and ensure capacity both for redevelopment within the city core and in surrounding communities to which they provide service. The Intel plant alone will require around 20 mgd of water and will produce a comparable amount of wastewater. With a population projection of 3.15 million by 2050 for the 15 counties in central Ohio, it’s going to be a scramble to keep pace in wastewater management.

mains, with others that also had the laterals lined. They could be in streets right next to each other, for direct comparison. Crews also installed sump pumps in houses in a different area, and monitoring meters measured how this affected groundwater around the foundations. They added flowmeters in sewers immediately downstream to gauge what effect the sump pumps had on reducing sanitary sewer flows, since they knew much of the water enters through the 4- to 6-inch transition from house to lateral just outside the foundation wall.

A concerted effort was made to distribute lateral lining or sump pump pilots among different types of properties, representative of those in all citywide areas that would need to be addressed.

### New ground

With mains taken care of and lateral pilot programs in place, the Sewerage & Drainage Division turned its attention in 2006 to CMOM initiatives that focused on structural integrity and maintenance, creating a Large-Diameter Sewer Assessment program.

“Because many of our internal crews don’t possess the equipment to televise sewers larger than 42 inches, we needed this program,” recalls Nick Domenick, P.E., project manager for the city of Columbus, Department of Public Utilities.

“Since our large-diameter sewers had never been fully assessed previously, we thought it’d be a good chance to get an idea of their condition. Given the expense of televising that sheer number of sewers, we developed a program to prioritize them.”

The idea was to televise about 40,000 lineal feet of large-diameter sewer every year for 20 years. “We just have that much LD footage,” explains Domenick, “so we started doing that, and realized that by releasing larger packages of work, we were able to achieve some economy of scale.”

The division started putting together 80,000- and 100,000-foot-long work packages, and recently completed everything within the sanitary system. They’re now shifting focus to televising their stormwater sys-

Matt Wagner from BLD Services measures a long section of felt tubing as they prepare to line a sewer lateral at a Columbus residence.





**Bryant Bailey (left) and Corey Green prepare to line a sewer lateral to help address private-side I&I.**

tem. “Through the use of consultants and CCTV vendors televising every lineal foot of large-diameter sanitary and combined sewer we have, we’re making strides on our storm side, too,” Domenick says. The result is identification of a significant quantity of necessary work, about \$200 million worth, which needs to be done within the next 5 to 10 years.

“The challenge now is prioritizing that work from an affordability standpoint, making sure we don’t have a huge hit to our ratepayers, that we’re maximizing existing service life, and performing intervention at the right time. Because when you assess these sewers and you see exposed rebar on hundreds of thousands of feet of pipe, it’s like, ‘Gosh, where do we start? Which one takes priority?’ This is where classic criticality analysis, looking at likelihood and consequence of failure, comes in. That affects the timing in our overall program, what part of town it’s in, and packaging the work into logical groupings,” Domenick says.

### Bold approach

Soon, data from the pilot programs began coming in, confirming suspicions about the bulk of their I&I. Meanwhile, City Council had been working on the legal nitty-gritty of getting legal access to residential laterals.

“We needed something to give us the authority to spend money on assets located on private property, which we don’t own,” Domenick recalls. In a bold move, the City Council enacted an ordinance declaring I&I an official public nuisance. This gave them authority to do what was necessary to stop the nuisance at its points of origin.

This would be accomplished by asserting a temporary Right of Access to perform work on the laterals. Because CIPP or sliplining would be used, ordinance language allowed trenchless access to the pipe at the main, or through a clean-out; and within reason, the work could go on as long as it took to complete. Ownership of the assets would never actually change hands.

One point used to justify the expense of lining residential laterals was the alternative: having to build large-diameter tunnels to capture overflows, while still not addressing the problem’s root cause.

“Let’s actually go in and try to get the water out of the system,” was the idea, according to Domenick. “It might not eliminate the tunnels entirely, but it might shorten them, or make them a smaller diameter,” and therefore less costly.

### Consumer education

That decision made, the next step would be most crucial: Selling it to Columbus citizens.

“The biggest challenge is the public interaction component of it,” Domenick states unequivocally. “Educating your customers about the value of it, and why this is the best expenditure of the ratepayer’s money. I think you don’t experience the ‘NIMBYism’ if you do an adequate job of explaining to them the rationale of why you want to do this in their neighborhood.”

**“Let’s actually go in and try to get the water out of the system.”**

**Nick Domenick**

### Getting to work

As the publicity machine was revving up, the actual work was being initiated. The largest part of the lateral lining went to BLD Services of Kenner, Louisiana. Their process works from the main line and doesn’t require clean-out access.

In the initial project areas, Sewerage & Drainage Division televised the laterals prior to releasing the bid package, so they had a better idea of whether or not they required significant point repairs or root removal prior to lining.

Domenick says they performed a sort of regression analysis. “We did some statistics on the number of laterals that actually needed a point repair. After we released the bid packages and started doing the work, we began keeping statistics on the ones that had a ton of roots in them, those that may have needed a cleaning to remove them. There are technologies out there now that allow for root removal from the main, another advancement I think has really yielded a lot of benefit to both us and the contractors. We don’t have to go onto private property to install that clean-out, and incur that cost. And from a customer service standpoint, we don’t have to tear up their yard. It also eliminates the need for potentially having to dig the lateral up for roots, too.”

They started out with 500 laterals per contract, then realized the contractors could handle more and still get done within needed timelines. On average at this point, they’ll release 750, and in some cases up to a thousand. Individual project areas are usually somewhere between 500 and 750. “We do have one coming up that’s going to be 1,200, and there’s not going to be any stop to this in the near future. It’s going to be multiple contracts for the next 20 years.”

BLD was awarded the projects more by virtue of their size, which allows them to achieve economies of scale in material sourcing.

“They’ve won most of the projects to this point,” Domenick says. “I think we’re on our eighth or ninth lateral lining project at this point. We’re about 4,000 or 5,000 laterals in, of the Blueprint areas we’ve gone into. And we’re only in our second of 20 Blueprint areas.”

Post-construction sewer flow monitoring has confirmed that the combination of mainline sewer, manhole and lateral lining has been reduced overall I&I by an average of 57%.

“We’ve largely completed all our improvements to satisfy the CSO consent decree,” Domenick says. “It’s the SSO one where the bulk of the work remains.” ♦

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# COMMUNITY MATTERS

Utility collaborates with local groups to improve residents' quality of life

By Ken Wysocky

In 2011, the Camden County Municipal Utilities Authority helped build a rain garden on a former “brownfield” parcel of land where an abandoned gas station once stood in the disadvantaged Waterfront South neighborhood in Camden, New Jersey.

The work was performed under the auspices of a group the utility formed called the Camden SMART Initiative, or Stormwater Management and Resource Training, a collaboration between the city, the utility and other public and pri-



Joe Myers

We invite readers to offer ideas for this regular column, designed to help municipal and utility managers deal with day-to-day people issues like motivation, team building, recognition and interpersonal relationships. Feel free to share your secrets for building and maintaining a cohesive, productive team. Or ask a question about a specific issue on which you would like advice. Call editor Luke Laggis at 800-257-7222, or email editor@mswmag.com.

vate groups and agencies. The organizations were united around a common goal: Build “green” stormwater infrastructure projects that would help remediate the effects of urbanization on the area’s waterways.

