

MESOCOSM TEST FACILITY: A BRIDGE BETWEEN LAB AND FIELD STUDIES



MESOCOSMS ARE LARGE, UNIFORM CONTAINERS USED TO EMULATE NATURAL SYSTEMS FOR EXPERIMENTAL STUDIES. THEY PROVIDE THE UNIQUE OPPORTUNITY TO CONDUCT SEMI-CONTROLLED AND REPLICATED EXPERIMENTS UNDER 'REAL-WORLD' CONDITIONS, SUCH AS DAILY AND SEASONAL CYCLES, WEATHER PATTERNS AND INCORPORATION OF RELEVANT LIVING ORGANISMS.

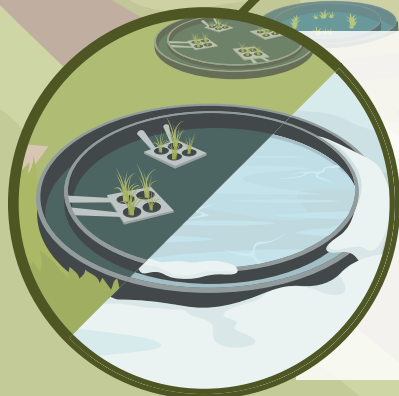
The InnoTech Alberta Mesocosm Facility, located in Vegreville, Alberta, was built in 2015-2016 and currently contains 30 below-ground and 16 above-ground mesocosms.

The facility provides a venue for researchers to conduct experiments that address some of Alberta's more complex and pressing environmental challenges.



ABOVE-GROUND:

4,750 L TANKS
POSITIONED ON TOP OF
A CONTAINMENT PAD.



BELOW-GROUND:

14,000 L TANKS EACH
NESTED INSIDE A 23,000 L
CONTAINMENT TANK
EMBEDDED IN THE GROUND.

Plants and animals can survive over winter in these mesocosms because they do not freeze to the bottom.

Mesocosms are multipurpose and can be adapted for a range of studies. To date, most studies at the facility have focused on materials, like soils and water, that contain industrial byproducts or other contaminants. Other possible studies could include detecting and/or testing how to control invasive species, examining the toxicity of materials over multiple years and many more!

KEY BENEFITS OF THE FACILITY:



Opportunity to conduct multi-year, customized studies in semi-natural conditions.



The only mesocosm facility of its type in North America that supports research in freezing temperatures.



On-site plant propagation.



On-site laboratories to support analyses.



Canadian
Conservation
and Land
Management

TO LEARN MORE ABOUT THE AQUATIC MESOCOSM FACILITY CHECK OUT THESE RESOURCES FROM INNOTECH ALBERTA AND MORE AT WWW.CCLMPORTAL.CA

Mesocosm Test Facilities - October 2023

Using Aquatic Mesocosms to Assess the Effects of Soil and Vegetation for Informing Environmental Research - July 2023

InnoTech Alberta
Aquatic Mesocosms
(Video) - 2023

State-Of-The-Art Above
Ground Mesocosm
Facility - 2020

