1. **Introduction**

Wetlands are land areas that are saturated with water long enough to allow for the development of hydric soils, growth of water tolerant vegetation and biological activity adapted to wet conditions (Government of Alberta, 2013). Bogs, Fens, and Marshes are examples of natural occurring wetlands in Canada. For instance, in Alberta peat and fogs account for about 90% of the wetlands in the province (Government of Alberta, 2013). Wetland ecosystems provide essential services to society, including flood control, water for domestic use and crop irrigation, recreation, habit for biodiversity, climate regulation and other, that positively impacts on societal welfare.

Despite the positive contribution of wetlands to society, they continue to be degraded across the world. Davidson et al. (2014) estimate that about 64-67% of the wetland areas in the world have been loss since 1900AD. In Canada, about 50-70% of wetland areas have been degraded since European settlements, including the Canadian Prairie provinces such as Alberta (Environmental Canada, 1986; Tiner, 1984, Watmough and Schmoll, 2007). Majority of the wetland degradations occur on agricultural landscapes (Badiou et al. 2011; Watmough and Schmoll, 2007). Agricultural producers may have an economic incentive to drain wetlands because, a) wetland areas could potentially reduce the feasible land area for crop production, b) wetland areas could reduce the efficiency of farm operations (especially farm machinery operations) and c) wetland areas could increase input wastage from overlaps (Cortus et al. 2011).

To conserve wetland areas around the world, there will be the need for wetland policies that specifically protect wetlands. Wetland policies are the operational policies or rules that provide a framework for the regulation and management of wetland areas. Using data from Peimer (2017; supplementary materials) we calculate that, globally, very few countries (about 9% or 17 countries) have specific wetland policies that protects wetlands; none of these countries has a no net loss or net gain wetland policy. Also, about 50% of countries around the world has some form of environmental laws that indirectly protects wetland areas, while 41% of the countries have no wetland policy.

In Canada, some provinces, such as Alberta, are beginning to design and implement their own policies to protect their wetlands. The Alberta’s wetland policy goal is a form of no let loss or net gain policy that seeks to manage wetlands in the province, excluding those on Federal lands, to minimize the loss and degradation of wetland areas and sustain their benefits to society. It provides a uniform framework to manage wetlands across all regions in the province; prior to the wetland policy, the Wetland Management in the Settled Area of Alberta: Interim Policy, (1993) managed wetlands on settled region (White region), while other policies (including the Water Act, the Environmental Protection and Enhancement Act, and the Public Lands Act) managed wetlands on crown lands (Green Area). The Water Act forms the legislative basis for the current wetland policy. The specific objectives of the Alberta’s wetland policy are:

1. Protect highest valued wetlands
2. Restore wetlands and their benefits in areas where losses have been high
3. Avoid, minimize, and if necessary, replace lost wetland value.
4. Management wetlands in a regional context.

The Alberta wetland policy’s goal of conserving wetlands is an important step towards reversing the trend of wetland degradation in the province and could possibly restore wetlands areas back to their levels during European settlements. However, society must also know the cost of the implementation of this policy, especially to agricultural producers who many be more affected by this policy. Therefore, the objective of this study is to estimate the cost to agricultural producers of implementing the Alberta’s Wetland Policy, especially specific objectives 1-3. Most wetlands occur on agricultural landscapes in Alberta, as in most Canadian provinces. As such, if we know the cost of Alberta’s Wetland Policy to agricultural producers, we could implement other policies to mitigate such costs so that the policy does not adversely impacts on agricultural production in the province.

The study is structured into 5 sections. In section two, we provide a background statement which describes the Alberta’s Wetland Policy and other related information. The methods that are used to achieve the objective of this study are presented in section 3. The results of the study and their discussions are provided in section 4. Lastly, section 5 presents the conclusion of the paper, including suggestions of future research.