Within a couple of years, the SMART initiative morphed into the Camden Community Initiative, a solutions-oriented partnership between governmental, nonprofit, private and community-based agencies and groups with even bigger collective ambitions: improve the environment, health and quality of life for residents of Camden, an environmentally and economically distressed city.

“A one-time project became something much bigger and better,” says Scott Schreiber, executive director of the CCMUA. “That rain-garden project went so well that we decided to figure out how to help out Camden in a multitude of different ways, such as reducing air pollution, stopping illegal dumping and other things.”

In 2016, the CCI received an Environmental Champion award from the U.S. Environmental Protection Agency, given to groups that represent exemplary public-private partnerships.

## Serving the greater good

The CCMUA’s community outreach efforts offer a valuable lesson for other utilities nationwide: By establishing themselves as so-called “anchor” institutions, utilities can work with diverse groups of stakeholders and make a significant positive difference for the people who live in the communities they serve.

“In New Jersey, we’re considered a model utility because of our ongoing commitment to societal and environmental issues,” Schreiber says. “We’re an example of what good government can be.”

“The CCMUA has been a true leader in this area in terms of understanding and analyzing underground infrastructure from a completely different perspective,” says Joe Myers, chief operating officer of the Camden Community Partnership, a grassroots nonprofit group that’s essentially the backbone of the CCI, providing staffing and administrative services. “They’re looking at the infrastructure through the lens of future generations.

“The CCMUA also challenges all of its partners to evaluate infrastructure from a generational perspective.”

Schreiber says his predecessor, Andy Kricun, was instrumental in the CCMUA’s outreach efforts that led to the formation of the CCI.

“He certainly deserves a lot of credit for all of this,” he says.

## Image makeover required

The utility didn’t always have such a sterling reputation. The utility was not considered a good neighbor, especially after the late 1970s, when it expanded an existing wastewater treatment plant in the middle of the Waterfront South neighborhood so it could handle all the wastewater from about three dozen communities. The ensuing foul odors from the Delaware No. 1 Water Pollution Control Facility, which now treats 58 million gallons of wastewater per day, posed a severe hardship on residents, Schreiber says.

Residents vehemently opposed the expansion, just as they opposed the decision



**“We’re extremely pleased to be able to engage residents and improve their quality of life.”**

**Joe Myers**

“We needed to change from being viewed as bad actors to being an integral part of environmental solutions for Camden,” Schreiber notes. “Our very existence was an environmental justice issue.”

Slowly but surely, however, the utility stepped up its game. Around 1999, it spent more than \$50 million on odor control technology at the wastewater treatment plant.

“That got us to what I would call a neutral place, where we were no longer hated by the community because we were doing what’s to be expected by a good neighbor,” he says.

“Then came the realization that by using state revolving funds and by partnering with other entities, the CCMUA could actually benefit the city and address various needs it didn’t have the wherewithal to handle itself.”

The utility also used a grant from Camden County to turn an abandoned industrial site along the Delaware River into Phoenix Park. Completed in 2017, the park provides riverfront access to residents and includes green infrastructure that mitigates flooding by capturing 5 million gallons of stormwater annually.

**Helping disadvantaged youths**

Furthermore, the utility established a Green Ambassadors program, which provides five-week summer internships for 10 to 20 high school students who work on CCI green-infrastructure projects. More than 45 students have “graduated” from the program.

It also established a PowerCorps Camden (an offshoot of AmericCorps) that increases economic opportunities for up to 60 disadvantaged “at-risk” youths a year by hiring them to maintain various green infrastructure projects.

“These programs help break down barriers to employment and foster economic opportunities, while simultaneously transforming Camden into a healthier, greener, more sustainable city,” according to a report from the US Water Alliance.

In addition, the CCI, in conjunction with the CCMUA’s SMART program, has built 49 green infrastructure projects throughout Camden that capture and naturally filter more than 60 million gallons of stormwater a year that otherwise would contribute to combined-sewer overflows, Schreiber and Myers say.

The CCI team also has distributed 223 rain barrels to Camden residents, planted 1,458 trees, engaged 4,000 community members, hosted 33 sustainability events and workshops and collaborated with more than 40 project partners in developing green infrastructure projects and programs. And more than 100 residents have joined the Adopt-A-Drain program, in which they clear debris from storm drains to reduce flooding and water pollution, Myers notes.

“We’re extremely pleased to be able to engage residents and improve their quality of life,” he says. “I’d say the idea of a collaborative, multi-disciplinary team looking at addressing stormwater management in an urban environment is very unique.

“Usually it’s just a municipality working on problems, but here we’re bringing together many resources and a lot of knowledge to the table to better effectuate change,” Myers says. “That’s the strength of this initiative.”

to site a prison there (now demolished) and a trash-incineration plant. Those projects represented ongoing environmental injustice, with the poverty-stricken neighborhood serving as a dumping ground for unwelcome projects.

**A dramatic turnaround**

Schreiber says it’s been extremely gratifying and rewarding to see the progress that’s been made through the CCI’s efforts.

“I really am thrilled because it has had substantive impacts on the city and turned attention to issues we were concerned about,” he says. “When you start thinking about the city and its needs, it’s amazing how you can find ways to benefit the people who live here.”

From the green stormwater infrastructure projects that help mitigate flooding to the internships (four interns recently were hired for full-time jobs with six-figure salaries) to a recent \$2.6 million grant the CCMUA was awarded to address flooding in a Camden neighborhood, the utility is making a difference on many levels in the community. And the CCI is at the hub.

“FEMA came to us because they had extra funding and heard about what we were doing [through the CCI],” Schreiber says of the grant. “None of these things would’ve happened without that first rain garden in Waterfront South.” ♦

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Sheila Joy is executive director of NASSCO. She can be reached at [director@nassco.org](mailto:director@nassco.org).

# PACP VERSION 8 LAUNCHING SOON

NASSCO has vetted all recommendations and addressed code update requests to improve assessment programs

By Sheila Joy

In early 2024, after eight years of identifying improvements, updates and developing new content, NASSCO will release Version 8 of its Pipeline Assessment Certification Program, Lateral Assessment Certification Program and Manhole Assessment Certification Program.

Since 2002 PACP, LACP and MACP have grown to be a national standard throughout North America and the trusted source for proper and consistent assessment condition coding of pipelines, laterals and manholes. The programs also continue to receive rapid acceptance and growth in South and Central America. The goal of these programs is to help pipeline system owners create comprehensive databases to properly identify, plan, prioritize, manage and renovate their assets based on condition evaluation.

