MODERNMCWANE

WEST KNOX UTILITY DISTRICT EXPANDS SYSTEM BY 50 PERCENT WITH DI PIPE Pg.11

Pg. 4 Managing Generational Differences in the Utility Workplace

Pg. 14 Ask the Ditch Doctor

McWane Ductile

THE DEVELOPER MYTH: DUCTILE IRON PIPE IS TOO EXPENSIVE FOR RESIDENTIAL APPLICATIONS (PG. 6)



WELCOME TO MODERN McWANE



Dear Readers,

Welcome to the Winter edition of Modern McWane. Hopefully, everyone had a wonderful holiday season with family and friends. Unfortunately, many of us get caught up in the hustle

and bustle of the season and don't take the time to enjoy it. With any luck, this didn't happen to you.

Welcoming a new year can be an exciting as well as nerveracking time. While we reflect on the year that passed, we also begin planning for the year ahead. A critical review of past performance, as well as a defined plan with goals for the future, are essential in achieving success.

Typically, a new year is the time that brings the retirement announcement of some good friends and coworkers. As much as we may hate to see these friends move on, it opens the door for new friends and staff members to join the team. At McWane Ductile, we are celebrating the retirement of a long time, dedicated employee, Fran Tone. We also have new personnel to welcome to our Sales and Marketing teams. Gunner Christian will join the Midwest team as a Sales Representative covering Iowa, Nebraska, Kansas, Missouri, and Southern Illinois. Marty Kurtz has joined the Sales Operations team as a Media Specialist. And Andrea Kubik has also taken on a new role as Marketing Manager for McWane Ductile. Congratulations to each of these folks! In this issue, we have a couple of interesting feature articles. One, authored by John Johnson, Regional Engineer, details the **Developer Myths** associated with the decision to choose cheaper, alternative materials such as PVC in private development construction. The other, offered by Senior Regional Engineer Roy Mundy, discuses the challenges of **Managing Generational Attitudes in the Workplace**.

As always, we have included new **Ditch Doctor** segments for the readers' education and entertainment. These fun and informative articles always seem to touch on topics significant to pipeline construction with a sense of humor. The **Project Profiles** section offers some highlights from several projects where McWane Ductile and our valued partners worked to ensure successful projects for these utilities.

Lastly, as we enter a new year, efforts have once again been initiated within State Governments and Federal agencies that would require utilities to include PVC in all project specifications. This type of legislation would impinge on the knowledge and experience of water industry professionals to select the construction materials best suited for a project and force them to choose cheaper and less durable materials in their place. We will discuss this topic in more detail throughout 2020 in our blogs and social media. If you would like more information on how to combat this effort, please reach out to your local McWane Representative listed in the back of this publication.

Finally, as we begin in 2020, we would like to take a minute and thank our readers and customers for their suggestions and support over the years. This engagement with you is what Modern McWane is all about.

Stuart Liddell

Sales Operations Manager Sales Operations Department



McWANE DUCTILE WELCOMES NEW MEMBER TO THE TEAM

Marty Kurtz, Media Specialist, was recently hired to handle the creation of video content and assist with McWane Ductile's content marketing efforts. Marty has been with the company for two years, starting as an intern in the Safety Department. Marty graduated from Muskingum University with a B.A. in Media Production in 2017. After graduation, he worked part-time as a local radio talent in Zanesville, OH. He spent four years as a radio D.J. for the college station as well as a writer for the school newspaper. Marty is also a member of the Phi Mu Alpha Sinfonia Fraternity. In his spare time, Marty enjoys photography and discussing Cleveland sports and country music. Marty takes pride in making quality visual content. He looks forward to answering questions and helping viewers understand company products and services.



See us in "the city beautiful."

American Water Works Association

Orlando, Florida June 14–17

Orange County Convention Center



For Generations

Visit McWane in Orlando

The McWane family of companies will be at the annual ACE conference to demo our latest innovations and show off our time-tested, industry-leading products. Stop by our booth, meet the team and see how we're engineering solutions that last for generations!



MANAGING GENERATIONAL DIFFERENCES N THE UTILITY WORKPLACE By Roy W. Mundy II, P.E., ENV SP, Assoc. DBIA, Senior Regional Engineer

Mundy is well-versed in this topic after participating in a faculty research project while serving as a full-time faculty member at Kentucky College. The team's paper has been published worldwide.

THE SHIFTING DEMOGRAPHICS OF THE WATER INDUSTRY IS FACING TWO SIGNIFICANT ISSUES:

1) AN AGING WORKFORCE AND POSSIBLE LOSS OF IMPORTANT ORGANIZATIONAL KNOWLEDGE AND 2) THE ISSUES OF A WORKPLACE GENERATION GAP.

A significant percentage of the current workforce is eligible to retire, and generational differences are real. These differences impact the workplace, but they can be managed.

