

Calgary's Bonnybrook WWTP Sees Immediate Process Efficiencies with Bar Screen Upgrade



"A detailed cost benefit analysis was conducted to assess the justification and technology selection to upgrade the Bonnybrook WWTP Headworks facility. The HUBER multi rake bar screen was selected based on a competitive equipment selection process that considered experience, proven performance and cost. This screening upgrade will provide protection to downstream plant processes in the BNR WWT facility to a peak capacity of 1390MLD."
- Ryan Robers, Stantec Consulting

Bonnybrook serves a population of approximately 950,000 and has an annual average flow of about 350 ML/d. It is Calgary's biggest and oldest wastewater treatment plant with its first treatment units in place by the mid 1930s.



The high cost of maintenance and unsatisfactory performance of the aging equipment in the Bonnybrook headworks made it clear to The City of Calgary that significant changes were in order. To add to issues, the poorly performing headworks allowed screenings to pass to the downstream process units causing operational and maintenance problems.

The City of Calgary opened a competitive selection process in order to gather information and make fact-based determinations about the selection of the equipment and the expertise they would choose to guide what would be a major implementation. HUBER obtained the highest ranking in this process and based on the equipment shop drawings provided by HUBER, detailed design was finalized to suit HUBER equipment.

“Our two major areas of change were in the aesthetics of the plant and the quantity of screening removed. The new headworks screens remove approximately three times what we were removing in the old facility. The visual difference is quite stark. The primary clarifiers, primary sludge thickeners and all weirs are practically clean.”

- Zorica Knezevic, The City of Calgary, Senior Project Engineer, Bonnybrook WWTP

Replacing the Old Facility

Age determined much of the plan. At 30-40 years old, the facility was simply worn out. The technology was also antiquated. The City considered replacing the old equipment, but realized that this option would render it impossible to achieve the same treatment capacity that a completely new facility would provide.

“We’re still pretty early in our experience with our new facility but have been impressed with the performance of the HUBER bar screen and washpress thus far. We’re looking forward to seeing the impact to our system and its performance long term.”

- Zorica Knezevic, The City of Calgary, Senior Project Engineer, Bonnybrook WWTP

Vastly and Immediately Improved

After replacing the old facility, Calgary’s process performance immediately improved. The visual appearance of the primary clarifier surface and weirs and primary sludge thickener surface and weirs is vastly improved. In the old facility, weirs and clarifier surfaces were loaded with floatables and unsightly materials.

After the new headworks was placed in service, weirs and clarifiers are amazingly clean. The amount of screenings and grit collected in the new facility triples what the old facility was able to remove. Extracting these new volumes definitely produces cleaner liquid stream throughout the plant and it also greatly reduces stress on downstream units.



Responsive to Needs

Experiences among HUBER's clients are quite positive. From new facilities to replacement components, HUBER pays close attention to needs and issues that arise and the successes its clients celebrate. Responsiveness is a mantra that the entire team, from engineers, to implementation crews and service technicians are passionate about.

"HUBER's units run efficiently with little required maintenance so far. This was quite an improvement from the frequent repairs and maintenance required to keep our old components and facility operational."

- Zorica Knezevic, The City of Calgary, Senior Project Engineer, Bonnybrook WWTP



HUBER serves the municipal and industrial wastewater treatment market with high quality liquid-solid separation technology. HUBER Technology offers the complete chain of screening, grit and sludge handling processes. The company is an original source manufacturer specializing in stainless steel fabrication of technologies for water and wastewater with proven experience and expertise with over 40,000 installations worldwide.