



## IDEXX Tecta: Automated and rapid bacteria tests save time on pipe replacement projects

The City of Minneapolis has over a thousand miles of aging water mains that require continual maintenance.

Every spring, crews from Minneapolis Water Treatment and Distribution Services (WTDS) begin deploying to neighborhoods throughout the city for annual cleaning and lining of the water mains to ensure that the water distribution system is functioning efficiently and safely.



“We can’t dig in the winter, so that means that we have to be as efficient as possible with the time that we do have,” said Matthew Sullivan, Minneapolis WTDS Water Quality and Laboratory Supervisor. “The Distribution team wanted test results faster, so the lab needed a way to turn results around without having to come in on weekends.”

For faster results without the overtime, Minneapolis WTDS turned to the IDEXX Tecta\* B16 system for an automated solution to test the temporary water system being delivered to each household during the duration of the project. With IDEXX Tecta, they found a solution that provided the same analytical quality that they were getting with their current testing methods, while providing faster real-time results and saving on staffing costs.

**“This tool has proven invaluable for getting results quickly, especially failures. It essentially reduces the total sample time by a day and immediately alerts us to any failures, allowing for prompt resampling.”**

Brian Olson, Assistant Superintendent of Water Distribution

Minneapolis Water Treatment and Distribution Services

### The Challenge: Crews waiting on test results is inefficient, expensive

Minneapolis WTDS provides high-quality and safe drinking water to approximately 430,000 people in the greater Minneapolis, Minnesota area. As part of its mission, the WTDS team has embarked on a multi-year project to clean and line the cast iron pipes that distribute drinking water to the Minneapolis area.

Unlined cast iron pipes are structurally sound but are susceptible to a form of corrosion called tuberculation, that constricts flow and can lead to 'red water' issues when the build-up is disturbed and released. Cleaning pipe walls and lining them with cement mortar or epoxy extends the distribution system life and improves water flow and quality.

Before the pipes can be cleaned and lined, temporary water lines must be put in place for every household connected to the main – and the temporary system must be tested for standard water quality parameters. Temporary water lines can be in place for 2-3 months while the project progresses. Before crews can fully switch customers over to the temporary system, they must wait for test results from the lab. Before purchasing the Tecta\* B16, if the crew collected a sample on a Friday, the lab had to bring in overtime staff on Saturday for reading and reporting the 18- or 24-hour result. These factors added time – and cost – to a project as crews idled and waited for lab results.

“The Tecta is worth it, and we gain days on projects because of it,” said Nate Wold, General Foreman, WTDS. “For a 24-hour sample taken at 2 pm on Tuesday, we wouldn't be able to act on a passed sample until Thursday without working overtime. With that same sample in the Tecta we can act on Wednesday during our regular shift. That time savings with a project like cleaning and lining is in the tens of thousands of dollars.”



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### The Solution: A fully automated detection platform

Minneapolis WTDS needed a solution that would provide reliable results while saving them time in the lab and out in the field. The fully automated Tecta B16's ease of use, rapid results, and electronic notification turned out to be the ideal solution to test their drinking water.

The IDEXX Tecta system was created in response to contamination events and global demand for faster hands-off microbial detection solutions. Depending on throughput needs, the analyzer is available with 4 or 16 incubation chambers, which work with easy-to-use cartridges that require minimal sample preparation.

**The instrument simultaneously detects total coliforms and *E. coli* in 18 hours or less, without input or visual interpretation from a laboratory technician.**

It is U.S. Environmental Protection Agency (EPA) approved for the detection of *E. coli* and total coliforms in drinking water, and there are also tests available for fecal coliforms and enterococci. The Tecta\* system uses the enzyme substrate detection method combined with a proprietary polymer partition technology to provide accurate and timely test results. The instrument can detect a positive sample sooner than 18- or 24- hour test methods, triggering an email directly to technicians for a quick response to contamination protocols.

“The biggest benefits are not having to staff the lab on a weekend or a holiday and getting results without us even being there. The distribution guys get upset now if we don’t use Tecta,” Sullivan said.

These technological advancements mean that positive results come in via email in a few short hours, and negative results are shared as soon as the test is done – without requiring the lab to be open and staffed to read results. This often means the crew has the test result in hand when they arrive at the project site the next day, instead of waiting for the lab to reach out after reading the test.

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## **The Results: Getting crews back to work faster**

Minneapolis WTDS is using the IDEXX Tecta System mostly for cleaning and lining, as well as pipe repair and maintenance, testing 4 -16 samples per day, 5 days a week. With automated emails, early notification saves them time by allowing crews to start work early without having to wait for the lab to call with test results. The system also saves money for the laboratory budget by eliminating unnecessary Saturday overtime shifts to read samples.

“The Tecta samples also allow us to get water mains back in service faster, because we can sample later in the day after pipe work is completed and get the sample in before 3:30pm,” said Wold. “The water main can go back in service by the end of business the next day.”

The IDEXX Tecta B16 provides a comprehensive solution for modernizing water main maintenance. The benefits of using the automated platform, including enhanced efficiency, cost savings, early notification, and minimized disruption, make it a valuable tool for municipalities and utilities looking to optimize their infrastructure management and service delivery.





**IDEXX Tecta is a complete, self-contained automated microbiology testing system.**  
The method is U.S. EPA-approved for detecting total coliforms and *E. coli* in drinking water.\*

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**Start a test anytime.**  
You don't need staff in the lab to read the results. Tecta automatically reads results and can email the results immediately to crews, minimizing downtime.

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**Tests are reported automatically.**  
Even on weekends, automatic reports allow the lab to start samples on a Friday without paying for weekend read backs.

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**Early identification of positive results**  
Tecta can cut hours, sometimes even days, out of these projects.

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Learn more about IDEXX Tecta at [idexx.com/MNWater](https://idexx.com/MNWater)



\*Tectalert EC/TC medium and Tecta instruments are U.S. EPA approved at 40 CFR Part 141, listed as a method in *Presence/Absence Method for the Simultaneous Detection of Total Coliforms and Escherichia coli (E. coli) in Drinking Water*.

