



**LEXINGTON WWTP BOOSTS EFFICIENCY WITH
HUBER RAKEMAX® UPGRADE
NEW RAKEMAX® AND RAKEMAX® CF SCREENS
REDUCE CLOGGING, IMPROVE FLOW, AND
STREAMLINE SCREENINGS HANDLING FOR THE CITY
OF LEXINGTON.**

BACKGROUND AND CHALLENGES

The City of Lexington Wastewater Treatment Plant processes an average flow of 3 MGD (million gallons per day) of municipal wastewater, with a peak flow of 14 MGD.

A HUBER RakeMax (multi-rake) screen was installed in 2021 upstream of the influent pumps and the Headworks. The RakeMax replaced one of two old, single rake climber screens that deposited screenings onto a belt conveyor. The remaining climber screen remained for back-up.

The existing climber screens were aging and allowed a lot of rag bypass that regularly blocked downstream pumps, which then needed to be manually unblocked. When funds were available the city embarked on a second phase of the project to replace the second climber screen and to replace the belt conveyor with a washing compactor.

They would still experience clogging downstream if the single rake screen needed to be used and the belt conveyor provided no washing or compaction and allowed dirty material to fall on the floor.

SOLUTIONS PROVIDED BY HUBER TECHNOLOGY, INC.

HUBER offered a second identical RakeMax and an option to purchase a newer model, the RakeMax CF (Center Flow), a screen launched in 2019. This screen includes similar components to the traditional multi-rake style of screen but passes the flow more efficiently and captures a higher percentage of screenings. The vertical lift design requires less footprint which suited these 4-foot wide by 30-foot-deep channels. The backplate of the CF screen provided a natural overflow bypass.

PROJECT DATA

Client: City of Lexington
Location: Lexington, NC

Project Type: Screening

HUBER Technology, Inc.
Solution: HUBER RakeMax®
CF Bar Screen

Completion Date:
September 2025

CLIENT TESTIMONIAL:

Mike Sutton, Utility Plant Chief Operator commented that the screen installation:

Prior to the HUBER RakeMax screen installation we had to pull and clear pumps 3 to 4 times a week and double that during a high flow situation. Now we rarely need to pull pumps. Also, the plastics, and other trash, has been reduce by at least 80% throughout the plant process (e.g. the air basin, contact chamber and effluent tank, along with the final clarifiers).

The side discharge requires a short, shafted screw conveyor to feed directly into the HUBER Wash and Press (WAP) that picks up screenings from the existing RakeMax screen. The WAP4L provided thorough washing of the screenings prior to compaction, reducing the volume of solids in the dumpster and odors. The machine is totally enclosed preventing material dropping on the floor.



RESULTS & BENEFITS

Maintenance Improvements:

- ✓ Substantially fewer pump blockages

Performance Improvements:

- ✓ 80% less rags in downstream processes
- ✓ Washed, compacted screenings with little odor
- ✓ A clean sanitary headworks area

IMPLEMENTATION & EXECUTION

- 2021: HUBER RakeMax (10880x975/13) installed
- 2025: Installation and commissioning of the HUBER RakeMax CF (10239X500X625/12), HUBER Ro8t 273 shafted screw conveyor, HUBER WAP4 Long Wash and Press



CONCLUSION

The installation of the HUBER RakeMax screens and associated handling equipment demonstrates the core purpose of an effective headworks system: minimizing downstream maintenance and improving the overall performance of wastewater treatment processes.

ABOUT HUBER TECHNOLOGY, INC.

Headquartered in Denver, North Carolina, HUBER Technology, Inc. operates a 206,000-square-foot state-of-the-art facility that houses offices, training centers, and advanced manufacturing capabilities. This enables us to design, produce, and deliver a wide range of wastewater treatment equipment, from dewatering screw press systems, headworks screens, grit handling, septage receiving, tertiary filtration and equipment and drying of biosolids equipment for use in the water and wastewater industry.

