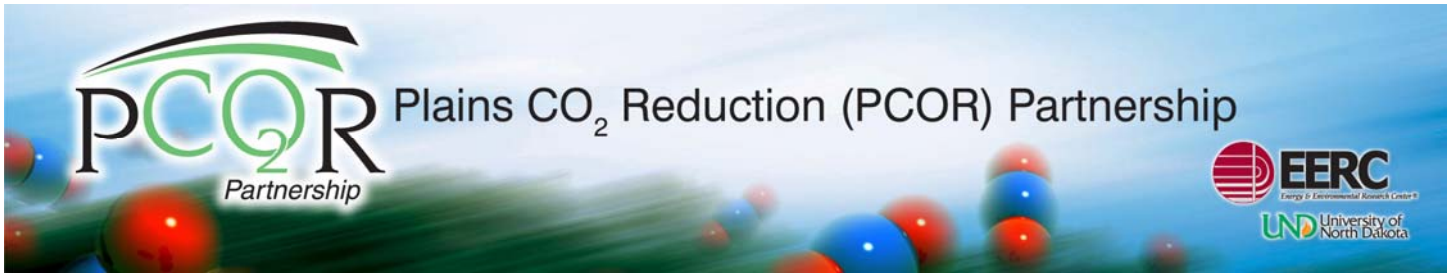

TERRESTRIAL FIELD VALIDATION TEST – PRAIRIE POTHOLE WETLANDS

Task 5 – Deliverable D13
Regulatory Permitting Action Plan

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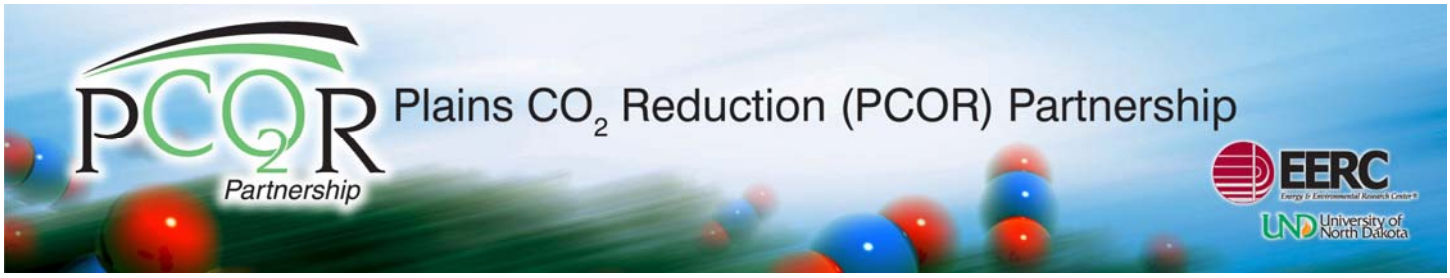

TERRESTRIAL FIELD VALIDATION TEST REGULATORY PERMITTING ACTION PLAN – PRAIRIE POTHOLE WETLANDS

Lisa S. Botnen, Energy & Environmental Research Center
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March 2006

INTRODUCTION

Plan Objectives

Guiding regulations are necessary to ensure that the physical, biological, and chemical qualities of our nation's resources are protected from irresponsible use. During the past 100 years, the United States has enacted wildlife laws and ratified international treaties to protect wild animals, plants, and their habitats. Most of these laws use permits as a tool to assist in the conservation of protected resources. Permits provide a means to balance use and conservation by tracking human activities that affect the environment. Therefore, it is prudent to develop a regulatory permitting action plan (RPAP) in accordance with relevant local, state, and federal regulatory agency requirements to provide guidance to those undertaking terrestrial sequestration projects.

This RPAP describes the regulatory and permitting steps taken by the Energy & Environmental Research Center (EERC) and its partners to conduct the Plains CO_2 Reduction (PCOR) Partnership Phase II terrestrial field validation test. The RPAP discusses the general permitting requirements for the EERC as well as its partners Ducks Unlimited, Inc. (DU), and U.S. Geological Survey (USGS). Additionally, relevant federal and state regulatory summaries are provided.

Project Description

The objective of the terrestrial field validation test is to develop the technical capacity to systematically identify, develop, and apply alternate land use management practices to the prairie pothole ecosystem (at both a local and regional scale) that will result in greenhouse gas (GHG) reductions. These reductions will include emission removals achieved by defining best management practices for sequestering carbon and reducing GHGs, including restoring the wetland/grassland complexes. The overarching research will result in the quantification of the amount of carbon sequestered in restored grassland systems such as the Conservation Reserve Program (CRP) and provide a standardized estimate of carbon sequestered under various grassland management regimes throughout the project area. The field validation test is designed

to effectively validate and quantify carbon sequestration potential in the PCOR Partnership region and determine the economic feasibility of terrestrial sequestration offsets based on the socioeconomic drivers affecting land use change.

