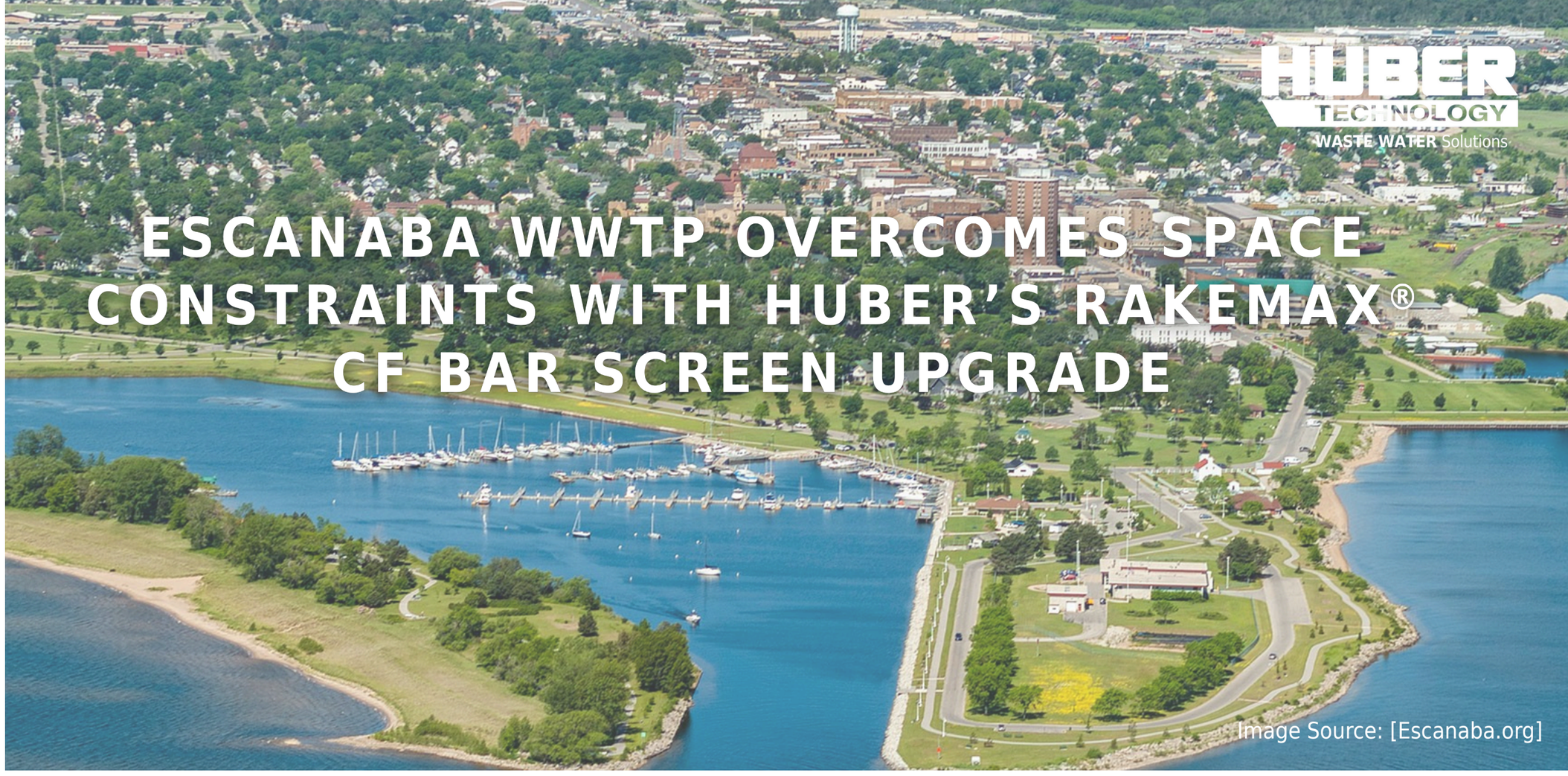


ESCANABA WWTP OVERCOMES SPACE CONSTRAINTS WITH HUBER'S RAKEMAX® CF BAR SCREEN UPGRADE

Image Source: [Escanaba.org]

BACKGROUND AND CHALLENGES

The Escanaba Wastewater Treatment Plant in Michigan underwent a design upgrade to accommodate increased flows into their treatment plant that included a new headworks screen. They faced several challenges:

·Reusing the existing headworks channels offered limited space for an additional screen.

