

## Customer & Market Due Diligence Of Wastewater Treatment Equipment Manufacturer: Establishing Demand Outlook And Growth Opportunities

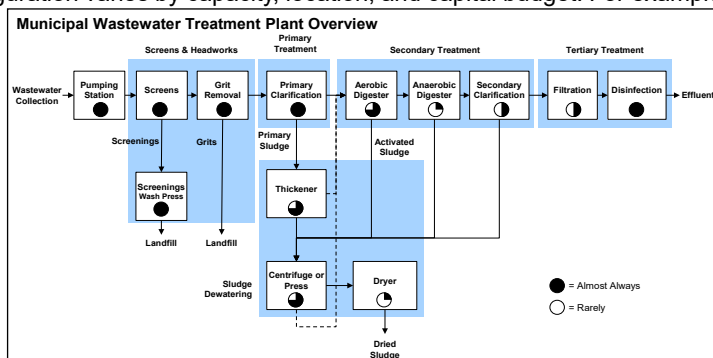
**The Challenge:** One of our PE clients was looking to acquire a leading wastewater treatment plant (WWTP) equipment manufacturer serving the municipal end-market. Attracted by favorable macro trends (aging infrastructure, inflow of funding through the federal infrastructure bill, and tightening of effluent regulations), our client was interested in building an end-to-end WWTP equipment platform. As such, our client asked Gotham to conduct an early Phase I 2-week customer & market due diligence of the target to: (1) pin down the equipment-level competitive landscape and identify potential acquisition candidates for growth; and (2) understand the capital and O&M funding/spending outlook and buying process for the municipal wastewater treatment market.

**WWTP Equipment Deep Dive And Acquisition Opportunity Assessment:** Gotham undertook a fact-based, bottom-up approach that entailed:

- Establishing WWTP equipment need by mapping wastewater treatment processes under different scenarios and identifying treatment technologies used, and associated equipment required for each treatment section of the plant
- Conducting 44 anonymous interviews with municipalities and other industry participants to establish: equipment usage and vendors; capital investment dynamics; engineering design and bidding process for equipment purchase; O&M requirements and buying approach; vendor selection criteria; and the target's reputation and competitive positioning
- Leveraging available government and market data to establish the capital/O&M spending outlook in the municipal wastewater treatment market and National Pollution Discharge Elimination System (NPDES) requirements
- Building a comprehensive database of WWTP equipment vendors and products (157 companies and 800+ products)
- Performing an in-depth equipment assessment to identify expansion categories and identifying potential acquisition candidates.

### Complexity of WWTP Equipment Driven By Diversity Of Processes And Plant Design Considerations

While a full-scale WWTP has 5 treatment sections (Screens & Headworks, Primary Treatment, Secondary Treatment, Tertiary Treatment, and Sludge Dewatering), the actual plant configuration varies by capacity, location, and capital budget. For example, plants in rural areas can spread sludge on farmland; however, plants located in urban areas require higher level of sludge dewatering to minimize sludge transportation and landfill tipping costs. Additionally, various sludge dewatering technologies are available (e.g., belt, screw, filter, rotary press, centrifuge) with equipment choice driven by the capital budget, dewatering requirements, design preferences, space availability, and operating costs. Further, secondary and tertiary treatment technology choices are driven by effluent quality requirements listed on the WWTP's NPDES permit, determining, e.g., use and type of membrane-based filtration (reverse osmosis, nano-, ultra-, or micro-filtration).



### Market Expected To Grow Driven By Aging Infrastructure, Government Spending, And Tightening Effluent Quality

Under the Clean Water Act, EPA implemented control over discharge quality via NPDES permits dictating the volume and quality of effluent and sludge. These permits are reviewed every 5 years; under the Biden administration, the EPA has taken an aggressive posture on water quality, especially regarding excessive nutrients and PFAS, driving a need for investment in secondary and tertiary treatment equipment. Additionally, some states (e.g., Maine) have begun disallowing spreading of sludge on farmland due to concerns about PFAS contamination in the food supply, requiring additional sludge dewatering equipment. The WWTP market is driven by replacement of aging infrastructure and the market is expected to get a boost of \$43B for water/wastewater infrastructure from the infrastructure bill. Municipal wastewater projects are typically funded by utility/sewer bonds, which are frequently backed by EPA's Clean Water State Revolving Fund (CWSRF), and these funds are expected to increase by ~2.5X original allocation in the FY2022-2026 timeframe due to the infrastructure bill.

### Multiple Growth Opportunities Available In This Fragmented Market Benefitting From Favorable Trends

The fragmented WWTP equipment industry has developed over a long time, with the oldest plants existing for 90+ years. Given the different types of equipment used in a WWTP and local purchasing dynamics, many companies specializing in a specific equipment type formed over the years in the U.S. and Europe, with some subsequent consolidation in the space (e.g., some companies now focus on a section of the plant) but only a handful offer a broad range of equipment. However, there are still a lot of small companies remaining, presenting an opportunity for the target to develop an end-to-end WWTP platform offering benefits for both the target (economies of scale) and the customers (ease of both service and spare parts procurement). To help our client build this platform, Gotham assessed the WWTP equipment categories based on 5 dimensions: engineered product, replacement lifecycle, favorable trend, competitive landscape, and availability of acquisition candidates. For example, membrane-based filtration is an attractive segment to enter because of its technical mature and growing application owing to stricter norms to meet biological oxygen demand (BOD) and total suspended solids (TSS) limits. For each equipment category, Gotham also identified the most promising acquisition candidates based on size, ownership, and potential fit with the target.

**The Outcome:** Gotham's comprehensive assessment of the WWTP equipment market provided our client with an early view of WWTP equipment, the competitive landscape, and potential acquisition opportunities, as well as an understanding of the municipal wastewater spend outlook and purchasing process. This fact-based clarity on the target's competitive positioning and its opportunity in the WWTP equipment market allowed our client to move forward in the auction process with confidence.