

FINAL CCBA PROJECT VALIDATION REPORT

MARAIS DES CYGNES NATIONAL WILDLIFE REFUGE RESTORATION INITIATIVE

PLEASANTON, KANSAS, USA

THE CONSERVATION FUND

JULY 9, 2009



Photo courtesy of The Conservation Fund

Validation Conducted by:

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Appendix A CCBA Compliance Checklist

Appendix B Stakeholder Comments

1.0 INTRODUCTION

This report presents the final findings of an audit conducted by Scientific Certification Systems (SCS) to validate the claim made by The Conservation Fund that the *Marais des Cygnes National Wildlife Refuge Restoration Initiative* conforms to the Climate, Community and Biodiversity Project Design Standards (First Edition). SCS has been accredited by the Climate, Community & Biodiversity Alliance (CCBA) to perform such validation audits.

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1.2. Project Description

The *Marais des Cygnes National Wildlife Refuge Restoration Initiative* (“the Project”) is an effort to restore native bottomland hardwood forests along the Marais des Cygnes River (USA) through replanting and long-term monitoring. The Project will restore and protect 776 acres (314 ha) of bottomland hardwood forest that had been used for crop-based agriculture or colonized by annual and perennial weeds. The project endeavors to provide benefits to biodiversity protection, wildlife habitat conservation, and community values while restoring natural habitats and sequestering carbon in planted trees over a 100-year project accounting period. The carbon offsets that are generated and purchased from this project will be retired and cannot be sold or banked for future offset purposes.

Project models predict 248 metric tons (273 short tons) of CO₂ equivalent per acre at year 50 and 335.7 metric tons (370 short tons) per acre at year 100. The annualized average for the first 50 years is 5.5 metric tons (6 short tons) of CO₂ equivalent per acre per year.

1.3. Summary of Validation Conclusion

Following completion of SCS’s duly-accredited validation process, it was our conclusion that The Conservation Fund’s *Marais des Cygnes National Wildlife Refuge Restoration Initiative* conforms to the CCBA Climate, Community and Biodiversity Project Design Standards (First Edition) at the Gold Level (see Appendix A).

2.0 METHODOLOGY

SCS began reviewing the Project in May 2009, beginning with a desk audit of Project documentation and phone calls and email correspondence with The Conservation Fund. An audit team, lead by an independent auditor and rounded out by two SCS staff GHG verifiers, conducted a formal site visit and validation assessment from May 27-29, 2009. The Project Design Document (PDD) was posted for public comment on the CCBA website during the period of May 8-29, 2009¹, and the auditors reviewed all stakeholder input prior to drafting this report. Project stakeholders were also interviewed during the site visit.

As a result of the site visit, The Conservation Fund was asked to provide supplemental information regarding certain aspects of the PDD². This information was provided in June and July of 2009.

2.1. CCBA Standards

SCS conducted its evaluation to validate claims that the Project conforms to the CCBA Climate, Community and Biodiversity Project Design Standards (First Edition) (“the CCB Standards”). The CCB Standards require conformance to 15 criteria in each of 4 categories: 1) General (6 criteria), 2) Climate (3 criteria), Community (3 criteria), and Biodiversity (3

¹ The CCBA approved holding the site visit prior to the conclusion of the public comment period as long as no final conclusions were reached, and no reports were drafted, prior to the close of the public comment period.

² In SCS’s system these are called New Information Requests (NIR) and project proponents are required to respond to specific requests for supplemental materials within a specified period of time.

criteria). In addition, each of the 4 categories contains 2 optional criteria, valued at 1 point each, that applicants can address to achieve a higher level of validation. Projects meeting the core requirements that also achieve 1 point from at least three different categories can be validated at the Silver level. Gold level validation can be achieved by projects meeting the core requirements while achieving 6 additional points, with at least 1 point from each of the 4 different categories.