NASSCO's Infrastructure Condition Assessment Committee, staff and consultants have worked tirelessly to review and vet all recommendations made to improve the programs and address code update requests. Below are some of the additions and changes to look for in PACP Version 8:

- New Codes for pressure pipe assessment
- New codes for perforated pipe
- Update of condition grade scores
- Update of stormwater codes (aligned with AASHTO stormwater guideline)
- Additional surface damage codes to address materials other than concrete
- Coding of new versus existing pipe
- Reorganization of the manual to allow a more logical progression from PACP to LACP to MACP
- Update of photos, illustrations and examples

If you are currently certified in PACP Version 7 but your certification term does not expire for a while, you may want to consider upgrading to certification in PACP Version 8:

- PACP professionals who became certified prior to June 1, 2023, may purchase an online upgrade course and manual (digital and hard copy) for \$175.
- PACP professionals who became certified after June 1, 2023, but prior to launch of PACP Version 8, will be provided a revised manual in digital format and an online upgrade course at no cost, with optional purchase of a hard copy of the PACP manual available for \$85.
- In either case, original certification dates will remain the same.

In tandem with the release of PACP Version 8, NASSCO is offering two new online courses to support individuals who may not be PACP-certified but need to know the basics in the evaluation of condition codes and assessing risk.

## PACP for Asset Management - Evaluating Condition Grades

This course will give an overview of PACP codes, the rationale behind the condition grades and scoring systems, and automated reports. This is intended for utility managers who require an understanding of NASSCO condition assessment results and how they can be interpreted to support proactive maintenance plans.

## PACP for Asset Management - Assessing Risk

A course for utility managers and engineers to understand how NASSCO's PACP condition assessment results combined with computerized maintenance management

systems and off the shelf tools such as GIS can be used to predict maintenance, rehabilitation and/or replacement of gravity piping systems.

It's important to note that upon the release of PACP Version 8, PACP Version 6 and earlier will be discontinued.

For more information or to take a NASSCO training course, please visit [nasscotrainingsource.org](http://nasscotrainingsource.org). ♦

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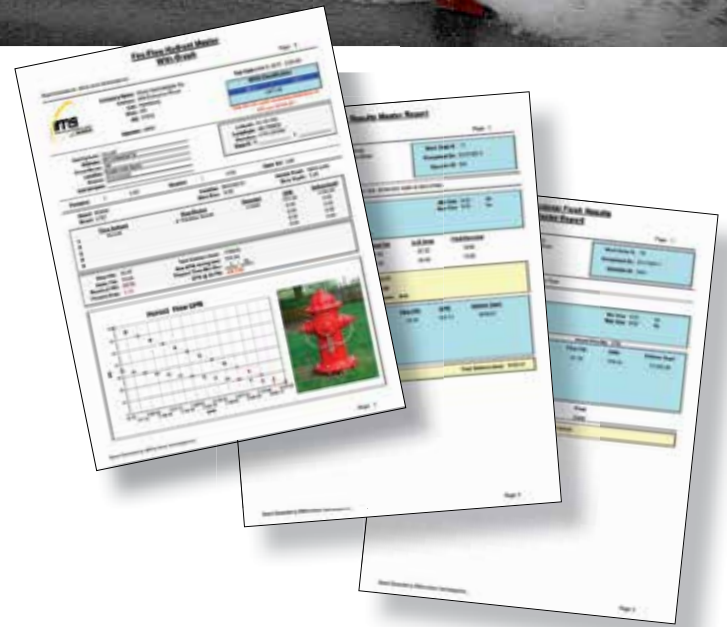
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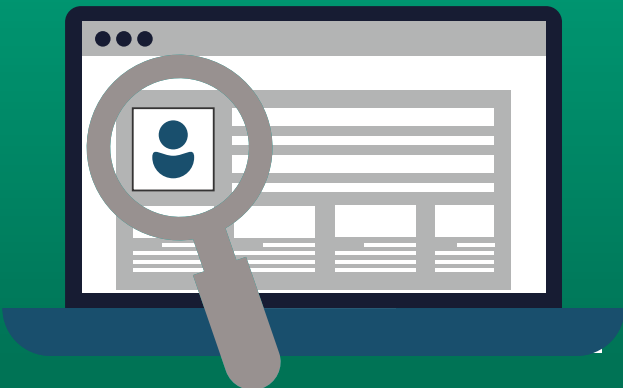
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# STORMWATER MANAGEMENT

## Catch Basin

### Ladtech HDPE adjustment rings

**Ladtech HDPE manhole and catch basin adjustment rings** are a suitable alternative to concrete rings. The company offers a full line of round, square and rectangular adjustment rings. The product lines also include sloped rings and 1/4-inch thick spacer rings that simplify grade adjustments, which takes the trial and error out of matching the finished grade. **877-235-7464; www.ladtech.com**



## Catch Basin Cleaners

### Hi-Vac Aquatech B10-1450

The **Aquatech B10-1450 combination jet/vac system** from **Hi-Vac** has an operator-focused design that makes for a safe and quiet work area. The rear-mounted hose reel keeps the operator off the street, out of traffic and away from blower noise while providing ample power. In addition, the top-loading boom and one-piece vacuum hose provide unlimited 360-degree operation. This flexibility means safe, easy placement of the unit regardless of the manhole or excavation location. Its triplex 150 gpm pump maintains a robust flow rate, and the integration of a high-performance 27-inch Hg blower results in efficient vacuum loading. **800-752-2400; www.aquatechinc.com**



### Vactor 2100i catch basin

The **Vactor 2100i catch basin** provides all of the advantages of the traditional 2100i, but with an improved air-routing system that provides an efficient air flow path for both the single-stage and dual-stage fan or a positive displacement blower configuration, resulting in outstanding performance and maximum productivity, according to the maker. Ergonomic controls make it easy to operate and maintain. For those who want to expand capabilities beyond catch basin cleaning and into vacuum excavation, a hydroexcavation package can be selected. Water system and water heater options are available to enhance the hydroexcavation performance. Features include Intuitouch one-touch controls, a Jet Rodder water pump, a high-strength aluminum water tank, a quieter engine design and high ground clearance. Options include water heaters and cold weather features. **815-672-3171; www.vactor.com**



## Collection System

### Oatey Mystic Rainwater Collection System

Easily collect and recycle rainwater with the **Oatey Mystic Rainwater Collection System**. This system directs rainwater from a downspout into a collection barrel. It is easily installed and will fit on a standard 2-by-3-inch residential downspout. Step-by-step instructions are included along with a 4-foot-high flow hose to connect the diverter to the



collection container. The two-piece design is made of durable, UV-resistant material and can be painted to match the downspout color. **800-321-9532; www.oatey.com**

## I&I Detection/Prevention

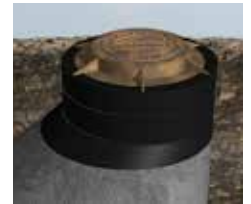
### Avanti International AV-100

**AV-100 chemical grout** from **Avanti International** is used to rehabilitate storm and sanitary sewer systems by eliminating infiltration in manholes, mainlines, joints, laterals and lateral connections, and before or after various forms of CIPP lining. It is injected after lining seals in the annular space between host pipe and liner, and lateral reinstatement, which are the primary sources of infiltration. It is an ultralow viscosity, chemically reactive gel with a similar viscosity to water. It can permeate anywhere water can travel and has adjustable cure times from seconds to hours, creating an effective, long-lasting water barrier while providing soil stabilization. **800-877-2570; www.avantigrout.com**