Research has found some significant differences between the generational cohorts of Baby Boomers, Generation X and Millennials. Research has also found some common beliefs that suggest positive implications for working relationships between the generational cohorts as well as for recruitment and retention. A successful multigenerational workplace motivates its employees, improves communication, and retains and manages essential organizational knowledge, helping it to maintain a competitive advantage.

Since today's multigenerational workforce no longer follows the traditional rules of leadership and management, leaders of organizations must have a broad understanding of the people they hire, supervise and associate with daily. Managers must not only understand where their reports are coming from, but they must also understand their own generational framework. A commitment to multigenerational diversity is necessary to encourage tolerance and understanding among workers.

GENERATIONAL DIFFERENCES ARE REAL.

The ideals, values, traits, goals and characteristics held by generations are increasingly different from one another. While representative of a newer trend, these differences are substantial and play a significant role in how members of each group relate to one another. A few specific differences between generations include communication styles and expectations, work styles, attitudes about work and life, comfort with technology, views regarding loyalty and authority, and acceptance of change.

GENERATIONAL DIFFERENCES CAUSE MISUNDERSTANDING.

It is widely recognized and accepted in organizations that people of different generations often aren't on the same page. As with other dissimilarities between people, lack of commonly held beliefs and experiences can, and often do, cause misunderstandings among employees of different generations.

GENERATIONAL DIFFERENCES CAUSE STRIFE.

Due to the misunderstandings that occur, tensions between people of different generations are not uncommon. Though

workplace tensions are not limited to workers of differing age groups, strife from inter-generational dealings is often tricky for co-workers to settle.

GENERATIONAL ISSUES IMPACT THE WORKPLACE.

Misunderstandings and strife within an organization negatively impact employee interaction and productivity. Consequently, the entire organization suffers, as valuable time, energy and emotions are wasted dealing with crisis rather than managing the business of doing business. Differing work and life expectations can also create tensions. While some disapprove of those who end their workday promptly at 5:00 p.m., those departing conversely resent the glares they receive as they walk out the door, thinking that those who stay late should get a life. Furthermore, both of these groups spend their days growing weary of those who are distracted from work finding care for their parents and fielding calls from their teenage children and plastic surgeons while on the clock.

GENERATIONAL DIFFERENCES CAN BE MINIMIZED.

Having a solid understanding of other generations is critical and should be assumed to not exist. Though the differences between generations have increased, steps can be taken to minimize the adverse outcomes that result from such differences.

THE WATER INDUSTRY IS NOT PREPARED FOR THESE DRAMATIC SHIFTS.

According to the American Water Works Association's (AWWA), 2014 State of the Water Industry Report:

... When participants were asked "Overall, how prepared do you think the water sector is to address issues related to talent attraction and retention in the next five years?" only one percent indicated that the water industry was fully prepared to address issues related to talent attraction and retention in the next five years while 15 percent thought the industry was not at all prepared, and 35 percent thought it was only slightly prepared.

... [survey participants] were also asked "Overall, how prepared do you think the water sector is to cope with any expected retirements in the next five years?" Only 1 percent of 2014 SOTWI respondents indicated that the water industry was fully prepared to cope with any expected retirements in the next five years while 12 percent thought the industry not at all prepared and 30 percent thought it was only slightly prepared. (AWWA, 2014). Updated SOTWI reports confirm in the list of critical issues for the industry to address, that managing generational attitudes in the utility workplace is still a challenge today.

THE CHART BELOW OUTLINES VARIOUS VALUES AND MOTIVATIONS IN TYPICAL WORK SITUATIONS:

	BABY BOOMERS	GENERATION X	MILLENNIALS
WORK ETHIC & VALUES	WORKAHOLICS WORKING EFFICIENTLY CRUSADING CAUSES PERSONAL FULFILLMENT DESIRE FOR QUALITY QUESTIONING AUTHORITY	• ELIMINATE THE TASK • SELF-RELIANCE • WANT STRUCTURE AND DIRECTION • SKEPTICAL	ASKING WHAT IS NEXT MULTITASKING TENACITY ENTREPRENEURIAL TOLERANT GOAL ORIENTED
LEADERSHIP STYLE	• CONSENSUAL • COLLEGIAL	• BELIEVE EVERYONE IS THE SAME • CHALLENGING OTHERS • ASKING WHY	• WILL BE BETTER DETERMINED AS THIS GENERATION GETS OLDER
INTERACTIVE STYLE	• TEAM PLAYER • LOVES TO HAVE MEETINGS	• ENTREPRENEURIAL	PARTICIPATIVE

Recognizing the loss of institutional knowledge considering the above, coupled with the challenge of training new employees in a multigenerational environment, leaders in our industry should openly acknowledge generational dynamics within their organization, educating themselves to utilize the different values of respective generations in a positive, synergistic manner in lieu of finding constant disruption producing inefficiency and low morale.

CONCLUSIONS

This research project has validated the values and attitudes of various generations that have been assumed by society. Now that this is confirmed, what steps should now be taken to minimize the conflicting value systems of interactive people within an organization and to maximize the individual value systems respectively? Significant efficiency can be gained within a utility's workforce when generational differences are identified and utilized for both the employees' and organization's benefit.