2.2. Audit Team Qualifications

Lead Auditor: Michael Thompson, Penobscot Environmental Consulting, Inc.

The evaluation was conducted by Michael Thompson, M.Sc., under a contract with SCS. Mr. Thompson is the President of Penobscot Environmental Consulting, Inc., and a Certified Wildlife Biologist³. He has worked as a subcontractor to SCS for over 10 years, conducting certification evaluations to the Forest Stewardship Council's (FSC) forest management and chain-of-custody standards. Mr. Thompson has also conducted audits to the Sustainable Forestry Initiative (SFI) forest management standards. He received his B.Sc. degree in wildlife from the University of Idaho and his M.Sc. degree in wildlife from the University of Maine. Mr. Thompson has over 25 years of experience in ecology, wildlife management, wetland science, and rare species conservation.

Team Auditor: Christie Pollet-Young, SCS GHG Program Associate

Ms. Pollet-Young is a Program Associate for SCS's Greenhouse Gas Verification Program. Ms. Pollet-Young has over a decade of experience in forestry, ranging from forest ecology research to conservation planning to carbon offset verification in both tropical and temperate climates. She has previously worked for the Smithsonian Tropical Research Institute's Center for Tropical Forest Science and The Nature Conservancy in Peru. Ms. Pollet-Young completed a Master of Forest Science from the Yale School of Forestry and Environmental Studies, and graduated with high honors from the University of California, Berkeley with a Bachelor of Science in natural resources and forestry. Ms. Pollet-Young is a lead auditor with SCS who has validated and verified forest projects under the California Climate Action Registry, the Chicago Climate Exchange and the Climate, Community and Biodiversity Standards.

Team Auditor: Kyle Holland, SCS GHG Verification Forester

Kyle Holland is a Certified Forester with an extensive background in forest management, modeling and assessment. Prior to joining SCS in 2009, Kyle was responsible for thousands of acres of forestland as a Resource Supervisor with the Potlatch Corporation. In this position, Kyle gained valuable experience with the day-to-day practicalities of forest administration, silviculture and fiber procurement. In the public sector, Kyle has served the Chesapeake Bay Program, the State of Maryland and the State of Wisconsin as a forestry specialist, working on riparian forestry issues. Kyle is currently completing his PhD in forest biometrics and statistics at the University of California, Berkeley, and has forestry degrees from the University of Minnesota and the University of Idaho. Kyle holds numerous certifications from the Society of American Foresters, the American Tree Farm System and the State of Minnesota.

³ See www.penobscotenvironmental.com and contact at [mike \[at\] penobscotenvironmental.com](mailto:mike[at]penobscotenvironmental.com) or 207.846.1115.

2.3. Audit Process

The audit process included the following steps:

- Initial client meeting and project orientation (via conference call);
- Review of Project documentation, including Project design reports, preliminary models, and project background descriptions;
- Site visit on May 27-29, 2009, that included:
 - Project overview by The Conservation Fund (various PowerPoint presentations);
 - Presentation of Project accounting model (information from Environmental Synergy, Inc., [ESI], a consultant to the project proponents);
 - Meetings with project partners and supporters, including the U.S. Fish & Wildlife Service (USFWS); and
 - Field trip to the Marais des Cygnes NWR that included: visits to reforestation sites, mature bottomland hardwood forest, and NWR biodiversity restoration sites;
- Review of stakeholder comments;
- Response to NIRs by project proponents;
- Further document review and draft validation report preparation;
- Technical review and approval of the draft report by SCS; and
- Preparation of CCBA Statement of Compliance.

3.0 STAKEHOLDER COMMENTS

The Project Design Document (PDD) was posted on the CCBA website for an official public comment period of May 8-29, 2009. During this time, two comments were received (from the USFWS and Gaiam Inc.), which indicated the carbon offset benefits of this project (see Appendix B).

