



# NAPIER-REID

Water and Wastewater Treatment Solutions



[www.napier-reid.com](http://www.napier-reid.com)

# ENGINEERING INNOVATION SINCE 1950

## ABOUT US

Napier-Reid is a leading water and wastewater treatment solutions company with an established reputation for design innovation and manufacturing excellence. Since 1950, we have dedicated our experience and professional knowledge to the design and manufacture of water and wastewater systems that meet or exceed the requirements of both industries and municipalities.

Our capabilities include professional engineering, manufacturing, installation and field support. We have in-house registered professional engineers capable of complete system engineering including process, mechanical and electrical/control designs.

## OUR MISSION

Our core mission is to provide high-quality, cost-effective water treatment solutions. Continual product development is our mandate; we are constantly striving to improve our products to suit our customers' individual needs while ensuring improvement to the environments and ecosystems in which they are applied.

Since our inception, we have completed over 3,000 water and wastewater projects for customers world-wide, which stand as a testament to our ongoing commitment to provide the highest quality service, products and after-sales support in the industry.

## GLOBAL SUCCESS

With headquarters in Toronto, Canada, Napier-Reid continues to expand its operations internationally. Our market spans from the Americas and the Caribbean to the Middle East, Africa, Europe and Asia.

Napier-Reid staff is comprised of highly qualified engineers, project managers and support personnel. Our continued success results from the efforts of these highly dedicated professionals, many of whom have decades of experience in their own field.





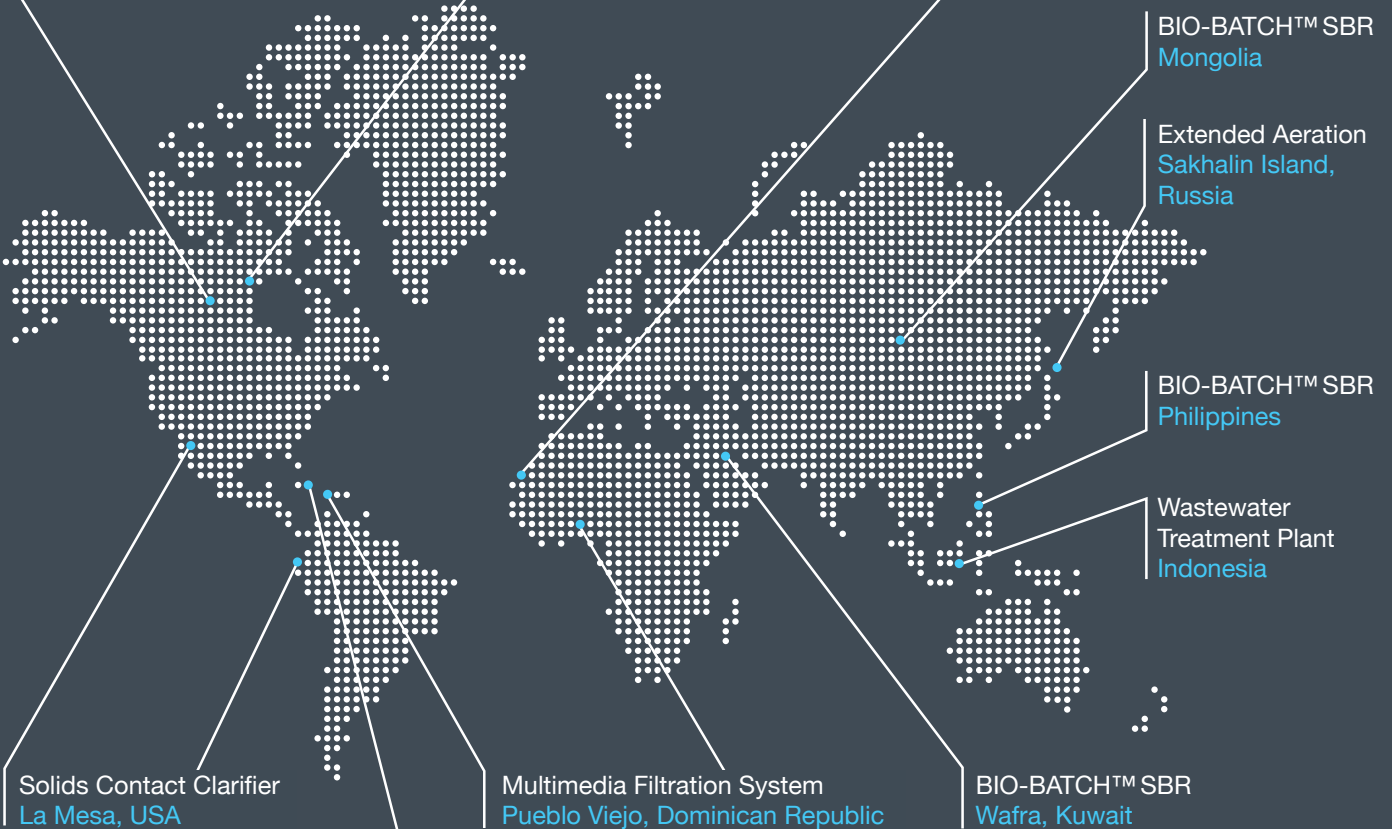
Pressure Filters  
Rolling River, Canada