### CCI Piping Systems WrapidSeal Manhole Encapsulation System

The **WrapidSeal Manhole Encapsulation System** from **CCI Piping Systems** consists of an engineered primer and a wrap-around, heat-shrinkable sleeve designed to seal joints and prevent groundwater from entering a collections system. This material has a high-shrink membrane (70% stretch and 40% recovery) designed to shrink around any manhole profile. In addition, the high-tensile strength accommodates structural movement, while the tough backing resists soil stress and provides suitable abrasion resistance. It can be used for new construction or for the rehabilitation of existing manholes to control infiltration through joints and prevent deterioration, thus eliminating costly maintenance repairs and the added expense of treating groundwater. **800-867-2772; www.wrapidseal.com**



### Cretex Specialty Products Internal Chimney Seal

**Cretex Specialty Products Internal Chimney Seals** are mechanical, so there is no need to worry about surface adhesion or stopping active leaks prior to installation. The seals eliminate and prevent manhole chimney inflow. During wet weather, clear water enters the manhole through deteriorated and broken chimney joints, which may burden the collections system. The chimney seal has a 50-year design life and is available in four widths, allowing complete chimney coverage up to 24 vertical inches with a single seal. **800-345-3764; www.cretexseals.com**



### CUES LAMP II

The **CUES LAMP II (Lateral and Mainline Probe II)** can assist in locating buried assets and help prevent potential cross-bore risks. It is an inspection tool for identifying infiltration and inflow, potential cross bores, pipe defects and structural conditions in lateral services and mainlines. When used with the optional Mini Pan & Tilt Cameras, it can inspect lateral services and tra-



verse multiple bends and wyes when deployed with or against the flow. Mainline inspection is accomplished with a pan, tilt and 40-1 zoom camera. It can pull 1,000 feet of video cable, reducing traffic control expenses while increasing production, and launch 150 feet or more into the lateral. The package includes a detachable steering wand, self-leveling camera head, built-in lens wiper, 360-degree pan and tilt, four banks of LEDs with variable light intensity, and a built-in sonde with switchable frequencies. **800-327-7791; www.cuesinc.com**

## Envirosight ROVER X HD

The **ROVER X HD** sewer inspection system from **Envirosight** helps municipalities target high-priority areas for inspection, empowering wastewater professionals to pinpoint and characterize I&I sources in mainlines and laterals. It is suitable for performing detailed assessments that provide direct insights into areas of concern. With 12 quick-change wheel options, it can inspect lines from 4 to 96 inches in diameter and keep setup time short. Six-wheel drive with proportional steering navigates it past obstacles, and its overlapping wheels climb offsets with ease. Plus, powerful motors and a geared drivetrain maximize travel range. **866-937-1718; www.envirosight.com**



## Sauereisen Manhole ChimneySeal No. F-88

**Manhole ChimneySeal No. F-88** from **Sauereisen** is an elastomeric lining composed of fiber-reinforced, asphalt-modified urethane. It is self-priming with water absorption of 0.05%. Applied by gloved hands at 1/8-inch minimum thickness, it provides a flexible barrier or gasket seal for the prevention of water infiltration. It resists the stresses and movement associated with freeze/thaw environments while maintaining ideal elasticity/adhesion over temperature ranges from -30 to 250 degrees F. **412-963-0303; www.sauereisen.com**



## Superior Signal Smoke Fluid Systems

**Smoke Fluid Systems** from **Superior Signal** are used to find faults and sources of surface water inflow in collections systems. Smoke fluid is both high-quality and economically priced. Blowers are engineered for smoke testing, using a double-insulated heating chamber with stainless steel injector to maximize dry smoke output and produce quality, liquid-based smoke. Blowers can be configured to work with Superior Smoke Candles. **800-945-8378; www.superiorsignal.com**



## Lift Stations/Wet Wells

### PRIMEX Eco Smart Station

The **Eco Smart Station** control system from **PRIMEX** provides a safe, energy-efficient solution for optimum pump control in municipal lift station applications. It uses the latest technology in VFD, microprocessor-based controller, data storage and communication capabilities available. It achieves up to 30% energy savings using an efficiency auto-tune algorithm that searches for the pump speed that will consume the least amount of energy per gallons of liquid pumped. It is housed in a multiple-compartment Arc Armor Enclosure, reducing the risk of injury resulting from electric shock and exposure to arc flash. It features the Energy View controller powered by kW Logix software, an energy-efficient solution. The color touchscreen HMI provides level control, pump alternation, flow monitoring, data logging, alarm logging, historical trending and



comes equipped with a SD memory card for data storage and download. It is available in 29 models, from 10 to 100 hp.

**844-477-4639; www.primexcontrols.com**

## Saniflo Sanicubic 2 VX

The **Sanicubic 2 VX** lift station from **Saniflo** provides above-floor drainage for multiple plumbing fixtures for a commercial structure, eliminating the need for costlier and less convenient pit installations. It is an ideal solution for projects where conventional, below-floor drainage is impossible or too costly to install. Equipped with two 1.5 hp motors, the lift station is capable of discharging effluent through either 2- or 4-inch rigid pipe and offers a shut-off head of 43 feet. It employs an internal air pressure switch for automatically cycling the unit on and off. The unit also comes equipped with a wired control panel, as well as an external audible and visual LED indicator alarm in the event that a pump experiences overload or ceases to operate. Featuring easily removable circular panels on top, the IP68 enclosure permits ready access to every major component inside. **800-363-5874; www.saniflo.com**



## Smith & Loveless CAPSULAR Underground Pump Station

The **CAPSULAR Underground Pump Station** from **Smith & Loveless** provides an operator-friendly and economical solution for large-flow pumping up to 20,000 gpm. With a Safe-Stair entryway module and integrated HVAC, the pump station design meets the OSHA definition of "designed for continuous human occupancy" and therefore does not require classification as confined space entry. It comes with simplified, yet powerful QUICKSMART touchscreen controls and a spacious interior offering a variety of user options including shelving, work desks, sinks and storage. The station is pre-engineered and fabricated, allowing for simple installation and future flow capacity increases via adaptation of additional pumps or larger rotating assemblies.

**800-898-9122; www.smithandloveless.com**



## Pretreatment

### BioMicrobics BioSTORM

**BioSTORM** from **BioMicrobics** provides a sustainable, low-maintenance management solution for decentralized and remote locations. The two-stage process prevents pollutants such as trash, debris, sediment and hydrocarbons from entering storm drainage networks from parking lots, highways and other impervious surfaces. It catches surface runoff before it reaches watersheds, protecting streams from pollutants and supporting natural ecosystems. Certified to NJDEP standards, its pre-engineered design removes trash, sediment, oil and other suspended debris in the stormwater. The complete system combines litter control screening with TSS separation as part of an effective stormwater management system. Each system includes the StormTEE litter screen and BioSTORM hydrodynamic separator. Model size and stormwater capacity ranges from 0.5 to 10 cubic feet per second.