Environmental Setting

The project will be conducted in a rural location in the Prairie Pothole Region (PPR). The PPR of the northern Great Plains is characterized as tall, mixed, and short grass prairie. Most native grasslands have been converted for agricultural production. Remnant grasslands are characterized by cool season and warm season grasses and forbs. The study area will consist of a mosaic of cultivated cropland and grassland intermixed with prairie wetlands. The site is located in McPherson County, South Dakota.

PERMITTING OVERVIEW

Energy & Environmental Research Center

The National Environmental Policy Act (NEPA) of 1969 establishes national environmental policies that pertain to the federal government as a whole and stipulates certain procedural requirements for federal agency actions.

In order to begin the terrestrial field validation test, the EERC was required to complete the U.S. Department of Energy's (DOE) environmental questionnaire. DOE's NEPA implementing procedures require consideration of the potential environmental consequences of all proposed actions. DOE must determine as early as possible whether such actions require an environmental assessment (EA) or an environmental impact statement (EIS), or if they qualify for categorical exclusion. The EERC's responses to the questionnaire provided DOE with the information necessary to determine the appropriate level of NEPA review. This field validation test was granted a categorical exclusion.

Ducks Unlimited, Inc.

DU projects fall under the regulating jurisdiction of the state in which they are working, or the federal government if activities are being conducted on federal lands, or in or near waters of the United States or adjacent wetlands. Upon review of the activities planned for this field validation test, it was concluded that no specific permits needed to be obtained. Under other circumstances, a U.S. Army Corps of Engineers (COE) 404 permit may be required for wetland restoration, or historical clearances may be needed from the state historical society office in which the project is taking place. Although not required for this field validation test, for reference purposes and completeness, these permits and requirements are discussed further in their respective sections of this report.

U.S. Geological Survey

As a federal agency, USGS is subject to NEPA requirements as well as the jurisdiction of the state in which it is conducting activities. The tasks planned for this field validation test do not require any specific NEPA compliance documents other than the input that was provided to the EERC for the NEPA questionnaire. Work that is to be conducted on private lands will require written permission from the landowner.

FEDERAL AND STATE REGULATORY SUMMARIES

The following section provides a brief overview of regulations that may be considered when conducting a terrestrial sequestration project in the state of South Dakota. A more detailed discussion of federal and state regulations that may be applicable for this type of project can be found in the PCOR Partnership topical report entitled "Deployment Issues Related to Geological and Terrestrial CO_2 Sequestration in the PCOR Partnership Region."

Federal

National Environmental Policy Act

The NEPA of 1969 establishes national environmental policies that pertain to the federal government as a whole and stipulates certain procedural requirements for federal agency actions. Except as otherwise provided by Congress, the act applies to all federal agency actions. This includes actions that intersect with private activities, for example, through a federal permit or funding. However, the requirements may vary depending on the type of action involved. NEPA establishes goals for agency actions as well as the requirement to prepare environmental documents.

Various levels of analysis of potential environmental effects, depending on the circumstances and the expected degree of environmental impacts, are required by the regulations. Generally, an EIS must be prepared for major federal actions that significantly affect the environment. An EIS must review a sufficient assortment of proposed alternatives and the direct, indirect, and cumulative effects or impacts of each alternative.

An agency is excluded from preparation of any formal NEPA environmental analysis with respect to activities that are either separately or cumulatively known to have no or only minor environmental effects. These activities are known as categorical exclusions. Most federal agencies have developed criteria for defining and listing actions that may be categorical exclusions. However, these activities are subject to being removed from the listing if particular circumstances, for example, if species listed as threatened or endangered, are present.

An EA is a midlevel analysis prepared for an activity that is not clearly categorically excluded but does not clearly require an EIS. Based on the EA, the agency either prepares an EIS or issues a "Finding of No Significant Impact" (FONSI), which averts further NEPA study and

document preparation. In order to make a valuable contribution, an EA should be prepared early in the decision-making process of a particular action (EERC, 2005).

U.S. Army Corps of Engineers Section 404 Permit

The purpose of the Section 404 program is to ensure that the physical, biological, and chemical quality of our nation's water is protected from irresponsible and unregulated discharges of dredged or fill material that could permanently alter or destroy the resource.

Section 404 of the Clean Water Act (CWA) requires a COE permit for the discharge of dredged or fill material into waters of the United States including wetlands. Regulated discharges include filling wetlands for development, grading or pushing material around within a wetland, disturbing wetland soil during land clearing, etc. The general rule is that for an activity to receive a 404 permit, it must comply with the U.S. Environmental Protection Agency (EPA) Section 404(b) (1) guidelines. In general, the guidelines require that the activity be the least environmentally damaging alternative that is feasible, and that adverse impacts are avoided, then minimized, and then compensated for (such as creating or restoring wetlands to replace those that would be filled).

Waters of the United States include essentially all surface waters such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. Wetlands are areas characterized by growth of wetland vegetation (bulrush, cattails, rushes, sedges, willows, pickleweed, and andiodine bush) where the soil is saturated during a portion of the growing season or the surface is flooded during some part of most years. Wetlands generally include swamps, marshes, bogs, and similar areas.