If you have questions or comments or would like to request a free on-site presentation on this topic, feel free to contact Mr. Roy Mundy at roy.mundy@mcwaneductile.com.



THE DEVELOPER MYTHE DUCTILE IRON PIPE IS TOO EXPENSIVE FOR RESIDENTIAL APPLICATIONS

By John Johnson, M. ASCE, ENV SP, NACE CT, Regional Engineer

How often have we heard a developer tell a utility they simply can't afford to install Ductile iron pipe (DI pipe) for a planned subdivision because it's *too expensive*. After all, the developer is providing the water and wastewater mains for free, transferring ownership to the local utility usually after one year.

DON'T FORGET THE OTHER FACTORS

Unfortunately, the developer doesn't have a vested interest after that first year. They often site that DI pipe costs more than twice as much as Polyvinyl Chloride (PVC) on a price per foot, ignoring many of the factors relating to a successful long-term installation, as well as design life and lower energy and repair costs that are in the best interest of the utility.

One must account for factors beyond the initial price-per-foot of the pipe, such as:

- Bedding
- Tapping saddles
- Line locator wire
- Corrosion protection

The utility might also prioritize the sustainability/environmental cost and design life when specifying pipe material for developments. When these real costs are considered, the initial Lot Cost differential is minimal. Similarly, if the utility employs the University of Michigan Life Cycle Cost Study and the American Waterworks Association's Buried No Longer Study for material selection, they have the opportunity to significantly



increase sustainability, and in many regions of the United States, virtually double the design life of mains by specifying DI pipe versus allowing developers to use PVC.

LET'S CALCULATE!

To illustrate, let's begin with a detailed breakdown of the installation cost of PVC vs. DI pipe using one mile of 8-inch diameter pipe and a commonly used 65-foot lot size (with lots on both sides of the street), totaling 162 lots per mile.

\$0

PIPE BID PRICE	
8 Inch PVC C900	8 Inch DI Pipe
DR18	PC 350
\$8.00/LF	\$18.44/LF
\$520 / LOT	\$1,198 / LOT

LINE LOCATOR (labor has not been added)		
PVC Pipe	DI Pipe	
\$ 0.26 Per Foot	\$0	
\$21.02/ LOT	\$0	

BEDDING COST COMPARISONS (assuming acceptable native soil for DI pipe)			
Trench Depth:	PVC- 52-inch	DI Pipe 46-inch	
Trench Width:	24-INCH	24-inch	
Select Backfill:	\$22.00/ton	\$0/ton	

SERVICE SADDLES (for each side of the street, labor has not been added)		
PVC Pipe	DI Pipe (direct tap)	
\$87.00 / LOT	\$0	
CORROSION PROTECT	ON (assumes worst case scenario in a	
corrosive area)		
PVC Pipe	DI Pipe	
\$0	\$44.20 (V-BIO @\$0.68/LF X 65')	

PRICING INCLUDES HAULING AWAY UNSUITABLE MATERIAL

\$44.20

PVC Pipe	DI Pipe
\$3.95/LF	\$0
\$256.75 / LOT	\$0

Calculations listed here are based on current market price at the time of this publication, January 2020.







24-inch DI pipe is installed in Johns Creek, Georgia.

Entering these real costs into a spreadsheet, we gain a clear picture of the actual cost difference versus the myth that developers would have us believe. It's important to note that your utility installation requirements may vary from this example. In that case, simply remove or adjust the numbers listed in this template.

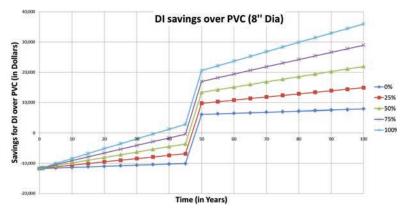
INSTALLATION COST / LOT	PVC DR18	DI PC 350
PIPE	\$520.00	\$1,198.00
SERVICE SADDLE	\$87.00	\$0
LINE LOCATOR	\$21.12	\$0
CORROSION PROTECTION	\$0	\$44.20
BEDDING COST	\$256.75	\$0
TOTAL	\$884.87	\$1,242.20
LOT COST DIFFERENCE		\$357.33

Calculations listed here are based on current market price at the time of this publication, November 2019.

When we calculate the actual lot cost difference of \$357.33 / \$200,000 housing lot, the difference comes out to 0.178 percent! Many housing subdivisions and industrial park lots are significantly higher, which would lower the lot difference even further.

For less than **2 tenths of a percent**, a utility can benefit from an unsurpassed design life of 100+ years, as documented by the American Waterworks Association's Buried No Longer Study. This dramatic increase in design life allows utilities to lower their pipeline replacement from 36 to 50 percent, which is one of the highest costs a utility must manage. And in many cases, enjoy lower pumping costs over the entire design life compared to DR14 PVC, as documented by the University of Michigan Life Cycle Cost Study.