**800-753-3278; www.biomicrobics.com**



### Gorman-Rupp SFSC pumps

**SFSC** pump models from **Gorman-Rupp** are equipped with Eradicator Plus solids reduction technology, and are designed for applications where nonwoven flushable wipes, trash bags, hair, indus-



# PRODUCT FOCUS

trial byproducts and agricultural wastes are present. All pumps are equipped with a rugged, heavy-duty continuous vane impeller for the most aggressive waste-handling applications. The pumpout vanes incorporated into the thick back shroud help prevent the buildup of debris behind the impeller. The wear plate utilizes notches and grooves with an oversized lacerating tooth designed to cut and shred organic solids before they enter the pump. They are available in 3-, 4- and 6-inch discharge sizes. **419-755-1011; [www.grpumps.com](http://www.grpumps.com)**

## Stormwater Management

### Enz USA Bulldog Manhole Nozzle

The **Bulldog Manhole Nozzle** from **Enz USA** was designed to clean lift stations and vertical pipes. It eliminates the disposal process by emulsifying the grease. This allows the operators to pump the resulting wastewater to a sewage treatment plant. A job that could take hours to do can now be done in 20 or 30 minutes. There is no water loss from leaks and it requires no maintenance.

**888-369-8721; [www.enz.com](http://www.enz.com)**



### Hach Flow Advanced Data Report

**Hach Flow's Advanced Data Report** augments the data provided through the Data Delivery Services program. DDS bundles flow and rain monitoring equipment, service and support, and data at a fixed, monthly cost, easing the burden of short and long-term flow monitoring projects. The report can be tailored by application, such as for wet weather impacts, high level/surcharge monitoring, capacity and more. A report with a wet weather focus provides a cleaned, model-ready dataset as well as a polished, detailed report including wet and dry weather analysis, hyetograph and hydrograph analysis, flow balancing between locations and peak flows. Armed with a wet weather focused advanced report, which can easily be shared with other stakeholders, collection system managers can glean insights about their stormwater and collection system health, better pinpoint surface water issues arising from rain events, and make informed decisions.

**800-220-2279; [www.hach.com/flow](http://www.hach.com/flow)**



### Pipeline Renewal Technologies Quick-Lock

**Quick-Lock** sleeves from **Pipeline Renewal Technologies** target failing pipes where vulnerable and seal out groundwater. They install in minutes with minimal manpower and no resin. Positioned by a crawler (or a pushrod in lines as small as 4 inches), and expanded pneumatically with an air-compressor, the sleeves provide structural, trenchless pipe repair to resolve problems such as infiltration, longitudinal cracks, separated joints and abandoned laterals. The sleeve has a locking system that once expanded ensures it stays permanently in position. It has its own static capability and absorbs the natural tectonic movements of the pipes. An EPDM rubber gasket provides infiltration abatement. Both sleeve and gasket are chemically resistant against sewage, thinned acids, lye and aromatic and chlorinated hydrocarbons. Multiple sleeves may be interleaved to perform long repairs. The sleeves minimize diameter loss, and are available in diameters ranging 4 to 72 inches.

**866-936-8476; [www.pipelinert.com](http://www.pipelinert.com)**



### Sealing Systems Flex-Seal 2.0

**Flex-Seal 2.0** from **Sealing Systems** is an all-purpose sealant that adheres to many surfaces and has over 800% elongation. It is designed to prevent I&I and to provide corrosion protection at the grade adjustment ring section or joint section of manholes



and catch basins. It's 100% safe and Prop 65 compliant. The internal seal is manually applied using a paint brush and the kit is designed to cover 12 vertical inches on a 27-inch-diameter manhole.

**800-478-2054; [www.ssisealingsystems.com](http://www.ssisealingsystems.com)**

### Sprayroq SprayShield Aqua Guard

**SprayShield Aqua Guard** from **Sprayroq** is a highly moisture-tolerant, corrosion-resistant lining for municipal water and wastewater assets. It reduces expensive downtimes and provides unparalleled ease of use and application in the field, according to the maker, making it a go-to solution for protecting new assets and preserving aging infrastructure. It is suitable for wastewater applications such as tanks, basins and clarifiers, to stormwater assets including reservoirs and penstocks.

**205-957-0020; [www.sprayroq.com](http://www.sprayroq.com)**



### Super Products Camel Max Series

**Camel Max Series** combination sewer cleaners from **Super Products** allow operators to perform various tasks with jetting, vacuuming and excavating. The product line comes in a variety of model configurations: 900 Dump, 1200 Dump, 1200 Eject and 1200 Wastewater Recycle. All 1200 models come standard with a high-dump subframe, eliminating the need to back up a ramp for debris removal. The 1200 Dump is capable of dumping into a 42-inch container while maintaining a low overhead height and a low center of gravity for increased stability. The 1200 Eject allows operators to dump safely into a 48-inch container without use of additional containment products. The 1200 Wastewater Recycle enables operators to clean sewers without using freshwater, and is capable of cleaning nearly 3,000 feet of sewer pipe per day and saving 60,000 gallons of water per week.

**800-837-9711; [www.superproducts.com](http://www.superproducts.com)**



### Tech Products StormDrain Markers

**StormDrain Markers** from **Tech Products** are deep embossed markers made for high traffic areas where it is important to protect fragile ecosystems. Using high-tonnage presses, a logo or other information is embossed onto the marker to allow the copy to be easily read long-term. They are suitable for use on sidewalks, roadways and curbs. They can be attached either via epoxy, concrete anchors or directly to the surface via a hammer.

**800-221-1311; [www.techproducts.com](http://www.techproducts.com)**



### Xylem Vue

Utilities often lack real-time data and visualization around how their sewer system is performing, which makes it difficult to confidently make decisions regarding unexpected overflows. **Xylem Vue** powered by GoAigua's SSO/CSO Prediction application, complimented by data from sensors, river/tide levels and rainfall forecast, helps utilities understand the current network state so they can visualize and predict future impact of wet weather events on network performance. Tools like SSO/CSO Prediction provide customizable displays identifying operational needs that integrate multiple data sources into a single platform. It also utilizes hydroinformatics insights to simulate water flows and related processes across the sewer system. Utilities get valuable insights to network hydraulic performance in real-time while understanding the current and potential risks of flooding and overflows, giving them increased confidence to make operational decisions.

**855-995-4261; [www.xylem.com](http://www.xylem.com) ♦**





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By **Craig Mandli**

### Level monitors used to measure Green infrastructure performance

**Problem:**

It is well established that green infrastructure or nonstructural programs can be effective in reducing stormwater runoff volume and pollution from urban areas. One Tennessee utility put their GI investment to the test by developing a bioretention basin to decrease the volume of stormwater runoff. The utility was concerned with the effects of runoff from a park going into an adjacent stream.



