

OmniSite Provides AI-Powered Virtual Microbiologist for Wastewater Treatment Facilities

AI software from OmniSite identifies wastewater organisms and advises plant operators on process adjustments for precise treatment control.

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[OmniSite](#), an Indianapolis-based remote monitoring provider with more than 28 years of experience and tens of thousands of monitors deployed across the United States, provides an AI-powered Virtual Microbiologist and process advisor software designed for wastewater treatment facilities. The cloud-based software allows lab operators to connect a camera microscope to the OmniSite platform, which automatically counts and identifies wastewater indicator

organisms, assesses floc health, and evaluates other critical process parameters — then advises on plant adjustments for precise control.



Wastewater treatment relies on biological processes that require consistent monitoring of microbial communities. For many municipal utility managers, manual microscopic analysis of wastewater samples is time-intensive and dependent on trained personnel — resources that can be limited, particularly in smaller municipalities. The Virtual Microbiologist addresses this challenge by automating organism identification and delivering data-driven process recommendations through OmniSite's cloud infrastructure.

Key capabilities of the Virtual Microbiologist software include:

- Automated counting and identification of wastewater indicator organisms

- Floc health analysis and assessment of critical process parameters
- Process adjustment recommendations for wastewater treatment operations
- Cloud-based connectivity through a standard camera microscope
- Integration with OmniSite's existing GuardDog monitoring platform

"Municipal utility managers are tasked with maintaining water quality standards while often working with limited staff and resources," said Mr. Tom Ward, President and CEO of OmniSite. "The Virtual Microbiologist provides lab operators with AI-assisted organism identification and process recommendations, which can support more consistent monitoring across wastewater treatment facilities of all sizes."

OmniSite was founded on Jan. 3, 1998, as Logical Concepts, Inc. by Tom Ward in the garage attached to his family home. The company holds a patent on its cellular technology and has grown from that garage startup into a nationwide operation headquartered in downtown Indianapolis. OmniSite's product line — including the OmniBeacon, XR50 PLUS, Crystal Ball PLUS, WINGs multimodal device, and the GuardDog software platform — serves municipalities, industries and communities across the United States.

The company's monitoring solutions focus on municipal sewage and water pumping stations, with a stated mission of providing early warning of malfunctioning equipment to support environmental protection. In 2022, OmniSite began migrating its back-end servers to Amazon AWS for enhanced reliability, redundancy and security — a multi-year infrastructure project that supports the company's cloud-based services, including the Virtual Microbiologist.

OmniSite also offers peer-to-peer control, which allows any OmniSite product to signal another for complex interlocked control across long distances using a simple fill-in-the-blanks table, eliminating the need for complex programming. This capability extends across municipal drinking water and wastewater pumping systems.

"OmniSite was built on the belief that early notification of equipment issues is essential to protecting waterways and communities," Mr. Ward said. "The Virtual Microbiologist extends that same principle to the biological monitoring side of wastewater treatment, giving operators data-driven guidance on process adjustments."

OmniSite provides free in-person product training spanning 1.5 days at the company's training facility in Indianapolis, available to operators and municipal staff at no cost. The company also offers configuration services, where OmniSite technicians set up the GuardDog cloud interface for customers.

OmniSite serves businesses nationwide and reports tens of thousands of monitors located across the United States monitoring municipal sewage and water pumping stations. The company's cellular and cloud-based solutions are designed to support municipalities of varying sizes, including those with limited technical staff.

Municipal utility managers seeking additional information about the Virtual Microbiologist or OmniSite's full product line can visit <https://www.omnisite.com/> or call +1 317-885-6330. Additional resources and updates are available on the OmniSite blog at <https://www.omnisite.com/blog>.

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About OmniSite

OmniSite is a privately owned family business headquartered in downtown Indianapolis, Indiana. Founded on January 3, 1998, as Logical Concepts, Inc. by Tom Ward in the garage attached to his family home, the company has grown over more than two decades into a nationwide provider of cellular and cloud-based remote monitoring solutions. OmniSite's product line — including the OmniBeacon, XR50 PLUS, Crystal Ball PLUS, WINGs plus virtual Microbiologist, and the GuardDog software platform — serves municipalities, industries, and communities across the United States. The company holds a patent on its cellular technology and reports tens of thousands of monitors deployed nationwide. In 2022, OmniSite began migrating its back-end servers to Amazon AWS for enhanced reliability and security. OmniSite serves businesses nationwide from its Indianapolis headquarters.

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Notes to Editors

1. OmniSite was founded in 1998 as Logical Concepts, Inc. The company changed its name to OmniSite in 2008. It is a privately owned family business headquartered in downtown Indianapolis, Indiana.
2. SCADA stands for Supervisory Control and Data Acquisition — a system used to monitor and control industrial equipment and processes remotely.
3. The OmniBeacon product evolved from the SmartLight, first created in 2012, and was renamed and redesigned in August 2015.

4. OmniSite's Peer-to-Peer Control feature was released in October 2024. The company also offers Rapid Installation Kits (XR50 and Crystal Ball kits) with pre-terminated wire harnesses, conduit, and analog sensors.
5. OmniSite offers free in-person product training (1.5 days) at its Indianapolis training facility.
6. All product claims and statistics referenced in this press release are sourced from information provided by OmniSite and the company's website at <https://www.omnisite.com>.
7. GuardDog is OmniSite's proprietary cloud-based notification and historian software, included at no additional cost with every OmniSite device.

End of Press Release.

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