

Institute of Environmental Change & Society

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IECS provides *world-class infrastructure* and *research expertise* in environmental sciences enabling cutting-edge scientific research to advance the provincial, national and international research agendas

IECS builds on two decades of research by environmental scientists at University of Regina

Funding

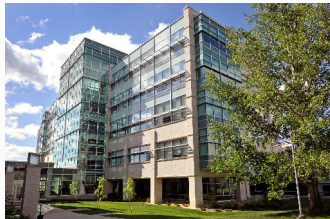
Initial funding:

- \$7M grant from **CFI** and **Govt. Saskatchewan**,
- \$3M federal **Knowledge Infrastructure Program**
- **University of Regina** (3 research scientists)
- In-kind contributions from instrument manufacturers

IECS housed in purpose-built facilities in the
Research and Innovation Centre

Operating:

- Blue skies & applied research grants
- Service for internal & external clients



Sustainable use of aquatic resources

- effects of nitrogen & phosphorus pollution
- climate change & water availability
- anti-bacterial gene transfer
- microplastics



Sustainable use of aquatic resources

Long-term ecological research — 20+ years monitoring lakes in Qu'Appelle Valley

Nitrogen diversion — water water treatment plant upgrade



Sustainable use of aquatic resources

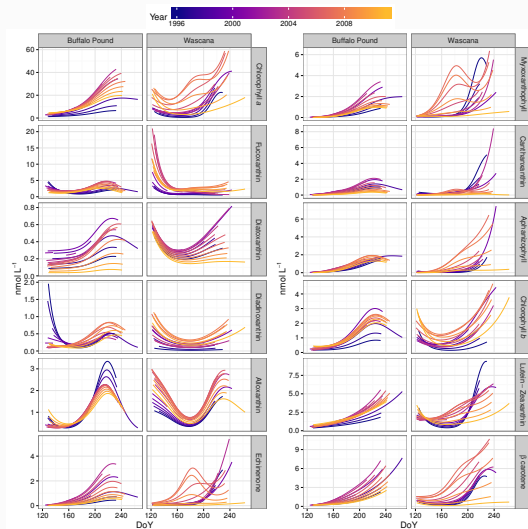
Wide range of expertise & data

- Nutrient chemistry
- Carbon sequestration
- Algae
- Zooplankton

Monitoring coupled with experimental manipulation

Baseline: WWTP upgrade

Statistical modelling of trends

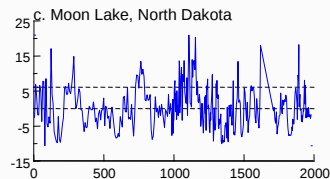
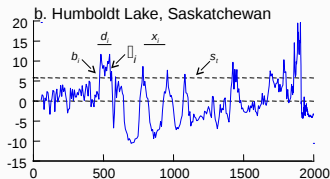
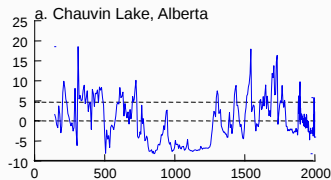


Sustainable use of aquatic resources

Lake sediment records provide unique temporal perspective on environmental change

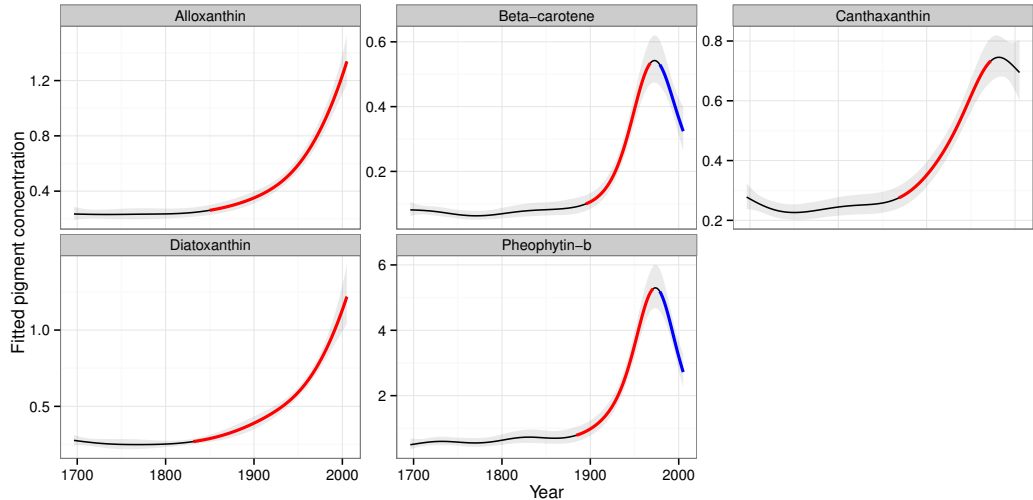
Track long-term changes in nutrient status — algal blooms

Develop our understanding prairie climate variability



Sustainable use of aquatic resources

Management advice — Lake Winnipeg



Lake Pulse — NSERC Strategic Network

\$5.5M network grant

Spatial snapshot of lake ecosystem health across Canada

IECS – western project node