On the subject of DI pipe vs. PVC pipe for new development projects in their service area, Consolidated Utility District



General Manager Bill Dunnill stated, "When we changed our specs in 2014, the cost to the developer was a consideration. We made some concessions in service line materials and even DI pipe wall thickness. The net increase was about \$370 per lot at that time. Although not insignificant, it was minuscule in comparison to the cost of the lot, and the longterm benefit to Consolidated Utility District (CUD) Tennessee ratepayers is tremendous."

NEED ASSISTANCE CALCULATING THE COST FOR YOUR NEXT PRIVATE SUBDIVISION INSTALLATION?

McWane Ductile offers multiple services to our customers, extending far beyond manufacturing DI pipe. From estimating to design, from production to installation, we take great pride in providing education and assistance to water professionals throughout the water industry. Contact your local McWane Ductile representative today!

MCWANE DUCTILE PROJECT PROFILES

WEST

Sales Region: West Sales Representative: Christine Michaelidis Project Location: Taft, CA Project Owner/Utility: CRC — California Resources Corporation/West Kern Water District Project Engineer: Dee Jasper & Associates Project Contractor: Specialty Construction Project Distributor: Ferguson Bakersfield Branch

Types of Ductile iron pipe used on the project:

Diameter	Joint	Class	Footage
8"	Tyton [®]	350	9,162

Specialty Construction of San Luis Obispo, California, was awarded this project. Once in place, this will provide improved pumping and distribution. This Tupman Project is replacing old, outdated cast iron waterline. The CRC is California's largest oil and natural gas producer. California has four major known basins: San Joaquin, Los Angeles, Ventura and Sacramento. CRC provides "Energy for California by Californians." California homes, farms, businesses and communities need ample, affordable and reliable energy.

The DI pipes installed are 8-inch Tyton Joint Pressure Class 350 retrained by utilizing Sure Stop 350® gaskets. The expected completion is the first quarter of 2020.







MIDWEST

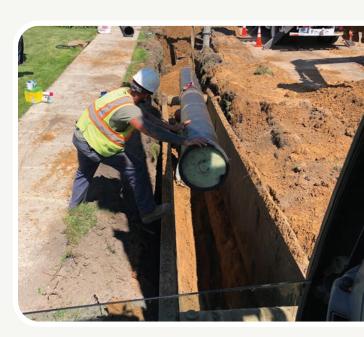
Sales Region: Midwest	Types of Ductile iron pipe used on the project:			
Sales Representative: Kevin Christian	Diameter	Joint	Class	Footage
Project Location: Walkerton, Indiana	12"	Tvton®	350	4.800
Project Owner/Utility: Town of Walkerton	12	Tyton-	300	4,000
Project Engineer: JPR & Associates	8"	Tyton®	350	1,500
Project Contractor: Haskins Underground	6"	Tyton®	350	200
Project Distributor: Ferguson Waterworks South Bend Indiana			1	1

The town of Walkerton, Indiana, has a population of 2,267 people, so when they built a new water transmission project and upgraded to a new 12-inch Ductile iron pipe transmission main, it was a "big deal," said Mark Haskins, owner of Haskins Underground.

Haskins Underground is based in Plymouth, Indiana. Mark is a third-generation underground contractor. Mark's grandfather started in the underground construction business in 1969, as Haskins Incorporated. His father took over the business in 1984. After working with his father for many years, Mark decided in 2007 to start his own company, now Haskins Underground.

The 4,800' of 12-inch PC 350 TJ Ductile iron pipe upgraded the existing 6-inch cast iron main that supplied most of the town's water. There had been smaller upgrades over the years, but this is by far the largest the town has done at one time. The project was engineered by JPR & Associates out of South Bend, Indiana. It was federally funded and is considered an American Iron and Steel Requirement project.







NORTHEAST

Sales Region: Northeast
Sales Representative: Bob Hartzel
Project Location: Bloomsburg, PA
Project Owner/Utility: SUEZ Pennsylvania Operations
Project Engineer: GHD – Bloomsburg, PA Office
Project Contractor: Pioneer Construction Company, Inc., Honesdale, PA

Types of Ductile iron pipe used on the project:

Diameter	Joint	Class	Footage
16"	Tyton®	52	39,566
12"	Tyton®	52	525
8"	Tyton®	52	833
6"	Tyton®	52	325

When SUEZ Water Pennsylvania acquired the water and wastewater system assets of Mahoning Township in March 2019, it was the jump-start of an extensive expansion project to connect to the town of Bloomsburg.

For phase one, SUEZ invested \$8.5 million to install a new water main along US Route 11 through the corridor that transverses Montour and Columbia Counties. The 31,501 feet of 16-inch Ductile iron pipe serves as an alternate source of water for Mahoning Township.

Phase two of the project included the replacement of an 8-inch cast iron water main with a 16-inch Ductile iron water main. This main serves the Fernville area of Columbia County and connects to the new water main on US Route 11. This phase included 8,065 feet of newly installed water main and serves approximately 70 homes. The final steps include the installation of new services to all the homes in Fernville as well as 17 residential and 36 commercial services connected to the new mainline on US Route 11.