Circular Extended Aeration  
Geraldton, Canada



Package BIO-BATCH™ SBR  
Mauritania



Solids Contact Clarifier  
La Mesa, USA



Multimedia Filtration System  
Pueblo Viejo, Dominican Republic



BIO-BATCH™ SBR  
Wafra, Kuwait

BIO-ROTOR™ RBC  
Quito, Ecuador



Ion-Exchange Demineralization System  
Moa Nickel, Cuba



Horizontal Pressure Filters  
Lagos, Nigeria





Bio-Batch™  
SBR  
Abu Dhabi  
UAE

## BIO-BATCH™ SEQUENCING BATCH REACTORS

- Continuous inflow or true batch design
- Smaller footprint
- Integral feature for biological N and P removal
- Superior treatment performance
- Lower operating costs

## BIO-ROTOR™ ROTATING BIOLOGICAL CONTACTORS

- Simple and reliable
- Extra heavy duty shafts eliminate shaft failures
- Innovative direct drive system
- Extremely low operating costs
- Suitable for small communities, resorts, mining and oil/gas camps



Bio-Rotor™  
RBC  
Coalburn  
Canada



Membrane  
Bio-Reactor  
Module

## MEMBRANE BIO-REACTORS

- For new installations or retrofits
- High-quality treated water suitable for reuse
- Durable PVDF UF membranes provide long service life

## EXTENDED AERATION SYSTEMS

- Available in steel or concrete tanks
- Can be built in circular or rectangular shape
- Suitable for small to medium plants
- MBBR or IFAS option available



Extended  
Aeration  
Plant  
Flesherton  
Canada



Vortex Grit  
Removal  
System  
Belle River  
Canada

## VORTEX GRIT REMOVAL SYSTEMS

- Compact and effective
- Low energy consumption
- Steel or stainless steel chamber available
- Up to 95% of grit removal efficiency of 50 mesh



Screw Grit Classifier  
Orangeville  
Canada

## SCREW GRIT CLASSIFIERS

- Efficient shaftless screw
- Washing function reduces organic contents
- Cyclones concentrator can be added
- Screw conveyors and screw dewatering presses also available

## CLARIFIERS

- In circular or rectangular configurations
- Flocculating or solid contact design can be added
- Dissolved Air Flotation clarifiers available for industrial wastewater, sludge thickening or fixed-film process
- Custom design for any retrofit applications



Primary Clarifier  
Drumheller  
Canada

## BIO-HTX™ SLUDGE HEAT EXCHANGERS

- Tube-in-tube counter-flow design
- Robust and clog-free
- Insulated enclosure for high energy efficiency
- Readily removable end connections for ease of maintenance
- Over 250 units installed since 1956



BIO-HTX™  
Sludge Heat Exchangers  
Corbett Creek  
Canada

## SLUDGE DEWATERING SYSTEMS

- Belt filter presses with integral sludge conditioner and rotary thickener
- Manual or automatic filter presses with membrane squeeze option
- Stainless steel frame and rollers for durability
- Complete system with feed and wash pumps, air compressor, polymer system and controls



