



University of
Lethbridge

NEWS RELEASE

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Research study to focus on the environmental impacts of effluent release

Around the world, people use wetlands to help treat wastewater. University of Lethbridge researchers will look to better understand how these complex systems work by studying the Frank Lake wetland and its watershed near High River, Alberta.



With base funding from Cargill Limited and matching funds from the Natural Sciences and Engineering Research Council (NSERC) of Canada Alliance program totalling approximately \$1.5 million, the research team will embark on a five-year project.

Drs. Matt Bogard, Steve Wiseman and Larry Flanagan from ULethbridge will be joined by two researchers, Drs. Kerri Finlay from the University of Regina and Markus Brinkmann from the University of Saskatchewan. Partners in the project include Cargill Limited and the Highwood Management Plan Public Advisory Committee, with support from ULethbridge Professor Emeritus Dr. Stewart Rood and Dr. Peter Leavitt from the University of Regina.

“The goal of this project is to understand the impacts of land use on the health of the Little Bow watershed, with a focus on the role that the Frank Lake wetland plays in processing effluent in this economically important region,” says Bogard, an assistant professor of biology and Canada Research Chair. “We want to provide all stakeholders with scientific knowledge and data to help manage the watershed as best as possible.”

Frank Lake is a restored wetland six kilometres east of High River. Managed by Ducks Unlimited Canada, the wetland is listed as an Important Bird Area. Treated effluent from both the Town of High River and Cargill Limited is released into Frank Lake to maintain water levels. Not only does the wetland provide habitat for birds, it adds another level of effluent treatment by further removing nutrients, salts and other chemicals. The concern for stakeholders is how

long it can sustain current levels of treatment, and whether actions can be taken to enhance its functioning.

The wetland is also part of a larger watershed. Frank Lake flows periodically into the Little Bow River, which begins near High River and eventually joins the Oldman River. Along the way, other communities located within the watershed add effluent, and surrounding land uses include feedlot operations. By studying the whole basin, the researchers hope to gain an understanding of how the entire system works. The researchers will examine nutrient cycling in the watershed, water quality, aquatic ecology, health of the wetland and surrounding vegetation, and effluent toxicity.

“Part of the goal of this project is to tease apart the influence of different land uses on watershed health, so that future management decisions can better evaluate impacts of individual land uses,” says Bogard. “Much of the water used by humanity is released back into the environment as wastewater, so this project has major implications for watershed and wastewater management worldwide.”

Find this news release online at [Frank Lake wetland](#).

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