



EPCOR WATER PRIORITIES WATER RESEARCH CENTRE

April 29, 2026



EPCOR OPERATIONS

- Electricity
- Water
- Natural Gas
- Drainage
- Wastewater
- Industrial Water

Locations at a glance

U of A – EPCOR Partnership History

- EPCOR has collaborated with the University of Alberta on research initiatives for decades
- EPCOR supports U of A by offering opportunities for co-op students to gain valuable work experience
- Students from Engineering, Business and other faculties and departments have had long, fulfilling careers at EPCOR
- The WRC will allow this work to continue, in a much more collaborative, strategic and effective manner.

EPCOR Water Research Mission Statement

Our mission is fostering a collaborative environment for innovation, research, and the implementation of best practices to continuously search out technologies and methods (novel and established), that are fit for purpose to EPCOR and that will improve the efficiency, sustainability, and cost effectiveness across the One Water cycle. We will share our learnings across EPCOR and industry, playing a pivotal role in shaping communities.

Key Theme Areas



Water and Wastewater Treatment Process Optimization

Water	<ul style="list-style-type: none">• Chemical dosing optimization• Water treatment robustness and resiliency• Impact of residuals on NSR• Raw water contamination mitigation• New technology to mitigate treatment risks and impacts of climate change
Wastewater	<ul style="list-style-type: none">• Gold Bar Pilot plant operational strategy and objectives• Clover Bar operational improvements and Biosolids Management optimization• Sidestream treatment and nitrogen loading evaluation for Gold Bar• BNR performance review and optimization• Anaerobic digester optimization

Water Quality

Digital Optimization

Water Quality	<ul style="list-style-type: none">• Emerging substances of concern• Biological stability of drinking water• Taste & Odour• Lead management in drinking water• Water measurement techniques• Water quality monitoring
Digital Optimization	<ul style="list-style-type: none">• Enhance cybersecurity• Deploy AI/ML to enhance reliability, efficiency and optimize processes• Improve customer experiences• Increase network visibility by installing sensors• Asset health monitoring• Demand & consumption forecasting

Climate Change Mitigation and Energy

Climate Adaptation and Environmental Sustainability

Climate Change	<ul style="list-style-type: none">• GHG measurement and forecasting• Energy efficiency• Process optimization• Methane capture
Climate Adaptation	<ul style="list-style-type: none">• Effects of loading on North Saskatchewan River and urban creeks• Drought and flood management• Watershed management• Stormwater quality• Invasive species protection• Urban creek erosion protection• Green Infrastructure• Mapping and modelling

Linear Infrastructure Resilience

Linear Resilience

- Sewer system solids management
- Airflow/movement in sewer systems
- Corrosion impacts to piping systems
- Critical pipeline inspection techniques
- Stray electrical current impact on water distribution pipes
- CSO management