Belt Filter Press  
Morley  
Canada

## TERTIARY FILTERS

- Continuous backwash filters
- Conventional gravity or pressure rapid rate media filters
- Tertiary UF membrane filters
- Capable of meeting ultra-low phosphorus limits



Continuous Backwash Filter  
Mount Brydges  
Canada



Nanofiltration System  
Rolling River  
Canada

## MEMBRANE FILTRATION SYSTEMS

- Hollow-fiber Ultrafiltration (UF) systems for surface water treatment
- Nanofiltration (NF)/Reverse Osmosis (RO) systems for softening, demineralization, colour and organic removal
- Electrodeionization (EDI) systems for polishing

## GRAVITY FILTRATION SYSTEMS

- Conventional filtration or direct filtration
- Package system with coated steel, stainless steel or aluminum tankage
- Sludge recirculation option
- Integrated coagulation, flocculation, sedimentation and filtration process



Gravity Filter Trains  
Limoges  
Canada



Pressure Filtration System  
Rocky Rapids  
Canada

## PRESSURE FILTERS

- Sand, anthracite, greensand or MD-80™ catalytic media
- Designed for turbidity, iron, manganese, sulfide and arsenic removal
- Available in FRP, coated or stainless steel tankage
- Horizontal filters available for large capacity

## ION EXCHANGE SYSTEMS

- Used for water softening, nitrate removal and demineralization
- Heavy metal removal and recovery from wastewater
- Custom designed to suit the applications
- Package system can be supplied with all components pre-assembled including instrumentation and control system



Package Demineralized Water System  
Middle East



GAC Contactors  
Balsam Lake  
Canada

## GRANULAR ACTIVATED CARBON (GAC) SYSTEMS

- Taste and odour control
- Remove chlorine, natural organic matters, colour and synthetic organic contaminants
- GAC odour control systems also available for wastewater applications



Flocculators  
Belize  
Central  
America

## FLOCCULATORS

- Available in turbine, hydrofoil or picket fence design
- Supplied with variable speed drives
- Impellers and shafts in stainless steel
- Heavy-duty gear reducers for long service life

## GRAVITY AND DAF CLARIFIERS

- In circular or rectangular configurations
- Available with Lamella plates
- DI-FLOAT™ Dissolved Air Flotation clarifiers available for surface water treatment or sludge thickening
- Custom design for any retrofit applications



DI-FLOAT™  
DAF  
Deseronto,  
Canada



Inline  
Rapid Mixer  
Rocky  
Mountain  
House  
Canada

## MIXERS

- Inline dynamic mixers
- Top entry rapid mixers
- Inline static mixers
- Heavy-duty support bearings for steady operation

## AIR STRIPPERS AND DEGASIFIERS

- Forced or draft air strippers for methane, VOC and CO<sub>2</sub> removal
- Vacuum degasifiers for dissolved oxygen and CO<sub>2</sub> removal
- Vacuum systems using steam ejectors or vacuum pumps
- FRP or lined steel towers



Vacuum  
Degasifier  
Moa Nickel  
Cuba



Water  
Treatment  
Plant  
Quito  
Ecuador

## PACKAGE WATER TREATMENT PLANTS

- Pre-assembled package systems available for various treatment processes complete with all piping, instruments and controls
- Can be designed for installation into modified shipping containers or modular buildings
- Suitable for remote locations to reduce field installation costs



## ISO 9001 CERTIFIED

Napier-Reid is certified to the ISO 9001:2015 quality management system. It is our policy to supply products that meet or exceed customer requirements for quality, delivery, performance and value. We are committed to continuous improvement across the organization through the application of world-class business principles.



## STRATEGIC PARTNERS

Napier-Reid is proud to be associated with world-class suppliers and subcontractors, ensuring commitment to quality, availability and support. We have been approved by and have worked closely with over 150 leading consulting engineering firms worldwide.



## ADAPTABILITY

Our design engineers are able to step into the planning process at any point to define the problem and analyze alternatives to discover the best solution for your water or wastewater applications.

## EXECUTION



Napier-Reid has successfully executed over 3,000 water and wastewater contracts, with plant capacities ranging from 50 m<sup>3</sup> per day to 200,000 m<sup>3</sup> per day, including projects in some of the largest urban areas as well as many remote mining and oil/gas sites.



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