**Solution:**

Both the runoff volume and potential pollutant loads from pet feces led them to design a system which reduced the runoff volume through measures such as infiltration and evapotranspiration. To measure performance, a stormwater vault upstream from the GI area captured park runoff, which then distributed into an area with selected, high uptake, native plants. Residual runoff from the GI area was captured at a second vault located downstream. ADS ECHO level monitors were installed in both the up and downstream vaults. Data was captured in 15-minute intervals (5-minute intervals during storm events), stored in memory and transmitted daily to cloud-based software. The time series data from the inlet was compared to the outlet to show a reduction in flow, hence lowering the amount of *E. Coli* going into the receiving stream.

**RESULT:**

The utility found that they had a substantial capture rate, confirming the success of the GI implementation. With this type of validation, the utility now has data and corresponding proof to tackle additional areas knowing that they can justify investment. **877-237-9585; [www.adsenv.com](http://www.adsenv.com)**

### Rake helps fish hatchery maintain optimal conditions

**Problem:**

Built in 1974, the Jim Hinkle Spring River State Fish Hatchery is on a 7-acre island in the Spring River near Mammoth Spring, Arkansas. Water for the six tanks in the gravity-fed hatchery comes from the Spring River near the Spring River Dam at a rate of about 70,000 gpm. The freshwater intake at this facility has a high volume of weeds, stringy material and vegetation that jeopardizes the water volume for the downstream fish hatchery production.



**Solution:**

In 2023, the hatchery installed two Duperon Harvest Rake screens to replace

### Catch basin risers used for highway resurfacing project

**Problem:**

In the section being resurfaced on Wisconsin's I-39 highway, about a hundred catch basins laid atypically close to a concrete barrier wall. "In places, the barrier wall was actually over the basins," explains Curt Neuhauser, project manager for the Wisconsin DOT. "This initially seemed like it might cause a lot of unexpected work and expense. Fortunately, the contractor floated an option that sounded like it would work."



**Solution:**

Catch Basin Risers from American Highway Products were used to raise inlets without removing any surrounding asphalt. "I've used them before, and have found them quick and easy to install," says Payne & Dolan Project Manager Sam Bilhorn. "I felt they could be used here, and we could avoid removing or undermining the wall. And it wasn't even a change order — the point was, we were able to avoid a change order. And WISDOT agreed they were worth a try." The risers are precisely sized as needed for given situations; width, depth and height are customized for particular jobs. The manufacturer will even provide multiple sizes per order, and keep them organized by size when shipping.

**RESULT:**

"We used about 100 on the I-39 project, and had no problems at all," Neuhauser says. "All we had to do was remove the grate and install the risers. We didn't have to remove the barrier wall, and we didn't even have to dig out any roadway. The proof is in the pudding, of course, but we like how they worked on this project, and we'll be using them again."

**888-272-2397; [www.ahpl.com](http://www.ahpl.com)**

the older generation manual screens. The rakes collect debris upstream from the hatchery and deposit it on a conveyor belt, reentering the river downstream. This process allows the hatchery to remain debris-free while minimizing impact on the natural debris flow of the river.

**RESULT:**

As an automated system, the Harvest Rake is reducing labor requirements for the hatchery. The setup includes speed control that can be adjusted for large debris and above average flow conditions, such as after a large rain event. A rear spray bar ensures the conveyor is always clear and ready to accept debris from the rake. The rake met all environmental compliance requirements.

**800-383-8479; [www.duperon.com](http://www.duperon.com)**

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## Manufacturer solves streetsweeper stormwater grate cover challenge

### **Problem:**

Two of the nation's largest home building firms expressed frustration about a common site development National Pollutant Discharge Elimination System challenge. Street sweepers keeping development roads clear of debris from empty lots during construction tend to tear up traditional overgrate filters made of non-woven geotextiles. Traditional under-grate options require special tooling or multiple personnel to lift heavy grate covers to affix and maintain both over and under-grate options.



### **Solution:**

GEI Works developed a patented overgrate option that allows customers to affix the grate cover to the grate without special tooling, or having to lift the grate. Specialized fasteners provide both above and below-the-grate access without having to lift the grate itself. The over-grate filters are made with street-sweeper friendly materials that significantly reduce wear on the filter itself, extend use life and reduce labor costs to maintain. Additionally, options are available with larger aperture windows to allow more water flow and visibility over the grate, to reduce ponding.

### **RESULT:**

Large new-development Stormwater Pollution Prevention Plans utilizing the overgrate filters remained compliant and reduced maintenance costs. Investing in a longer-term overgrate filter despite initial cost difference to widely used typical filters lowered project costs overall through longer duration between replacements, minimal installation time, no special tooling requirements and easy maintenance. 772-646-0597; [www.erosionpollution.com](http://www.erosionpollution.com)

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## Manhole cutter cuts labor time on sewer system restoration

### **Problem:**

Years ago, Ames, Iowa initiated a large-scale restoration of its sanitary sewer system. Manhole lids need periodic adjustments to keep them level with the road. Previously, manhole repairs involved costly, labor-intensive methods that produced mediocre outcomes.



### **Solution:**

To expedite and economize the process, the city adopted the Mr. Manhole cutter and chimney rebuild system. This method uses round cuts, generating 20% less waste and using 20% less material than the traditional square cuts. Eric Cowles, a civil engineer in Ames, vouched for the speed and efficiency of the technology, noting that it eliminated much of the anticipated resident grievances. The Mr. Manhole system cuts repair time down to an hour, slashing costs and labor. It also ensures worker safety and minimizes traffic disturbances, ensuring resident satisfaction.

### **RESULT:**

With this system, Ames transformed its repair approach. The project, estimated at \$1.9 to \$2 million, was completed at \$1.6 million in under a year, surpassing quality expectations.

833-242-2221; [www.mrmanhole.com](http://www.mrmanhole.com)

## Noncontact level measurement saves plant time and money

### **Problem:**

At the Fourche Creek Treatment Plant in Arkansas, more than 7 mgd is collected, treated, and disposed of as reclaimed water that exceeds water quality standards before being released into the Arkansas River. The plant uses automatic bar screens at their facility for efficiency and ease, and therefore level measurement is critical in monitoring this process and alerting staff to potential overflows. A previously installed radar level transducer failed with no notice.



### **Solution:**

Plant operations chose to replace their existing products with cost-effective Pulsar Measurement REFLECT devices. The two-wire radar level sensor provides confidence in level measurement in challenging conditions such as turbulent applications with foam present, making it a suitable choice for wastewater pretreatment stages. It is noncontact and thus requires no routine servicing, and its robustness maintains accuracy with moisture, debris and chemicals present.

### **RESULT:**

Fourche Creek saved both time and money, allowing them to protect public health and the environment even more effectively.

888-473-9546; [www.pulsarmeasurement.com](http://www.pulsarmeasurement.com) ◆

# Product Spotlight

Wireless headsets keep crews in the know

By **Tim Dobbins**

CrewPlex is no stranger to hands-free communication systems. Their new DR10 wireless headset combines the performance of a proven system with an all-new fit and package.

