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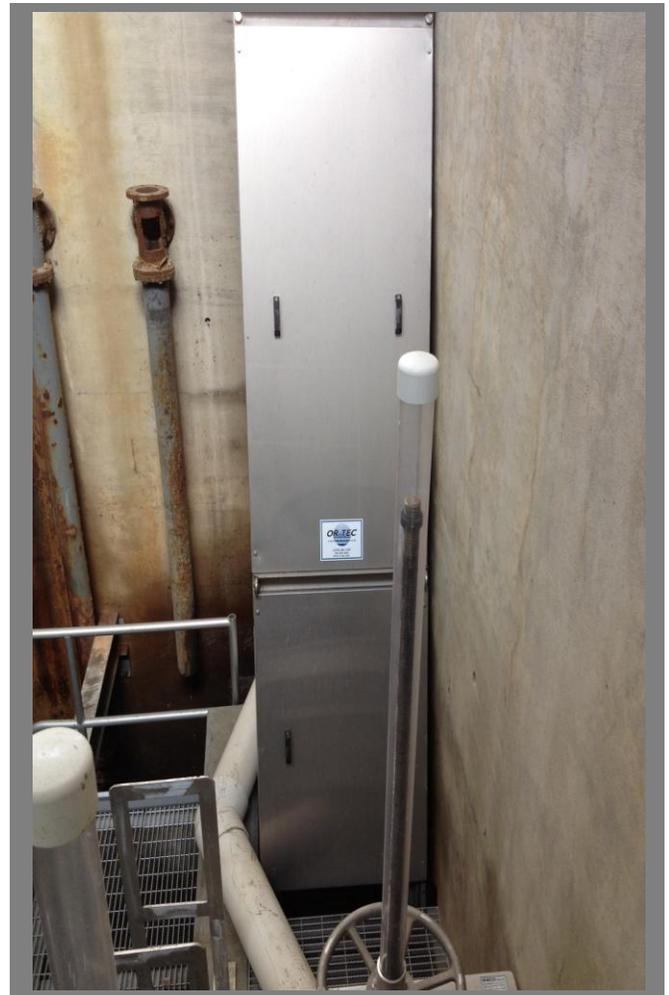
## Case Study: Rittman, Ohio Blue Whale Micro Bar Screen

Rittman is a city situated in the beautiful farm country of northeast Ohio. Founded in 1814 it now boasts a population of nearly 7,000.

The Rittman Wastewater Treatment Plant treats an average flow of 1.6 mgd and sees peak flows of up to 10 mgd.

The WWTP had a manual bar screen located in an inlet chamber some 30' below grade. Standard procedure saw the operators cleaning the manual bar rack using a rake and hoisting the screenings to grade for disposal.

Submersible pumps located downstream of the manual bar screen pump the flow on and up to grade for treatment.



*Micro Bar Screen  
Installed in Rittman*



*Compactor Washer  
Installed in Rittman*



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## Case Study: Rittman, Ohio Blue Whale Micro Bar Screen

**Customer:**  
Rittman WWTP

**Rittman Utilities Director:**  
Cary Metcalf

**Engineer:**  
Mr. Scott Ellsworth  
Environmental Design Group  
(formerly Floyd Browne)

**Contractor:**  
Mr. Randy Robinson  
Bogner Construction

**Application Details**  
**Average Daily Flow:**  
1.6 mgd

**Peak Flow:**  
10 mgd

**Equipment Installed**  
**Micro Bar Screen**

**Bar Spacing: 3mm (1/8")**

**Compactor Washer**

**Touchscreen Control Panel**

### The Micro Bar Screen Solution

The main issue with using manual bar screen (besides the labor involved) was that the 1" bar spacings allowed all manner of rags, fibrous material, plastics etc. to enter the wastewater treatment plant. These reformed and matted around rotating equipment, plugged lines, pumps and settled in tanks. This had become a major issue for plant personnel and resulted in a lot of time and money being spent on repair and maintenance.

Installing a standard mechanical screen with 1/4" spacing was considered but it was soon determined that even at 1/4" a considerable amount of smaller rags, long hair and fibrous material would continue to make its way into the plant. This material would once again reform, plug equipment and remain a maintenance issue.

It was at this point the decision to use a Blue Whale Micro Bar Screen supplied by OR-TEC, INC was made. The Micro Bar Screen's 1/8" bar spacing's capture a far higher percentage of all rags, fibrous material and small plastics entering the plant compared to a 1/4" screen. This hugely decreases problems caused by the plugging and matting of this material downstream.

### Current Operation

The Micro Bar Screen has changed operations in the plant dramatically. Pulling pumps to clean rags out of them, unwrapping rags and fibrous material from rotating equipment and manually cleaning the bar screen has completely stopped.

Now screenings are elevated to grade level by the screen rakes which fully clean the screen face. At grade the screenings are removed from the rakes by a simple scraper mechanism and discharged into a Blue Whale Compactor Washer. Screenings are then washed and organics remaining in the screenings are directed back to the inlet waste stream. The washed screenings are compacted to around 60-70% dry and elevated for disposal.

*"The Micro Bar Screen and compactor washer have worked very well for us. We are very happy with its performance and the results ...and I'm a skeptic"*

*-Rick, Rittman WWTP Operator*