·Increasing flow through the screen and limiting the headloss but using the same channel.

·The length of the existing inlet channel left little room for a new screen.

·Reusing the existing screen as backup and add another screen with limited space in the existing headworks.

SOLUTIONS PROVIDED BY HUBER TECHNOLOGY, INC.

The RakeMax® Center Flow (CF) Bar Screen is a unique variation to commonly used front rake, multi-rake screens. Having a unique U-shaped bar design and inside-out flow characteristics, this screen design can increase flow, reduce headloss and increase capture versus conventional multi rake screens with straight bars and flat screen surface.

Although a standard inclined multi rake bar screen was originally specified and bid, after securing the bid, HUBER presented the advantages of the RakeMax CF to the contractor, owner and the consultant. It was better suited to address the physical limitations of the channel. Its 90-degree installation provided a better fit in the channel and on the operating floor. The orientation also eliminated the need for an originally specified discharge screening sluice. Finally, having no bottom sprocket reduced the need for operators to enter a confined space.

PROJECT DATA

Client: Escanaba Waste Water Treatment Plant

Location: Escanaba, MI

Project Type: Screening

HUBER Technology, Inc. Solution: HUBER RakeMax® CF Bar Screen, HUBER Wash Press WAP2

Completion Date: August 2021

"Maybe the most telling benefit of the screen was the impressive screening capture. The screen with the "U" shaped bars offered more screening surface area thus lowering the slot velocity through the bars which was noticeable to the plant staff. "Screenings output increased from 300 lbs/week to between 700-800 lbs/week even after washing and compacting. The screen removes 1.2-2.0 cubic feet of rags per day. We haven't seen any rags or clogs in the downstream raw sewage pumps since the installation."

— Lead Operator, Escanaba Wastewater Treatment Plant

IMPLEMENTATION & EXECUTION

•May 2020: Order received.

