



FOUNDATION FOR THE FUTURE

CORE & MAIN CASE STUDY: NEW WATER SUPPLY & RETURN FLOW PIPELINE

Background

At Core & Main®, we have a responsibility to find the best solutions for distributing water, allowing communities nationwide to thrive. As a leading distributor of waterworks products and services, we possess an intimate understanding of our planet's most precious resource and the crucial role it plays in our residential and environmental ecosystems. By harnessing that knowledge and intertwining it with our expertise in pipeline systems, we are able to guide communities through the necessary steps to create new and innovative water solutions, no matter their climate, geography, legislative or engineering needs.

A Once-in-a-Generation Project

How would you feel if you had to walk 36 miles in order to ensure your family received clean and safe water to drink? That will fortunately never be a reality for the citizens of Waukesha, Wis., but the distance rings true. The area with a population of around 72,000 has a growing water problem, and it is not going away without the help of 36 miles of ductile iron pipe.

To put it simply, Waukesha needs a new water supply, and it will take a force of experts to make this monumental project come to fruition. But, this is not even the start of the city's history with water.

Dating back to the late 19th century, Waukesha was known as the "Spring City," with 60 natural springs within city limits. However, as the city grew, the springs could no longer meet the needs of the populous.

Today, the area relies primarily on an extensive sandstone aquifer, but that solution is dwindling as time passes. A layer of shale is keeping the aquifer from replenishing as swiftly as it did in the past. Now, what was once heralded as the "Saratoga of the West" is looking for a new, sustainable source to keep its communities thriving as they have been for centuries.

A solution to provide a safe and sustainable water infrastructure to Waukesha has been decades in the making. The City and the Waukesha Water Utility began researching alternatives in the 1980s, a process that ignited after sampling found the declining groundwater levels were leading to higher concentrations of total dissolved solids and radium. While it would not be dangerous for some time, city officials knew they had to act.

The intricate water issue also caught the eye of Dan Duchniak, who became the general manager of the Waukesha Water Utility in 2003.

One of the reasons that motivated him to take the position was finding a solution to the city's intricate problem.

"One of the things that we were looking at was the Great Lakes or groundwater sources. Those are the two logical choices that you have. As we were going through this and looking at what our options were, the Great Lakes became more and more attractive because it was a long-term, sustainable supply," Duchniak explains.

"We wanted people who understood the market and needs of southeastern Wisconsin."

KATIE RICHARDSON
Greeley and Hanson
Program Manager



By June 2016, Waukesha had been approved to take the first steps toward a pipeline that will effectively source water from Lake Michigan to the city and then return the same amount as treated water by using the Root River tributary. However, the utility knew they could not accomplish this feat alone.

Enter the Great Water Alliance, the City's new water supply program. Among its pioneers was program manager Katie Richardson. Since joining the team in October 2016, she has been working tirelessly with hundreds of consultants to make the pipeline a reality.

"It's just one of those things where when you're studying to be an engineer in school, and you know you're going to be really excited to see your project put out into the world, but this is amped up a couple levels," Richardson says.

After several years of researching materials, scouting the route of the pipeline and unveiling an all-encompassing website to educate public about the project, the time came to bring in other players - the contractors who would make this decades-old vision a reality.

"We wanted people who understood the market and needs of southeastern Wisconsin. But, we were also looking nationwide due to the size and length of this project," Richardson adds.

By the time they broke ground in 2020, the Great Water Alliance found a solution that offered national support with a localized focus.

The Winding Road Ahead

As an Outside Sales Specialist for Core & Main, Mark Hines knows an impactful project when he sees one.

"A community ceases to exist without clean, safe drinking water. When it comes to a community in need as a result of unsafe conditions in their current potable water supply, I can't think of a project more closely aligned to Core & Main's mission," Hines says.

He is right. At Core & Main, building safe, sustainable infrastructure is in our DNA. We are the ones behind the scenes, ensuring communities have what they need to work, live and prosper.

In this case, our associates at the New Berlin branch partnered with the project's contractor S.J. Louis to keep installation and other items on track and moving smoothly. Even before the project officially kicked off, Core & Main branch manager Bert McNeil says, they were in constant communication with several parties.

"We were involved from the get-go with phone calls from the engineer before any contractor was hired. So, we were the go-to people they called and relied on," McNeil adds.



"We looked for a team that had honesty and integrity. When we look for companies that are supplying those materials, we want to make sure that they have been there, done that, and they were able to come through for us in the long run."

DAN DUCHNIAK
Waukesha Water Utility General Manager



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MARK HINES

Core & Main
Outside Sales Specialist

processes, such as horizontal directional drilling (HDD), tunneling and other excavating practices. S.J. Louis’ partnership with Core & Main along with the contractor’s ability to perform these scopes helped to limit the footprint and amplify the overall impact of the work. U.S. Pipe also served as an integral role working with Core & Main associates to supply the right pipe for the job.

Richardson adds that the collaboration and knowledge Core & Main brings to the field is felt often.

“Core & Main has been really helpful and integral to making sure we had correct pipe installation. We’re not just talking about pipe installation anywhere. It’s Wisconsin. Like, thinking about what we are doing in these soils and wet areas. That’s been good to see that attention to detail. It is a large project, but it also needs to focus on here.”

And that focus will be on Waukesha and the surrounding areas until at least September 2023.

As the project makes its way through these communities, Richardson and her team will continue to educate and inform those living in these impacted areas. The messaging, at its core, is something everyone can understand. While construction may result in some inconveniences, the long-term benefits for residents and the environment is immeasurable. Teams not only aim to bring better water to humans and wildlife, but they are also setting the groundwork for better water conservation for generations to come.

The Alliance states on its website: “After such a long and arduous journey, the Great Water Alliance understands that we owe it to citizens, the environment and our partner communities to get this right.”

At Core & Main, we are dedicated to being there to help them do just that.

But, what does smoothly look like for a project that has been in the making for decades?

The short answer, per Richardson, is... a lot of twists and turns.

Since 2020, S.J. Louis and Core & Main have been working on the beginning phases of installation. That involves installing several miles of pipeline through several communities. All the while, Core & Main will be a key part of the training and education process as the project’s experts on waterworks and ductile iron pipe. Make no mistake. The road ahead will present challenges.

“The work will take place through varied types of conditions. There will be areas that are relatively open and other areas that are within the developed part of the city that will be more time consuming as S.J. Louis will have to contend with existing utilities, traffic control and tight workspaces,” Hines notes.

The expertise of Core & Main when combined with the multi-industry experience of S.J. Louis provides an all-encompassing, turn-key approach to the intricate