



**November 17, 2010**

## **Meeting Report: Alberta Carbon Offset System – Wetlands Restoration Quantification Protocol**

### **Background:**

Alberta's Climate Change and Emissions Management Act requires that facilities emitting more than 100,000 tonnes of greenhouses gases (GHG's) per year must reduce their emissions intensity by 12% annually. Facilities have several options for complying with the legislation. They can make improvements to their operations that result in the required reduction in GHG's; purchase or use Emission Performance Credits; contribute to the Climate Change and Emissions Management Fund; or they can purchase Alberta-based carbon offset credits.

Offsets must come from projects in a non-regulated sector that qualify under an approved quantification protocol, which sets out stringent requirements for creating offset credits. So far, 31 protocols have been developed in Alberta, not all of which are being used to create offsets.

The Wetlands Restoration Quantification Protocol was developed by Ducks Unlimited and ClimateCHECK. Climate Change Central, which manages the carbon offset system in Alberta, held a second round stakeholder session on November 4 to gather stakeholder input on the wetlands protocol and several others.

### **Key Messages:**

- In the wetlands protocol, credits are generated by projects that restore freshwater mineral soil wetlands on private lands in the Prairie Pothole Region of Alberta.
- Scientific studies have shown that after accounting for potential increases in nitrous oxide and methane emission, there is a net sequestration of carbon from restored wetlands relative to the baseline condition of a drained wetland.
- Studies have also found that ongoing management of the uplands around wetlands is critical to ensuring that the carbon sequestration objectives are achieved.
- According to Ducks Unlimited, there is a potential for restoration of 1 million wetlands that have been drained across the prairies.

- The Prairie Habitat Joint Venture has an objective of restoring 300,000 wetlands in Alberta.
- Targeted wetlands are class III – seasonal ponds and lakes, class IV – semi-permanent ponds and lakes, and class V – permanent ponds and lakes. Classes III and IV are likely dry for part of the year. Class I – ephemeral wetlands and class II – temporary wetlands are not included in this protocol because of too much variability in biomass accumulation and carbon sequestration. This wetland classification system is used by Alberta Environment.
- The objective is to restore a wetland to the class it was before it was drained – a drained class III back to a class III wetland, not a class V for example.
- Restoration of drained wetlands is carried out by an approved Wetlands Restoration Agency, which in Alberta only includes Ducks Unlimited, the City of Calgary and Olds College. The restoration is carried out by installing earth plugs where drainage structures exist.
- This protocol can only be used for restoration activity that starts after January 1, 2011 on wetlands that were drained before January 1, 2010.
- Dugouts don't count because wetland vegetation is required.
- There are three long-term land use agreement options for ensuring that restored wetlands achieve real, permanent and verifiable net sequestration of carbon, including a purchase agreement by a conservation organization, a Conservation Easement attached to the land title, and a 30-year Wetland Restoration Agreement that protects the restored wetland.
- Projects under Conservation Easements prescribe “no break, no drain” management and specific management actions for the uplands around the wetland.
- Wetland Restoration Agreements leave upland management to the discretion of the landowner but they must maintain perennial cover by planting grasslands or trees.
- If the landowner instead wants to grow cultivated crops on the uplands, they must use zero till as prescribed in the Tillage Quantification Protocol and the 4R nitrogen management plan prescribed in the Agricultural Nitrous Oxide Emissions Reduction (NERP) Protocol. Credits from these three protocols can be stacked to provide more income from a project.
- A participant commented that the NERP protocol can be expensive and time consuming so wetland protection on lands that have had manure applied to them might be better managed under AOPA's Best Management Practices setbacks for manure management.
- So why would farmers want to restore wetlands on their land?
  - Stacking credits contributes to real dollars for farmers.
  - Carbon sequestration is a leading edge ecosystem service farmers can provide.
  - Water quality is improved and flooding can be reduced with wetland restoration
  - Wetlands provide habitat for wildlife and help mitigate climate change
- Ducks Unlimited has a long history of working with farmers to restore wetlands on their land and manage the uplands to improve duck habitat. This protocol can help encourage

further wetland restoration and provide some funds to help offset the inconvenience and cost of farming around, rather than through, wetlands.

- For more information see:

Draft wetlands protocol

[www.carbonoffsetsolutions.climatechangecentral.com/files/microsites/OffsetProtocols/ProtocolReviewProcess/s Restoration Protocol FINAL POST Oct15 10 .pdf](http://www.carbonoffsetsolutions.climatechangecentral.com/files/microsites/OffsetProtocols/ProtocolReviewProcess/s%20Restoration%20Protocol%20FINAL%20POST%20Oct15%2010.pdf)

November 4, 2<sup>nd</sup> Round Stakeholder Review meeting agenda and presentations

[www.carbonoffsetsolutions.climatechangecentral.com/offset-protocols/alberta-protocol-review-process/6th-cycle-protocol-development](http://www.carbonoffsetsolutions.climatechangecentral.com/offset-protocols/alberta-protocol-review-process/6th-cycle-protocol-development)

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