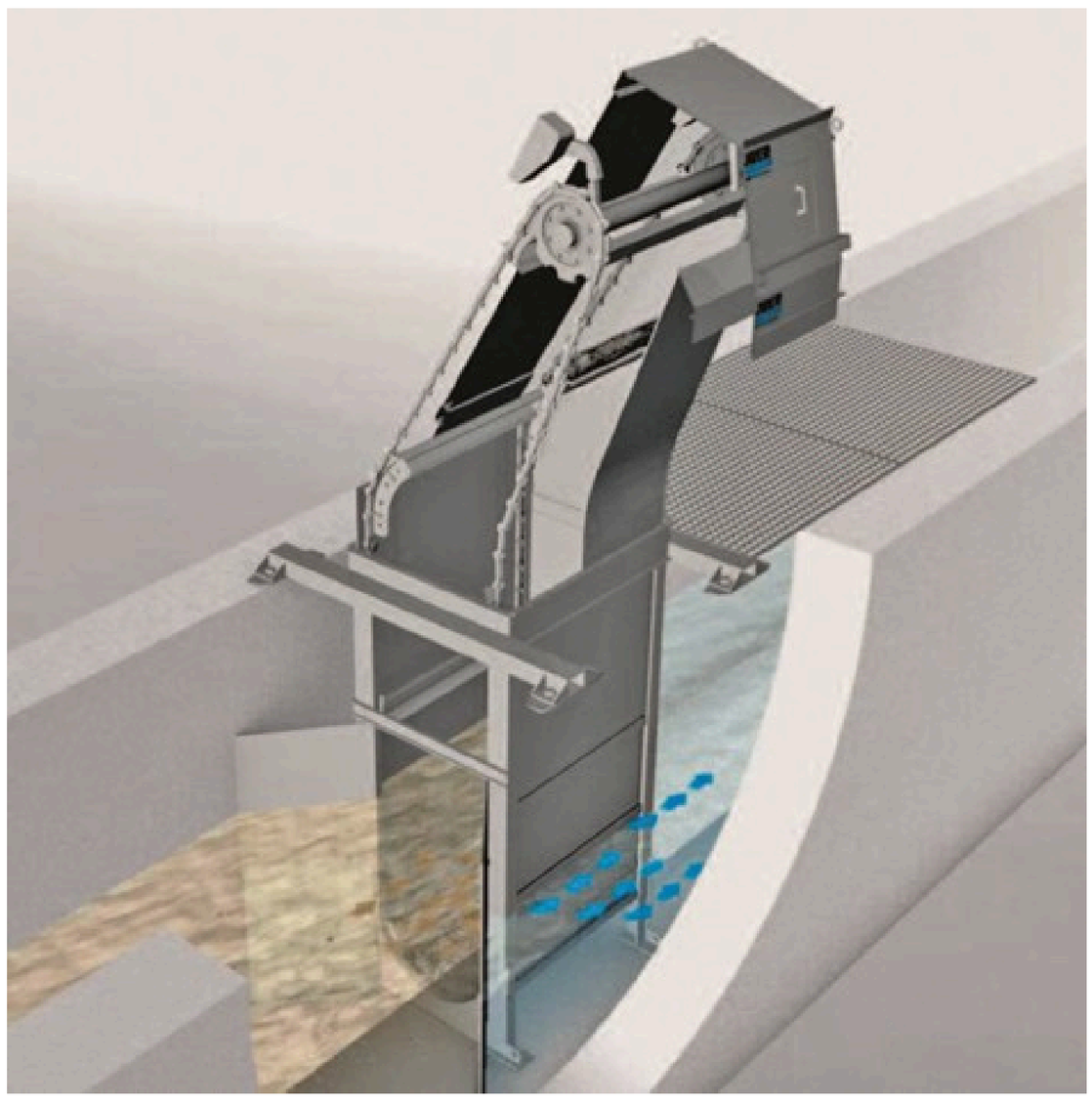
•May 2021: Screen and washer equipment delivery on site.

•August 2021: Commissioning and startup.

HUBER’s engineering team collaborated with plant operators to ensure seamless integration with minimal downtime.

RESULTS & BENEFITS

- The unique U-shaped bars and inside out flow pattern offer the highest hydraulic capacity of any screen for any given channel width.
- Screen design offers the highest capture efficiency of any bar screen design.
- Vertical installation reduces footprint and reduces overall project costs.
- Lower maintenance with no underwater bearings and sprockets. No cleaning brushes or spray water required.
- U-shaped bars and large screening surface area affords more capacity allowing for retrofitting existing works.



CONCLUSION

There were understandable reservations with what would be the very first installation of the RakeMax CF in the U.S. Extended warranties and on-site support visits were amongst the assurances provided by HUBER to build confidence in the solution. Together, HUBER and the operators were able to monitor the hydraulics, capture, operation and maintenance of the screen. This successful project launched the promotion, application and common use of this new screen technology. Being the first proved to be the right decision and has led to an ongoing relationship which has paid dividends in trouble free operation, limited maintenance and the protection from unwanted screenings.

Since this installation, HUBER has provided similar solutions to many other municipalities, all benefiting from significantly more screenings capture, better hydraulics, smaller footprint, lower overall cost of installation and no underwater moving parts.

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.

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For more information about the HUBER RakeMax® Center Flow please scan the QR code