delcowater
Integrated Solutions

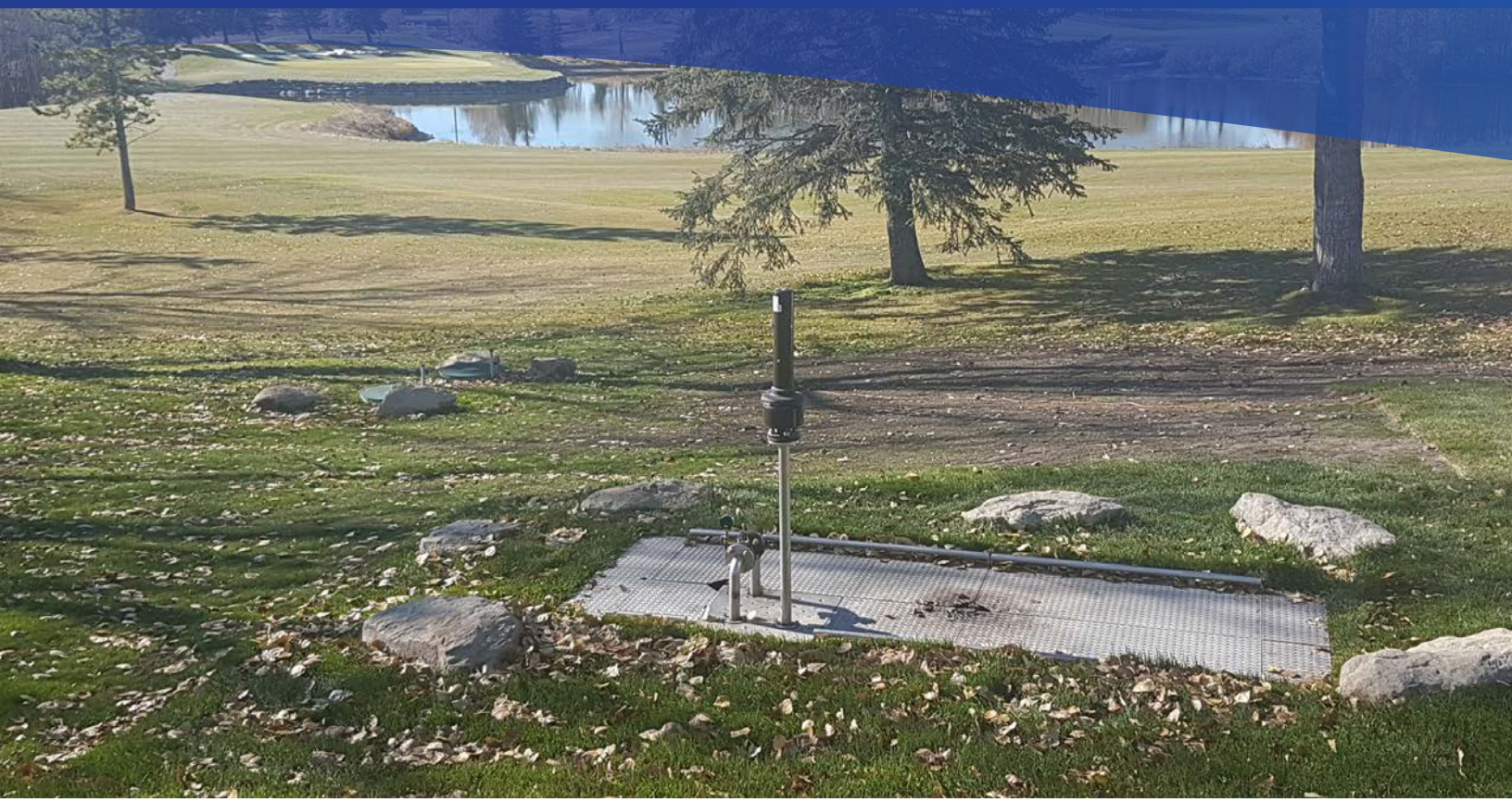
A Canadian Leader in Water Treatment Solutions

WASTEWATER TREATMENT

MBBR & MBR TECHNOLOGY

Sustainable wastewater treatment solutions for **high quality effluent.**

Delco Water's packaged wastewater systems are designed to meet high quality effluent standards.



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Calgary • Saskatoon • Humboldt • Winnipeg

INTRODUCTION TO MBBR

The Moving Bed Biofilm Reactor (MBBR) water treatment technology is an attached growth treatment process. MBBR wastewater package plants are efficient, effective, and economical turnkey wastewater treatment solutions.

Bearspaw Golf Course
Bearspaw, Alberta
In Ground MBBR Facility

KEY PRODUCT FEATURES

An efficient, effective, and economical solution

- Capacities range from 1 to 20,000 m^3/day
- Suited climate conditions from +40°C to -55°C
- Designed and fabricated to suit the individual site requirements and specifications
- Packaged plants have a compact footprint, are self-contained, and easily transported
- Stainless steel construction
- Fully skid assembled
- Integrated sludge processing option
- Advanced automation options available

MBBR technology is designed to enhance the activated sludge process by providing a greater biomass concentration in the aeration tanks, thus reducing the reaction basin size. Delco Water's MBBR technology achieves a high mineralization of organics, leaving little surplus sludge. As a result, fewer system cleanings are required.

Membrane Bio-Reactor Technology

When used with specialty ultrafiltration, a MBBR process becomes a **Membrane Bio-Reactor (MBR)**, capable of meeting the most demanding of wastewater treatment goals.

Featuring industry leading MBR membranes, our MBBR and MBR technologies meet all regulatory requirements for effluent re-use or discharge back into the environment.

Pentair's X-Flow Airlift MBR Membranes provide a clean alternative to submersible hollow fibre and flat sheet membranes.

MBBR FACILITY TYPES

Typical "in-ground" MBBR facility.

Typical "above ground" MBBR facility.

THE BENEFITS OF AN MBBR WASTEWATER TREATMENT SYSTEM

- Modular design makes scaling up or down very simple
- Plug and play features minimize installation time
- Fully automated MBBR systems are easy to operate and maintain
- Superior effluent quality makes disposal effortless
- Odourless and noiseless operation
- Low sludge production
- **Costs can be up to 40% less than those of comparable plants**
  - Reduced site work to install system
  - Low operating costs
  - Low power consumption
  - Reduced maintenance and cleaning requirements

The 1,200 m^3/day wastewater treatment plant at the Harmony Beef Processing Plant uses seven different treatment stages to filter their wastewater.

It utilizes UF membranes and biological filtration to create a Membrane Bio-Reactor (MBR) system.