4.0 CCB VALIDATION FINDINGS

This report of our validation findings addresses each of the CCBA criteria and indicators. For each criterion, the CCBA indicators are listed along with a description of the evidence that was considered, the findings from the audit and when applicable, Non-Conformity Reports (NCRs), Opportunities for Improvement (OFIs) and New Information Requests (NIRs). In the case of non-conformance, a Non-Conformity Report stipulates the deficiency and its relation to the CCB protocol. NCRs indicate broad non-conformance at the criterion level that must be satisfied prior to project validation. An Opportunity for Improvement is issued when overall conformance with a criterion has been achieved but in instances where actions could be taken to further ensure compliance with an indicator. A New Information Request indicates when additional information is necessary to complete the validation. All NIRs must be received prior to project

Throughout the remainder of the report, The Conservation Fund will be referred to as the “Project Proponents” and the U.S. Fish and Wildlife Service will be referred to as “the Service”, “USFWS”, or “Project Partners”. The Project Proponents collated much of their

Project information in a document entitled *Restoring a Forest Legacy at Marais des Cygnes National Wildlife Refuge*, which is available to the public on the CCBA website (<http://www.climate-standards.org>). The CCBA refers to such documents as Project Design Documents (PDD). Upon completion of the validation process, an updated PDD will be posted to the CCBA website.

4.1. General Section

The General Section of the CCB Standards addresses project site conditions, baseline projections, project design and goals, management capacity, land tenure, legal status, adaptive management, and knowledge dissemination.

4.1.1. G1 – Original Conditions at Project Site

The original conditions at the project site before the project commences must be described. This description, along with projections (see G2), will help determine the likely impacts of the project.

Indicator G1.1. *The location of the project and basic physical parameters (e.g., soil, geology, climate).*

Findings: The PDD contains a detailed description of the project location, which is on both sides of the Marais des Cygnes River within the National Wildlife Refuge of the same name in Pleasanton, Kansas (see Figure 1 in PDD). The PDD contains descriptions of the Marais des Cygnes National Wildlife Refuge (NWR), climate, geology and topography, and soils and hydrology in the Project area (see also <http://www.fws.gov/maraisdescyignes/>).

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G1.2. *The types and condition of vegetation at the project site.*

Findings: The PDD contains a description of the natural vegetation in the project area and an overview of the history of land clearing in the region for agriculture and pasturelands. The project partners (USFWS) provide additional information about vegetation in the project area in the 1998 Comprehensive Conservation Plan (CCP) for the Marais des Cygnes NWR⁴. The immediate project area consists of former bottomland hardwood forest that had been converted to cropland or pastureland that was later colonized by goldenrod and broomsedge when the lands were taken out of production.

⁴ USFWS. 1998. Comprehensive Conservation Plan, Marais des Cygnes National Wildlife Refuge. U.S. Department of the Interior, Fish and Wildlife Service, Region 6.

Prior to the Restoration Initiative, the bottomland hardwood forest that remained was a part of the original 3,300 acres of this forest type that was found along the Marais des Cygnes River, as indicated by the historic maps from the General Land Office surveys of 1856. The Restoration Initiative proposed to restore cropland and non-native grassland to the native forest type once present in the area.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests:

NIR1: CCBA Criterion G1 – Original Conditions at Project Site – requires that the project proponents provide a description of the project site, including the types and condition of vegetation at the project site. The PDD contains an overview of the historic and current vegetation conditions in the project area (see Section G1.2) and reference is made to an 1856 Government Land Surveys (GLS) description of the historic vegetation conditions near the Marais des Cygnes River.

It is important to understand where the Go Zero tracts are located with regard to the estimated historic boundary between forest and prairie, while recognizing that this boundary naturally fluctuated over time. The Conservation Fund, therefore, was asked to provide a map that shows the location of the Go Zero tracts in relation to the historic forests, as defined by the 1856 GLS report or similar published sources of information. The Conservation Fund was also asked to provide a copy of the report(s) used to define historic forest conditions in the project area.

