**Salt distribution in the Prairie Pothole Region under a changing Climate**

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This work is being done as part of a master's thesis with the focus of wetland and upland salinity in the Prairie Pothole Region (PPR). Understanding the distribution of salt in the prairies and what conditions control transport and re-distribution is key for agricultural producers. Salt transport is directly linked with water transport in this region and is subject to alteration under different future climate scenarios and could cause unexpected salinization of wetlands and soils. To further the understanding of salt transport in the PPR, this project uses data collected from St. Denis National Wildlife Area from the past several decades to analyze the amount of salt entering and leaving wetland ponds and the associated climate and hydrological conditions that allow for transport to occur. Analysis of this long term time series data gives insight into the effects of wet and dry periods on salt transport and how this may present itself in the future. A secondary objective of this study is to use 2D numerical modeling of a prairie wetland cross-section to investigate how salt is re-distributed under a variety of future climate scenarios.