Due to the project taking place on US Route 11, construction could only be conducted between the hours of 9 p.m. and 6 a.m. to avoid prime travel hours on the state highway. Contractors were also restricted from working during the Bloomsburg Fair, a nine-day event that draws nearly half a million people and 1,050 vendors. Despite these two restrictions, the project is still on schedule with an anticipated completion in the spring of 2020.

Upon completion, this infrastructure enhancement will provide the opportunity for substantial business growth along the main commercial corridor of US Route 11. Local and state public officials heavily supported the project due to the need for economic development in the area.



SOUTH

Sales Region: South
Sales Representative: Josh Baker
Project Location: Knoxville, TN
Project Owner/Utility: West Knox Utility District
Project Engineer: GRW Engineering
Project Contractor: Merkel Brothers Construction

Covering 7.9 miles in the rapidly growing area of the West Knox Utility district, this force main project came with its challenges.

The new 30-inch force main project would expand the West Knox system by 50 percent. The new 30-inch line would transfer flow from a major Industrial Park and to a newly built "Melton Hill Treatment Plant." The surrounding area is highly developed with a vast number of property owners, schools and the Pellissippi College Hardin Valley Campus.

"The project will assist in staying ahead of the development curve," stated Wayne Hastings, Assistant General Manager of West Knox Utility District. "Ductile iron pipe was chosen for this project due to the life cycle benefits," said Hastings.

Design Engineer, Louis Robbins with GRW Engineering, commented on the project and their selection of DI pipe, "Since 100 percent of the system's wastewater will be transported through this approximately sevenmile-long 30-inch force main, this project was a very critical component of the overall improvements to the system. After several discussions with our client, the decision was made to implement DI pipe with the Protecto 401 lining due to the toughness of the pipe and the importance of the installation. Since the line is located in a rapidly growing area, we knew with DI pipe, repair sleeves and other components could easily be obtained and kept in stock when planning for an emergency repair or a new connection into the line."

Merkel Brothers Construction was willing and able to tackle this much-needed project. "The magnitude of the project needed daily management," said Rance Merkel, owner of Merkel Bros Construction. "The cooperation from the utility district was top-notch, and the timely delivery of products was key to the success of the job,"

Diameter	Joint	Class	Footage
30"	Tyton®	Tyton® 200	
30"	TR Flex®	200	12,584

stated Merkel. Rance would like to thank his team, led by his brother, Chris Merkel, Doug Franklin and Samuel Garbar, for the success of this project.



TREATMENT PLANT

Sales Region: Treatment Plant	Т
Sales Representative: Dan Henrie	Р
Project Location: St. Louis, Missouri	_
Project Owner/Utility: Metropolitan Sanitary District MSD — St. Louis, MO	_
Project Engineer: Phase 1 — Jacobs Engineering Phase2 — HDR Engineering	_
Project Contractor: Haberberger Inc., Mechanical Contractors	P
Project Distributor: Midwest Municipal Supply — Caseyville, IL	_

Types of Ductile iron pipe used on the project: Phase 1: Maline Creek Vent Shaft

Phase I: Maine Greek vent Shart						
Diameter	Joint	Class	Footage			
24"	Flange	53	(18) 17'6"			
36"	Flange	53	(10) 17'6"			
42"	Flange	e 53 (6) 17'				
Phase 2: Maline Creek Pump Station						
Diameter	Joint	Class	Footage			
12"	Groove	53	(26) 17'6"			
30"	Groove	53 (16) 17				
20"	Flange	53 (4) 8'0"				

MSD Project Clear is the initiative to improve water quality and alleviate many wastewater concerns in the St. Louis region. It will invest billions of dollars over a generation in planning, designing and building community rainscaping, system improvements and an ambitious program of maintenance and repair.

Maline Creek is a small tributary to the Mississippi River located on the northern edge of the City of St. Louis. The underground storage facility will reduce the volume of discharge into Maline Creek and, ultimately, the Mississippi River. The Maline Creek Storage Facility will run from Chain of Rocks Drive to Church Road. In this project, there are two locations, just upstream of the confluence of the Mississippi River, where combined sewers that carry both wastewater and stormwater may discharge into Maline Creek during significant wet weather. They are located near the intersection of Riverview Drive and Maline Creek.



This project was a unique installation of fabricated pipe. The special feature here is fabricated pipe (24-inch, 36-inch and 42-inch) lowered piece by piece into the vent shaft by a crane. Special attention was given to the bolted flanged ends. McWane Ductile – Ohio calculated the carry and stable-stack capacity for each of the shafts during installation. Our company confirmed that the assembled flanged pipe will support the capacity required for installation.

Haberberger, Inc.'s Pat Reilly, Vice President of Construction Marketing, and Ken Baily, Project Manager for the Maline Creek pump station and storage facility, worked aggressively to meet production deadlines throughout the project. Their professional approach and dedication to quality is reflected in the final work product. The Pump Station and Storage Facility are expected to be completed early spring 2020.