The DR10 All-In-One Wireless headset was built using the platform of CrewPlex's beltpack system, but now without the wire. "It combines the great sound quality and range performance of the proven DR10 system with the comfortable fit, noise isolation and flip-up microphone muting technology of the SmartBoom PRO headset," says Debbie Hamby, vice president of marketing for CrewPlex.

CrewPlex also focused on making the headset capable of withstanding harsh conditions, knowing that operators need reliable communication in all environments. It is IP-54 rated, so users can trust it's water and dust resistant. "The CrewPlex All-In-One is an excellent addition to any stormwater, wastewater and/or underground infrastructure maintenance crew that requires a reliable, great sounding comms system," Hamby says. "It has excellent wireless coverage that delivers a strong performance even in the toughest and loudest work environments."

According to Hamby, users appreciate how easy the headsets are to use and comment on how clear communications come through. "Workers need to be able to put on the headset and go to work without experiencing a learning



curve," Hamby says.

The headset's all-in-one design features an easy-to-read OLED display and supports up to 10 full-duplex users, including unlimited listen-only and shared users. The DR10 All-In-One uses Li-poly field replaceable batteries that provide up to 14 hours of life in the dual-ear and seven hours for the single-ear model.

To charge, CrewPlex designed a drop-in charger for the All-In-One headset and Hamby says it makes charging easy and efficient. "The entire headset can be placed on the charger without having to remove the battery or plug in a cord," she says. The charger holds up to six individual headsets and users can also charge up to six additional batteries simultaneously. Users may also charge using a USB-C port if needed.

CrewPlex took weight into consideration when engineering as well, knowing that long days with a heavy headset on is less than desirable. Single-ear models with battery weigh 9.7 ounces and the dual-ear model with battery installed weigh 13.8 ounces.

DR10 All-in-One headsets can be added to networks of existing DR10 and MR10 systems from CrewPlex, so those using other CrewPlex products can integrate seamlessly. And when the headset is not in use, they collapse for easy storage and transportation. **334-321-1400; www.crewplex.com**

**SPECIAL REPORT**

## OZ Lifting Products Tele-Pro davit crane



OZ Lifting Products' patented Tele-Pro davit crane features a telescoping boom adjustment that can be moved in and out while under load. A ratchet screw jack allows the user to adjust the boom from horizontal to 45 degrees while under load and the 360-degree rotation of the crane allows for a full range of motion. Smart latch technology at the boom/mast means no tools are required for assembly. A zinc-plated finish provides

added corrosion protection. The Tele-Pro is available in 500-, 1,200- and 2,500-pound capacities. Volt AC and DC electric winches are optional on the 500- and 1,200-pound models, or a manual winch with a drill drive adapter is available for all three models. The cranes are made in the USA and each one is individually tested and certified at 125%.

**800-749-1064; www.ozliftingproducts.com**

## Pioneer Pump ElectricPAK VFD for temporary applications

Franklin Electric brand Pioneer Pump introduced the ElectricPAK variable frequency drive, a rugged, packaged solution designed to withstand the demands of mobile dewatering applications. The platform is engineered to deliver a more intuitive operation experience via a new touchscreen interface, known as SmartPrime. The VFD platform will be available in two portable packages.



The ElectricPAK VFD can be mounted to the pump skid to simplify transport and ensure that pump, motor and VFD are always ready to set up and go on the job site. Or the VFD can be mounted in its own standalone skid for maximum setup versatility and use with different pumping systems. The standalone skid features a metal cage design that keeps the VFD protected and secure during transport while providing extra protection against job site hazards. Via the drive's SmartPrime control interface, users can handle all aspects of operation from a streamlined central hub with easy-to-navigate graphics.

**866-271-2859; www.franklinwater.com**

## Echologics ePulse Optimize condition assessment service

Echologics' ePulse Optimize condition assessment service is a non-invasive and cost-effective solution that enables water utilities to prioritize repair and replacement of assets in their distribution systems, proactively managing the risk of infrastructure damage, supply interruption and inefficient allocation of capital funds. It uses acoustic wave analysis to assess the condition of water mains and distribution systems. As an added benefit, the ePulse Optimize simultaneously pinpoints leaks to provide a comprehensive picture of overall asset health and condition. This data-driven approach provides asset managers valuable insights to assess risk and make informed decisions about maintenance, rehabilitation and replacement programs.

**866-324-6564; www.echologics.com**



## Kaman static Air Gap Tool measurement device

Kaman's static Air Gap Tool is a portable measurement device that helps reduce downtime by providing a fast, repeatable and reliable means of measuring one of the most critical aspects of hydrogenerator operation — the installed static air gap between the generator rotor and stator. Operating the AGT is designed to be simple: insert the device into the air gap to display and record measurement data, ensuring alignment of the generator rotor and stator. The Kaman AGT reduces the number of overhaul technician hours required to inspect and analyze this critical operating parameter. The AGT can be used in any orientation, horizontally or vertically depending on the design of the generator. The AGT is powered by a long-life rechargeable battery permitting up to eight hours of operation between charges.

**800-687-5158; www.kaman.com**



## Flojet Versijet industrial motor drive diaphragm pumps

Xylem's Flojet brand has enhanced its Versi-Jet Series industrial motor driven diaphragm pumps with the introduction of a new, four-chamber model. The new MDD pump has been specifically designed to serve industrial applications requiring flow rates of between 3 and 5 gpm. The new pump replaces the existing Flojet Quad Series, offering higher pressure capabilities, greater ambient temperature resistance and longer pumping life. The pump head has been specifically designed with a cast aluminum lower housing for enhanced durability, handling a maximum pressure of up to 60 psi. The pump also offers improved heat resistance and has been tested to achieve temperature stabilization in elevated ambient conditions of 122 degrees F.

**855-995-4261; www.xylem.com/flojet**



## MentorAPM MapViews asset management software

MapViews, MentorAPM's latest improvement to its ESRI GIS integration capabilities, allows systems to visualize changes and updates to GIS asset features before application. It integrates with the end user's ESRI GIS database and displays the information within the platform, enabling any team including operations, maintenance and capital planning, to view changes to GIS asset features before they are applied. It also facilitates progress monitoring and tracking of network management programs like valve turning, lead replacement and hydrant flushing.

**434-879-6220; www.mentorapm.com** ♦



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**Avanti AV-100 chemical grout earns NSF/ANSI/CAN 61 certification**

The Water Quality Association has granted certification to Avanti International's AV-100 chemical grout, both in liquid and granular form, confirming its compliance with NSF/ANSI/CAN 61 Standards for Drinking Water System Components. AV-100 chemical grout joins other Avanti products that are NSF/ANSI/CAN 61 tested and certified including: AV-150 Acrylate Gel, AV-202 Multigrout, AV-248-LV Flexseal LV, AV-275 Soilgrout, AV-278 Low Vis Hydro, AV-315 Microfoam, AV-330 Safeguard and Ultrafine SD.

