Ensuring the quality of our water starts with good research. Advancing Canadian Wastewater Assets (ACWA) is an innovative partnership between the University of Calgary and the City of Calgary. Its goal is to advance wastewater treatment technologies to address environmental and human health issues.

The ACWA Research Facility has grown to include the following partners, which have provided their expertise and financial support to the development of the facility:

- University of Calgary
- City of Calgary
- Canada Foundation for Innovation
- Alberta Advanced Education and Technology
- Natural Sciences and Engineering Research Council of Canada
- Agilent Technologies Canada Inc.
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City of Calgary
University of Alberta
University of Victoria
University of New Brunswick
Dalhousie University
Environment Canada

Advancing Canadian Wastewater Assets
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The University of Calgary’s ACWA Research Facility, embedded within the City of Calgary’s Pine Creek Wastewater Treatment Centre, bridges the research gap between bench/pilot-scale testing and applications used in full-scale municipal wastewater treatment plants. ACWA replicates real-world situations and enables research that cannot be performed elsewhere in the world.

ACWA is an initiative under the Urban Alliance — a research partnership between the City of Calgary and the University of Calgary created to coordinate the seamless transfer of cutting-edge research for the benefit of all our communities.

**RESEARCH THEMES**

- Wastewater research and demonstration
- Public health protection
- Fate and removal of biologically active compounds
- Linkages between ecological processes and emerging biologically active compounds
- Impacts of effluents on biota and ecological processes
- Cumulative impacts and compensatory responses

**RESEARCH AND DEVELOPMENT AREAS**

- Wastewater Technology: filtration, oxidation, ozonation
- Monitoring: chemical, biological
- Assessment: risk, environmental impacts, cumulative effects, diagnostic tools

**UNIQUE FACILITIES, UNIQUE TOOLS**

- Wastewater research and demonstration
- Public health protection
- Fate and removal of biologically active compounds
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**RESEARCH THEMES**

The expertise of our internationally renowned team spans the breadth of water research: ecology, biology, toxicology, microbiology, process engineering, medicine and public health.

ACWA allows researchers to push technology boundaries and develop the necessary improvements to protect public health and receiving waters. Research will develop the technology to remove increasing numbers of emerging chemicals, pathogens and toxins from wastewaters. It will also explore the impacts of pollutants on aquatic environments.

**OPPORTUNITIES TO PARTICIPATE**

National and international researchers are encouraged to participate in ACWA by leading their own collaborative research programs.

The ACWA Research Facility encourages involvement of equipment manufacturers, process designers, contractors and consultants in the research and development program.

**SERVICES**

The ACWA Research Facility can provide fee-for-service work for:

- Proof-of-concept testing
- Full-scale testing
- Data analysis
- Validation
- Optimization
- Regulatory use

**FACILITIES**

- Research wastewater treatment plant (0.375 megalitres per day) with:
  - Ultra-filtration, advanced oxidation, ozonation and reverse osmosis modules
  - Twelve research streams
- Four research laboratories:
  - Pine Creek, microbiology, stable isotope and aquatic labs