SIMPLIFY YOUR JOB SITE.

When it comes to Horizontal Directional Drilling, nothing is easy. Or at least that's how it used to be. Today, HDD is as simple as the push of a button thanks to the McWane Pocket Engineer™. Designed to simplify the complex calculations needed to complete your drill-op, the Pocket Engineer compiles decades of field experience into one pocket-sized tool. Visit pe.mcwane.com or download the Pocket Engineer from the App Store or Google Play Store.





mcwaneductile.com

POCKET ENGINEER Available for **iOS + Android** or online at **pe.mcwane.com**



BUILDING IRON STRONG UTILITIES FOR GENERATIONS

20%

From estimating to design, from production to installation, we take great pride in providing education to water professsionals. Check out our presentations offered at these upcoming events.

CONFERENCE & PRESENTATION SCHEDULE WINTER 2020

CONFERENCE	PRESENTER	DATE	LOCATION	ТОРІС
AWWA Indiana Section 2020 Annual Conference	Roy Mundy	1/28/20	Indianapolis, IN	A Framework to Evaluate Life Cycle Costs and Environmental Impacts of Water Pipelines
AWWA Connecticut Section	Roy Mundy	2/25/20	Plantsville, CT	Managing Generational Differences in the Utility Workplace
RWAU's 2020 Annual Conference	John Johnson	2/25/20	St. George, UT	Corrosion Protection Guidelines: Utilizing the Design Decision Model
AWWA Illinois Section Watercon 2020	Roy Mundy	3/23/20	Springfield, IL	Managing Generational Differences in the Utility Workplace
AWWA Illinois Section Watercon 2020	Roy Mundy	3/25/20	Springfield, IL	Sustainability of Lower Energy Cost Utilizing Proper Pipeline Material
AWWA New York Section — Water Event	Roy Mundy	4/14/20	Saratoga Springs, NY	A Framework to Evaluate Life Cycle Costs and Environmental Impacts of Water Pipelines



Dear Ditch Doctor,

We have a situation. We need to field cut the bell from a 36-inch pipe, but there is a 6-inch welded flange outlet 7 inches from the cut location. We can cut the pipe and make a connection with an MJ valve, right?

Pepper Pete in Pottsville

Well, Pepper Pete,

I would love to say you're going to be okay, but this just isn't one of them. You are about to set yourself up for failure, and that keeps me up at night. You say you have 7 inches of clearance, but actually, the OD of the flange is more than the 6-inch pipe. Therefore, your 7 inches is now 5 inches. The next problem is the MJ bell depth, the width of the gasket, and the width of the retainer gland, which in total is approximately 9.5 inches prior to assembly. Somewhat difficult to install over 9 inches of products in a 5-inch space. The last major issue you are facing is the probability of a leak at the welded outlet. The welded outlet may be damaged when the retainers on the gland are tightened to the 36-inch pipe due to the proximity. So, sorry my friend, but the answer you don't want to hear is the best one: order a new pipe.

Later man,

Ditch Doctor

Dear Ditch Doctor,

Installation time for these 30-inch bell restraint harnesses is crazy long, man. It has been raining off and on for a month, and we are falling way behind on this project. I also can't get the firewood cut at home when I'm working all this overtime! Is there a faster, easier, better product we can use to speed up this process?

Freez'n in Farmington

Dear Freez'n,

Easy bro. There are options and you are correct. The bell restraint harnesses are cumbersome and do take a considerable amount of time to install. I feel for ya there. A great option is to switch out the Tyton[®] pipe (with restraint harnesses) with TR Flex[®] pipe. Installation time for a 30inch TR Flex[®] Joint is less than five minutes. You already know the installation time for a 30" Tyton[®] joint with a bell restraint harness can take over one hour. Let's get your project back on schedule so you'll have more time to get that firewood cut and keep the house warm.

Stay warm,

Ditch Doctor

MIKE DODGE, VP SALES & MARKETING

EAST SALES TEAM

GENERAL SALES

Craig Spitzer, General Sales Manager Office: 908-878-0822 craig.spitzer@mcwaneductile.com

Gary Kurtz, Assistant Sales Manager Office: 908-878-0821 gary.kurtz@mcwaneductile.com

Larry Jones, Inside Sales Manager Office: 908-878-0825 larry.jones@mcwaneductile.com

CONNECTICUT & MASSACHUSETTS

Jeff Houser, District Manager New England Office: 518-275-1780 jeff.houser@mcwaneductile.com

VERMONT, NEW HAMPSHIRE, MAINE & RHODE ISLAND

Jim Guilbault, Sales Representative Office: 802-578-7057 jim.guilbault@mcwaneductile.com

NEW YORK

Mike Palermo, District Manager New York Office: 585-737-0456 mike.palermo@mcwaneductile.com

CENTRAL & EASTERN PENNSYLVANIA

Bob Hartzel, District Manager Mid Atlantic Office: 717-571-5683 bob hartzel@mcwaneductile.com