**Asahi/America partners with McElroy to provide welding equipment**

Asahi/America has formed a strategic partnership with Tulsa, Oklahoma-based McElroy Manufacturing to provide fusion equipment that is compatible with Asahi/America's thermoplastic piping systems. Asahi/America will offer McElroy-manufactured butt and socket fusion equipment that will be available for rental or purchase. In addition to the fleet of welding equipment, Asahi/America, in partnership with McElroy University, will launch an online welding certification and Learning Management System for contractors and installers who will be operating the equipment. This will be available in early 2024.

**Aquarius Spectrum to partner with Innovative Utility Solutions**

Aquarius Spectrum announced its strategic partnership with Innovative Utility Solutions. This strategic collaboration will allow IUS, which operates across 10 states, to serve as the main distributor for Aquarius Spectrum in Arizona, Nevada, Colorado, New Mexico, Utah, Wyoming, Kansas, Missouri, Arkansas and Oklahoma. Customers will also now have access to pilot systems provided with IUS support.

**Brown and Caldwell adds Ravi Chadha as senior VP and CSO**

Brown and Caldwell announced Chicago-based Ravi Chadha has joined the company as senior vice president and chief strategy officer. With over 25 years' experience leading corporate business strategies for several *Fortune 500* companies, Chadha will work closely with the company's leadership to ensure the employee-owned firm sustains its measured growth and builds on its reputation as a water and environmental market leader.



**Ravi Chadha**

**Oldcastle Infrastructure and FIDO Tech announce partnership**

Oldcastle Infrastructure, a CRH Company, entered into a strategic partnership with FIDO Tech, a U.K.-based artificial intelligence and technology solutions provider, to deliver leak detection and broader water management and conservation solutions in the United States. Leveraging its national footprint, Oldcastle Infrastructure will facilitate and accelerate the rollout of FIDO Tech's AI-led nonrevenue water detection service across the US market.

**ASTERRA surpasses 100,000 water leaks**

A series of subsurface leaks found by Pennsylvania American Water, using ASTERRA satellite leak detection solution Recover, represent an important milestone — ASTERRA has now detected over 100,000 water leaks on behalf of its worldwide customers. Recover is facilitated by the user through ASTERRA's SaaS platform, EO Discover. The EO Discover dashboard pro-

vides users with all their insights in a single platform, helping utilities prioritize and track their work in the field.

**Stantec chosen to provide services for Toronto's flooding protection program**

The city of Toronto has selected Stantec to provide engineering services for Phase 5 of the city's Basement Flooding Protection Program. This multi-year program, which began in 2006, helps reduce the risk of flooding through improvements to the sewer system and overland drainage routes, which can face increased pressure with heavy rainfalls. For the latest phase of the BFPP, Stantec will design and implement storm sewer, sanitary sewer and storage sewer projects to help protect the basements of residents' homes from major flood impacts. These sewer resiliency solutions will also mitigate the risk of surface flooding within the city. The firm previously provided expertise for Phase 3 of the program.

**Pace Analytical Services acquires Alpha Analytical**

Minneapolis-based Pace Analytical Services has added new capabilities, including advanced hydrocarbon analytical support and expanded sediment and tissue testing, with the acquisition of Alpha Analytical. The acquisition also includes additional dredging and ecological risk assessment analytical support capabilities. This additional expertise allows Pace to work on contaminated sediment, animal tissue and vegetation samples for client projects to determine the environmental impact on vegetation, wildlife, fish, birds, sediment and soil, and provides natural resource damage assessments.

**Southwest Strategies invests in Katz and Associates**

Southwest Strategies has agreed to invest in and partner with San Diego-based Katz and Associates. Focused on infrastructure communications, specifically in the areas of energy, transportation and water, the company will offer its clients public outreach and community engagement services from nearly 100 professionals located throughout the western U.S. SWS and K&A will continue to deliver services to their existing clients and begin collaborating on larger initiatives and project opportunities.

**Felling Trailers names Capobianco as Regional Sales Manager**

Felling Trailers has appointed Jim Capobianco as their Northeastern regional sales manager. In his new role, Capobianco will be responsible for all sales development, activity, and dealer support in Maine, New Hampshire, Vermont, New York, Rhode Island, Massachusetts, New Jersey, Maryland, Delaware, Connecticut, Pennsylvania and Washington, D.C. He takes over the Northeastern region once served by Mike Flynn, who retired in January after 22 years with the company. ♦



**Jim Capobianco**

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## WORTH NOTING

### PEOPLE/AWARDS

Catherine Pallotta was promoted to vice president at American Structurepoint (Indiana). Her focus is growing the company's utility infrastructure practice in various areas, including stormwater systems.

Kevin Garnett was promoted to a vice president role at MECO Engineering (Illinois). Stormwater projects are among his specialty areas.

The Port of Tacoma (Washington) received a Phoenix Award from the U.S. Environmental Protection Agency for cleaning up and redeveloping Parcel 14, a 113-acre site. The third phase of the project creates space for stormwater management facilities.

The city of Attleboro was awarded a \$101,250 grant from the state of Massachusetts for an infrastructure study to help improve the flow of stormwater into the Ten Mile River.

The town of Bargersville was awarded a \$600,000 grant from the Indiana Office of Community and Rural Affairs that will go toward stormwater improvements. ♦

## CALENDAR

### February 13-16

National Association of Clean Water Agencies Winter Conference, Hilton Austin Hotel, Austin, Texas. Visit [nacwa.org](http://nacwa.org).

### February 25-28

International Erosion Control Association Annual Conference, Spokane Convention Center, Spokane, Washington. Visit [ieca.org](http://ieca.org).

### April 7-10

American Society of Civil Engineers Operation and Maintenance of Stormwater Control Measures Conference, DoubleTree by Hilton, Austin, Texas. Visit [asce.org](http://asce.org).

### April 8-11

Center for Watershed Protection National Watershed and Stormwater Conference, InterContinental Kansas City At The Plaza, Missouri. Visit [cwp.org](http://cwp.org).

### April 9-12

Water Environment Federation Collection Systems and Stormwater Conference, Connecticut Convention Center, Hartford, Connecticut. Visit [wef.org](http://wef.org).

### May 7-9

New York State Floodplain and Stormwater Managers Association, Queensbury Hotel, Glens Falls. Visit [nyfloods.org](http://nyfloods.org).

### May 8-10 (dates TBA)

Ohio Stormwater Conference, Kalahari Convention Center, Sandusky. Visit [ohioswa.com](http://ohioswa.com).

### May 15-17

International Erosion Control Association / United States Environmental Protection Agency Municipal Wet Weather Stormwater Conference, Auburn University, Auburn, Alabama. Visit [ieca.org](http://ieca.org).

### June 23-27

Association of State Floodplain Managers Annual Conference, Salt Palace Convention Center, Salt Lake City. Visit [floods.org](http://floods.org).

### August 27-29

StormCon Grand Sierra Resort and Casino, Reno, Nevada. Visit [stormcon.com](http://stormcon.com).

Municipal Sewer & Water invites your national, state or local association to post notices and news items in this column. Send contributions to [editor@mswmag.com](mailto:editor@mswmag.com).

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