

Scaling Up, Eliminating Odors: Howell's Innovative Approach to Wastewater Expansion

Location	End User	Installation Date	Design Engineer
HOWELL, MI	CITY OF HOWELL AND MARION COUNTY, MI	2021	HUBBELL, ROTH & CLARK, INC.

Background

As the population of the City of Howell and Marion County, Michigan continued to grow, the City and the County realized they needed to increase the treatment capacity at the Howell Wastewater Treatment Plant (WWTP) by 33%. In 2019, working with engineers from Hubbell, Roth & Clark, Inc. (HRC), they developed a plan to add a new wet well and headworks building at the WWTP. To ensure the new equipment, the wet well, and the headworks building would last 20+ years, prevent nearby residents from smelling wastewater odors, and improve worker safety, they chose to install a bipolar ionization odor and corrosion control system.

In northern climates, headworks buildings are heated to prevent water and piping from freezing and to provide comfort for plant operators. One of the benefits of the Air+ Supply Scrubber is its ability to include gas or electric heating. To eliminate the cost of a separate heating system for the headworks building, HRC specified a gas-fired heating system within the Air+ Supply Scrubber.

In 2021, Air+ provided an odor and corrosion control system featuring a custom-engineered Supply Scrubber and AirDuct™ distribution system designed to optimize the delivery of ions and tempered air throughout the headworks building. A centralized control panel was also provided to monitor and manage system performance, including operation of the ionizers, supply fan, heating system, instrumentation, and filtration components.

Project Highlights

WASTEWATER
SOLUTIONS

- + Incorporated an indirect gas-fired heating coil in the Air+ Supply Scrubber saving engineering, equipment, and installation costs of a separate heating system.
- + Reduced corrosion to ensure new equipment lasts 20+ years, prevented wastewater odors from nearby residents, and improved worker safety.



Superior Odor & Corrosion Control



Air+ Supply Scrubber



Air+ Supply Scrubber Ionizer Rack

Key System Design & Operational Parameters	Value
Supply Scrubber Airflow, CFM	5,400
Bipolar Ionization, Qty of model 501F Ionizers	12
Supply Scrubber Heating System	Indirect Gas Fired, 700 MBH
Duct Type	AirDuct™, Anti-Static Polyethylene
Control Panel	PLC and HMI equipped, SCADA compatible

The Air+ odor and corrosion control system has performed very well



There are no noticeable odors inside or outside the headworks building, and we have not experienced corrosion issues. In addition, our operators are much more comfortable performing maintenance work inside the building now that strong H₂S odors have been eliminated.

— Shawn Wheat, City of Howell, MI