NEW JERSEY & DELAWARE

Amy Locha, Sales Representative Cell: 908-319-0992 amy.locha@mcwaneductile.com

MARYLAND & WESTERN PENNSYLVANIA

Ben Leonard, Sales Representative Cell: 908-442-5241 beniamin.leonard@mcwaneductile.com

NORTH CAROLINA

Dwayne Shelton, District Manager Piedmont Office: 336-682-6187 dwayne.shelton@mcwaneductile.com

VIRGINIA

Todd Soady, Sales Representative Office: 757-262-6174 todd.soady@mcwaneductile.com

CANADA SALES TEAM

GENERAL SALES

Greg Eisnor, General Sales Manager Office: 905-974-3005 Cell: 902-449-2685 greg.eisnor@canadapipe.com

Martin Phinney, National Product Engineer Office: 506-961-9229 martin.phinney@canadapipe.com

Greg Principi, National Product Engineer Office: 905-974-3026 Cell: 289-244-6415

ATLANTIC

Steve Philpott, Sales Manager Office: 709-722-4814 Cell: 709-728-8760 steve.philpott@canadapipe.com

QUEBEC

Marc Giguere, Sales Manager Cell: 819-740-4242 marc.giguere@canadapipe.com

ONTARIO

Ron Siddique, Sales Representative Cell: 289-244-8714 ron.siddique@canadapipe.com

WESTERN CANADA

Scott Bell, Sales Representative Cell: 604-499-3825 scott.bell@canadapipe.com Brent Williamson, Sales Representative Office: 604-737-1279 Cell: 604-360-0960 brent.williamson@canadapipe.com

MIDWEST SALES TEAM

GENERAL SALES

Scott Frank, General Sales Manager Office: 740-622-6651 Cell: 740-202-3094 scott.frank@mcwaneductile.com Dave Bursh, Inside Sales Manager Office: 740-291-1064

dave.bursh@mcwaneductile.com

ILLINOIS

Dan Flaig, District Manager Cell: 815-353-4607 dan.flaig@mcwaneductile.com

KENTUCKY, SOUTHERN INDIANA & SOUTHWESTERN OHIO

Jon Melloan, Sales Representative Office: 502-859-2950 Cell: 502-472-6647 jon.melloan@mcwaneductile.com

MICHIGAN, NORTHERN INDIANA & Northwestern Ohio

Kevin Christian, Sales Representative Cell: 734-223-5632 kevin.christian@mcwaneductile.com

NEBRASKA, KANSAS, MISSOURI, IOWA, SOUTHERN ILLINOIS & SOUTH DAKOTA

Robin Hazlett, Sales Representative Office: 816-873-3411 Cell: 816-898-0516 robin.hazlett@mcwaneductile.com

Gunner Christian Cell: 913-526-6282 gunner.christian@mcwaneductile.com

NORTHEASTERN OHIO & NORTHERN WEST VIRGINIA

Kevin Ratcliffe, District Manager Office: 740-291-1012 Cell: 740-202-0004 kevin.ratcliffe@mcwaneductile.com

CENTRAL & SOUTHEASTERN OHIO, SOUTHERN ILLINOIS & SOUTHERN WEST VIRGINIA

Clinton (CJ) Fowler, Sales Representative Cell: 330-260-9292

clinton.fowler@mcwaneductile.com WISCONSIN, MINNESOTA,

NORTH DAKOTA

Scott Frank, General Sales Manager Office: 740-622-6651 Cell: 740-202-3094 scott.frank@mcwaneductile.com

TREATMENT PLANT SALES

GENERAL TREATMENT PLANT SALES

David Smith, General Sales Manager Cell: 724-316-4093 david.smith@mcwaneductile.com

Cory Humphreys, Technical Services Manager Office: 740-291-1046 cory.humphreys@mcwaneductile.com

NORTHERN OHIO, PENNSYLVANIA, MICHIGAN, NEW YORK

Matt Drummond, Sales Representative Cell: 614-917-3821 matt.drummond@mcwaneductile.com

SOUTHERN OHIO, KENTUCKY, INDIANA, & WEST VIRGINIA

Darcie Keirns, Sales Representative Cell: 740-607-9082 darcie.keirns@mcwaneductile.com

IOWA, MISSOURI, KANSAS, WISCONSIN, NEBRASKA, N. DAKOTA, S. DAKOTA & MINNESOTA

Dan Henrie, Sales Representative Cell: 630-604-7489 dan.henrie@mcwaneductile.com

MID ATLANTIC, SOUTHEAST

Alex Shelton, Sales Representative Cell: 740-572-2903 alex.shelton@mcwaneductile.com

SOUTH SALES TEAM

GENERAL SALES Terry Lynch, General Sales Manager Office: 615-305-0768 terry.lynch@mcwaneductile.com

ALABAMA, GEORGIA, SOUTH CAROLINA, FLORIDA, LOUISIANA & MISSISSIPPI

Jeremy Gwin, Regional Sales Manager Office: 205-541-4090 jeremy.gwin@mcwaneductile.com