Proponent's Response to NIR1: The proponents provided a GIS map analysis comparing the location of the Go Zero tracts in relation to the estimated forest/prairie boundary in 1856. They also provided information from Kettle *et al.* (2002)⁵ that gave an interpretation of the historic vegetation patterns in the region.

Auditor's Evaluation of Response: The proponents provided the materials requested in NIR1. The submitted materials support the position that the Go Zero tracts were likely formerly forest and that the proposed project is a forest restoration project (i.e., the project is not attempting to establish forest in what was once native prairie).

Opportunities for Improvement: None

Indicator G1.3. Current carbon stocks at the project site(s), using methodologies from the Intergovernmental Panel on Climate Change's Good Practice Guidance (IPCC GPG) or other internationally-approved methodologies (e.g., from the CDM Executive Board).

⁵ Kettle, W.D., K. Kindscher, and J.M. Delisle. 2002. Preliminary analysis of historic vegetation along the Marais des Cygnes River (Kansas). Final Report to Kansas Dept. Wildl. And Parks. Kansas Biol. Survey Report No. 106.

Findings: Without the project, the project proponents assume that the only significant current carbon stocks are associated with soil carbon. Prior to the installation of the Go Zero Tracts, the project lands were used for agricultural purposes or were colonized by annual and perennial weeds. The project proponents assumed that pre-project carbon stocks of these two vegetation types would be essentially zero. In the former, carbon would not be sustained over the long-term due to cyclical harvesting and in the latter, sequestration would be minimal. Similarly, herbaceous biomass is neglected because it is assumed to be constant between the “with” and “without” project scenarios.

ESI/TerraCarbon use proprietary methods, established by Winrock International, to estimate carbon pools. The monitoring regime conforms to the IPCC Good Practice Guidance (IPCC GPG 2003), with specific reference to Chapter 4.3, Guidance for Projects. During the Project, carbon sequestration estimates will be derived from direct measurements of 19 permanent plots, without reliance on default emission factors, which satisfies the IPCC Tier 3 highest level of accuracy standards. Proposed methodologies further conform to IPCC GPGs related to quantifying uncertainties and quality assurance/quality control (QA/QC).

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G1.4. A description of communities located in and around the project area, including basic socio-economic information (using appropriate methodologies such as the livelihoods framework).

Findings: The PDD describes the communities near the project areas and provides summary statistics for population, household income, and education based on U.S. Census Bureau statistics in Linn County and the state of Kansas.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G1.5. A description of current land use and land tenure at the project site (see also G5).

Findings: The PDD describes the current land use of the Go Zero Tracts, noting that all sites were USFWS lands that had been privately owned agricultural fields and pastures prior to the creation of the Refuge. The majority of these lands had been out of use since the mid-1990s and many of these lands had been colonized by broomsedge and goldenrod. Prior to the

restoration project, a small portion of the Go Zero Tracts were under agricultural production by private individuals through lease agreement with the USFWS. One farmer chose to end his lease for reasons unassociated with the restoration project and the other chose to farm lands already in his possession.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G1.6. A description of current biodiversity in the project area and threats to that biodiversity, using appropriate methodologies (e.g., key species habitat analysis, connectivity analysis), substantiated where possible with appropriate reference material.

Findings: The PDD contains an overview of current biodiversity in the project area along with an assessment of threats to that biodiversity. Much more detailed information related to these subjects, including methodology and reference material, is found in the Marais des Cygnes NWR Comprehensive Conservation Plan (CCP). USFWS staff members also gave a detailed history of the biodiversity of the region, noting past and present threats to that biodiversity. Both the PDD and USFWS staff concur that the Project will provide larger areas of connected bottomland hardwood forest habitat within the Refuge, supporting both terrestrial and freshwater biodiversity. The hardwood bottoms provide an important habitat for birds, which supports the management objectives of the Refuge for neo-tropical migrants and for those of the neighboring State Wildlife Area for waterfowl. The Project will also support species of hunting interest (i.e. deer, turkey, furbearers, and quail) and the large and diverse freshwater mussel community in the Marais des Cygnes River.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G1.7. A list of all IUCN Red List threatened species (which encompasses endangered and vulnerable species) and species on nationally recognized list (where applicable) found within the project boundary (see also B1).