Any person, firm, or agency (including federal, state, and local government agencies) planning to work in waters of the United States, or dump or place dredged or fill material in waters of the United States, must first obtain a permit from COE. Other federal, state, and local statutes may also require permits, licenses, variances, or similar authorization.

Types of Permits

General Nationwide Permits

A nationwide permit is generally the simplest form of 404 permit and authorizes a category of activities throughout the nation. This process eliminates individual review and allows certain activities to proceed with little or no delay, provided that the general or specific conditions for the permit are met. If the conditions cannot be met, a regional or individual permit will be required. A few of the nationwide permits that may be applicable to terrestrial sequestration are:

- Discharge of dredged or fill material in rivers, streams, or lakes located above the headwaters or in closed basins.

- Repair, rehabilitation, or replacement of a structure or fill which was previously authorized and currently serviceable. The structure or fill must not be significantly changed.

- Single projects of less than 10 cubic yards of fill. Piecemeal work is not authorized.

- Bank stabilization projects less than 500 feet long containing less than an average of one cubic yard of material per running foot. The activity must be necessary for erosion protection and may not exceed the minimum amount needed for erosion protection. Fill is not to be placed in wetland areas or in a manner that impairs water flow. Materials free of waste metal products and unsightly debris must be used, and the activity must be a single, complete project.

General Regional Permits

The district engineer issues regional permits for a general category of activities when the activities are similar in nature and cause minimal environmental impact (both individually and cumulatively). The regional permit is also used to reduce duplication of regulatory control by state and federal agencies. District regulatory offices have information regarding regional permits.

Individual Permits

Individual permits are required for potentially significant impacts. Individual permits are reviewed by COE, which evaluates applications under a public interest review, as well as the environmental criteria set forth in the CWA Section 404(b) (1) guidelines. The permit decision is generally based on the outcome of a public interest balancing process where the benefits of the project are balanced against the detriments. A permit will be granted unless the proposal is found to be contrary to the public interest.

States also have a role in Section 404 decisions, through state program general permits, water quality certification, or 404 program assumption (COE, 2006).

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) views permits as a conservation tool and issues them for many activities affecting wildlife species under different federal laws. Of particular interest to terrestrial sequestration projects, are the permits that may be required to conduct research on National Wildlife Refuge (NWR) lands (USFWS, 2006).

Special Use Permit

Each NWR has a somewhat individual special use permit (SUP) process. In general, a SUP enables the public to engage in activities on a NWR that may otherwise be prohibited. SUPs are used by refuge managers to control the amount and type of uses on an individual NWR. Permits clearly explain what is expected of the permittee with respect to restrictions and policies. Most

likely a SUP would be required to conduct research on a NWR located in the states in the PCOR Partnership region (NWR, 2006).

U.S. Forest Service

The National Forest Service (NFS) special uses program authorizes uses on NFS lands that provide a benefit to the general public and protect public and natural resource values.

Special Use Permit

A SUP grants rights or privileges of occupancy and use to the holder. These permits contain specific terms and conditions that the holder must follow. Before SUPs are issued, the Forest Service must determine that the proposed use complies with all management plans and laws, that there is a demonstrated need for the activity, and that the use is appropriate on national forest system lands. SUPs are a temporary authority. As with the SUP for research on a NWR, a SUP would also most likely be required to conduct research on NFS lands (USFS, 2006).

South Dakota

As mentioned in the Permitting Overview Section, no permits were required to conduct the terrestrial field validation test. For reference purposes, a brief overview of some of the regulations that may be considered when conducting a terrestrial sequestration project in South Dakota is provided below:

- Environmental Assessment
  - South Dakota codified laws
    - Statutory Title 34A – Environmental Protection

      Some of the actions that are subject to this chapter of South Dakota's codified laws include:

      - New and continuing projects or activities directly undertaken by any public agency or supported in whole or part through contracts, grants, subsidies, loans, or other forms of funding assistance from one or more public agencies.
      - Policy, regulations, and procedure-making.
      - The issuance by one or more public agencies of a lease, permit, license, certificate, or other public entitlement to an applicant.

      In order to avoid duplication of effort and to promote consistent administration of federal and state environmental policies, a state EIS is not required if one is required by the federal government (State of South Dakota, 2006).

- State Historical Society
  - South Dakota Codified Laws

- Statutory Title 1 – State Affairs and Government

  Chapter 19 of this title discusses the preservation of historic sites. Federal and state laws prescribe that the state historic preservation officer must review certain federal and state "undertakings." This process is commonly known as Section 106 for federal projects and Section 11.1 for state projects. Projects that are subject to this review include those that received government funding, require government licensing or permitting, and other forms of government involvement. The projects are reviewed to ensure compliance with the appropriate historic preservation laws. The laws require the governmental agency taking action consider cultural and historic properties in their planning (State of South Dakota, 2006).

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