



## PROJECT ACCOMPLISHMENTS

### The Science of Wetland Restoration

The research team is currently in the process of undertaking a “chronosequence” of soil samples from previously restored wetlands collected in the field seasons of 2015 and 2016. The chronosequence will allow the research team to date the soil and analyze rates of nutrient retention in restored wetlands. The results will provide information about the potential of using wetland restoration to store greenhouse gases and nutrients, help determine the potential of the wetlands that will be restored as part of this project, and provide insight into determining the recommended length of the contracts with landowners as part of a reverse auction.

The research team is also conducting an analysis using data collected from a robust vegetation survey of restored wetlands in the Parkland natural region that will incorporate wetland morphometry and vegetation survey data to determine the patterns and success of recovery of restored wetlands. Finally, a hydrologically distributed model that examines and maps surface and subsurface connections between wetlands and other larger drainage features is currently being applied to the Nose Creek watershed.

## ABOUT THE PROJECT

This three-year, interdisciplinary research project aims to inform both the economics and science of wetland restoration, using the Nose Creek Watershed in Rocky View County, Alberta, as an on-the-ground living laboratory.

The project is restoring wetlands through the use of a market-based instrument known as a “reverse auction” that creates incentives for local landowners. Wetlands have been targeted for restoration through the use of science-based models that evaluate each wetland for its potential contribution to providing ecosystem services – such as flood mitigation and pollution control.

The results of this research will help inform the implementation of Alberta's new Wetland Policy, provide education and outreach to local landowners about wetlands, and build capacity within municipalities by providing information and tools to be used to better manage wetlands at the local and watershed scales.

## RESEARCH TEAM

Dr. Peter Boxall, University of Alberta  
Dr. Irena Creed, Western University  
Dr. Shari Clare, University of Alberta

### Testing a Market-Based Instrument for Wetland Restoration

The reverse auction was completed successfully, with four landowners in the study region submitting bids into the auction. Members of the research team, as well as Ducks Unlimited Canada, visited each landowner a number of times to provide detailed materials and information regarding their potential wetland restoration. In total, 13 basins totaling 47.27 acres were bid into the auction and accepted for restoration. Restoration began in Fall 2016 and is set to resume this coming spring.

The research team is continuing to evaluate potential social barriers to wetland restoration. Graduate student Anna Kauffman is interviewing successful bidders in both the Nose Creek and Wintering Hills auctions. She is also interviewing eligible bidders who did not participate in either auction. The information being collected will help determine how landowners formulate bids, why they did not participate in the auctions, and what they think of the use of reverse auctions to secure wetland restoration in future programs

### Upcoming Plans

Wetland restoration is set to resume in Spring 2017. A second auction in the Nose Creek watershed is currently being planned. The research team hopes that the successful execution of the first auction will promote increased participation in a second auction. Data collected from a second auction will allow us to evaluate and compare the effectiveness of multiple reverse auctions in the same watershed to secure wetland restoration.

### Special Thanks to the Landowners of Rocky View County

The research team would like to extend sincere thanks for the continued engagement and support from the landowners of Rocky View County. We hope to have continued support from landowners for our second reverse auction. For more information on how to participate, please visit <http://restoreourwetlands.ca/> or contact [wetlands@ualberta.ca](mailto:wetlands@ualberta.ca).

## OUR PARTNERS



Your  
participation  
pays.



[www.restoreourwetlands.ca](http://www.restoreourwetlands.ca)