TENNESSEE, ARKANSAS, TEXAS & OKLAHOMA

Dusty Henderson, Regional Sales Manager Office: 615-418-0741 dustin.henderson@mcwaneductile.com

ARKANSAS, OKLAHOMA & North Texas

Steve Waryas, Sales Representative Office: 918-938-2379 steven.waryas@mcwaneductile.com

FLORIDA (Except Panhandle)

Gary Gula, Sales Representative Office: 239-989-6298 gary.gula@mcwaneductile.com

ALABAMA, LOUISIANA, FLORIDA (Panhandle only) & TENNESSEE (Memphis only)

Doug Clark, Sales Representative Office: 662-341-0205 doug.clark@mcwaneductile.com

SOUTH CAROLINA & EASTERN GEORGIA Eddie Lowe, Sales Representative

Office: 478-258-5458 eddie.lowe@mcwaneductile.com

TENNESSEE & NORTH GEORGIA Josh Baker, Sales Representative Office: 615-975-0806 josh.baker@mcwaneductile.com

TEXAS (Except El Paso) Scott Rhorick, Sales Representative Office: 254-317-8455 scott.rhorick@mcwaneductile.com

WESTERN GEORGIA Brian Richard, Sales Representative Office: 803-600-3323 brian.richard@mcwaneductile.com

WEST SALES TEAM

GENERAL SALES

Nick Koncar, General Sales Manager Office: 801-623-4256 Cell: 801-864-5544 nick.koncar@mcwaneductile.com Kim Christensen, Inside Sales Manager Office: 801-623-4254 kim.christensen@mcwaneductile.com

ARIZONA, NEW MEXICO & TEXAS (El Paso only)

SALES REPRESENTATIVES

Wes Cassiere, Regional Sales Manager — Southwest Cell: 480-280-5424 wes.cassiere@mcwaneductile.com

SOUTHERN CALIFORNIA

Carolyn Lopez, District Manager Office: 951-371-1440 Cell: 951-310-6444 carolyn.lopez@mcwaneductile.com

SOUTHERN CALIFORNIA & SOUTHERN NEVADA

David Bridge, Sales Representative Cell: 951-520-6416 david.bridge@mcwaneductile.com

UTAH & COLORADO

Aaron Loosli, Sales Representative Cell: 385-208-7352 aaron.loosli@mcwaneductile.com

WEST WASHINGTON & ALASKA

Jason Harrison, Regional Sales Manager — Northwest Cell: 425-681-1394 jason.harrison@mcwaneductile.com

OREGON

Carrie Stephens, Sales Representative Cell: 503-577-4177 carrie.stephens@mcwaneductile.com

Jason Barnes, Sales Representative

jason.barnes@mcwaneductile.com

NORTHERN CALIFORNIA &

SALES OPERATIONS

stuart.liddell@mcwaneductile.com

ieff.henderson@mcwaneductile.com

ierry.regula@mcwaneductile.com

ken.rickvalskv@mcwaneductile.com

Roy Mundy, Senior Regional Engineer

roy.mundy@mcwaneductile.com

John Johnson, Regional Engineer

john.johnson@mcwaneductile.com

john.simpson@mcwaneductile.com

Andrea Kubik, Marketing Manager

andrea.kubik@mcwaneductile.com

Marty Kurtz, Media Specialist

marty.kurtz@mcwaneductile.com

MODERNMCWANE 15

John Simpson, Regional Engineer

Jerry Regula, National Product Engineer

Ken Rickvalsky, National Product Engineer

MONTANA & HAWAII

NORTHERN NEVADA

Cell: 206-714-8213

Cell: 916-205-0906

Office: 352-208-5709

Cell: 614-404-4909

Office: 740-291-1068

Office: 609-290-7701

Cell: 859-361-8585

Fax: 859-273-4799

Cell: 951-813-9589

Cell: 865-256-2541

Office: 740-202-7352

Office: 740-291-1012

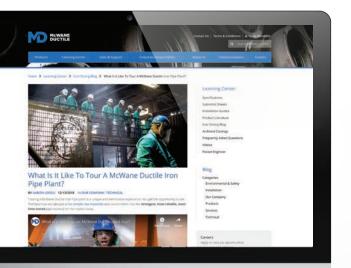
WASHINGTON, IDAHO, WYOMING,

Christine Michaelidis, Sales Representative

christine.michealidis@mcwaneductile.com

Stuart Liddell, Sales Operations Manager

Jeff Henderson, National Account Manager



CHECK OUT OUR BLOG FOR IRON STRONG INSIGHTS.

MCWANEDUCTILE.COM/BLOG



BUILDING IRON STRONG UTILITIES FOR GENERATIONS

MODERN**MCWANE**

DUCTILE



MCWANE DUCTILE 1201 Vanderbilt Road Birmingham, AL 35234

> [FIRST NAME] [LAST NAME] [ADDRESS1] [ADDRESS2] [CITY], [STATE] [ZIP]