

# Portland, ME – STEP SCREEN REPLACED BY HEADWORKS®

## MAHR® BAR SCREEN

In May 2008, Portland Water District installed 3 step screens in each of their 3 channels and in only 7 years of use, were facing maintenance & performance issues with the step screens. These screens were also affecting downstream processes. For e.g., the odor control system relied on an air intake via the screenings channel. In winter, the screenings falling back from the step screen would form a hardened log and block the screen face, thus affecting the intake to the odor system.

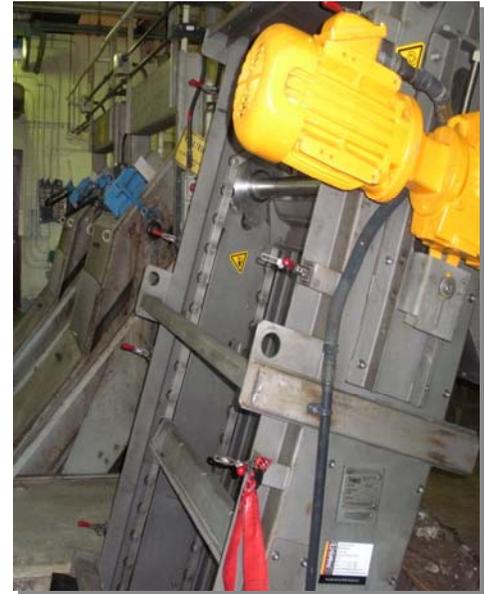
After conducting his due diligence, Scott selected the Mahr screen as he felt it was the best fit for his requirements. Scott did the equipment selection and engineering in-house, which gave him an in-depth understanding of the product and its unique features. In fact, after having had the unique advantage of seeing a Mahr screen operate right next to a Step screen for over a year, Scott is considering replacing the remaining 2 step screens with a multi rake screen. Scott had this to say about his decision to select a MAHR screen - *"The MAHR screen is a very heavy duty and maintenance friendly screen and I am very impressed with its performance"*.

The HEADWORKS MAHR BAR SCREEN brought a host of technical advantages to the table, along with the fact that it had several trouble free installations in the area operating for more than ten years which significantly bolstered the owner's confidence. Also, the fact that a vast majority of the large wastewater plants in the U.S use the MAHR BAR SCREEN added to that sentiment.

By opting to go with the Mahr Bar Screen, Scott avoided the typically seen problems associated with Step Screens such as Grit accumulation between the elements and its consequent damage to the screen.

In deeper channels, the lamella gets heavy which eventually wears out the bearing. Screenings fall back into the channel and develop a rolling "log". When flow surges the screen runs faster and the screenings tend to fall back in the channel forming a bigger roll, which eventually had to be manually raked out. In sharp contrast, the picture below shows the steeper angle the MAHR BAR SCREEN is installed at, with no screenings falling back.

Based on our screenings experience we feel that while step screens do have their specific applications, in most cases it is a more reliable and in the long run cheaper solution, to install a MAHR BAR SCREEN.



Project Name  
Owner/Engineer

East End WWTP  
Scott Firmin  
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Portland Water District  
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Channel Width  
Channel Depth  
Flow

4.50 feet / 1.37 m  
7.38 feet / 2.25 m  
40 MGD / 1.75 m<sup>3</sup>/sec



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