Findings: A list of IUCN Red List threatened species is provided in the PDD and the Marais des Cygnes NWR also has more detailed records concerning State-listed and Federally-listed rare species. The PDD list was derived from the IUCN Red List website, the USFWS Endangered Species Program, and the Kansas Natural Heritage Program. Listed species believed to occur in the project zone include peregrine falcon (*Falco peregrinus*), bald eagle (*Haliaeetus leucocephalus*), interior least tern (*Sterna antillarum*), and Piping Plover

(*Charadrius melodus*). The CCP will be revised in the near future (anticipated during 2011-2013) and will contain an updated list of threatened species in the Refuge.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.1.2. G2 – Baseline Projections

An analysis of projected land-use trends is necessary to predict likely on-site changes without implementation of a project. This “without-project” future land-use scenario enables comparison of the project’s likely impact with what would otherwise have occurred.

Indicator G2.1. Description of the most likely land-use scenario in the absence of the project, identifying whether the scenario assumes that existing laws or regulations would have required that project activities be undertaken anyway.

Findings: Without the Project, the PDD indicates that the project lands would have remained fields dominated by goldenrod and broomsedge. Due to the thick growth of these species, this habitat type precludes the growth of other vegetation, particularly the establishment of woody species. At least one of the parcels used for agriculture would have remained under cultivation. Though one of the goals of the Refuge is to restore bottomland hardwood forest, USFWS did not have the funds for this activity, and their restoration had not been planned in the near term.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G2.2. A projection of future carbon stock changes in the absence of the project, based on the land-use scenario described above. The timeframe for this analysis can be either the project lifetime (see G3) or the project accounting period, whichever is more appropriate. If there is evidence that non-CO₂ greenhouse gas (GHG) emissions such as CH₄ or N₂O are more than 15% of the baseline GHG fluxes at the project site (in terms of CO₂ equivalents), they must be estimated.

Findings: The PDD states that no major future changes in carbon stocks were anticipated under the without-project scenario. As previously mentioned, the goldenrod-broomsedge habitat would have prevented the establishment of woody species and the carbon accrual of

these species is minimal. The carbon associated with the agricultural land would be zero because the sequestration would not be sustained over the long-term due to harvesting.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G2.3. Description of how the “without-project” scenario would affect local communities in the project area.

Findings: In the without-project scenario, the project proponents believe that the land would most likely be of only limited use to the community for either recreation or agriculture due to the preponderance of goldenrod-broomsedge on these lands.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G2.4. Description of how the “without-project” land-use scenario would affect biodiversity in the project area.

Findings: If the property remained dominated by goldenrod-broomsedge it would have very low biodiversity values. For the small portion of land under cultivation, there would be ongoing impacts associated with farming operations (heavy equipment, fertilizers, and pesticides) that could potentially negatively impact terrestrial and freshwater habitats. The forest fragmentation caused by the majority of lands covered by weeds would have had a continued adverse impact on biodiversity, particularly avian species due to increased predation and brood parasitism from the brown-headed cowbird, which thrives in forest edge habitats.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G2.5. Description of how the “without-project” land-use scenario would affect water and soil resources (see also B5).

Findings: Project proponents estimate the “without-project” scenario to include the continued presence of the weedy goldenrod-broomsedge habitat and limited agricultural land use. Without the deep rooting of forest vegetation, the lands would remain susceptible to soil erosion, and in some cases, soil degradation due to chemical and fertilizer use. Sediment loading in the Marais des Cygnes River would decrease water quality and detrimentally impact freshwater biodiversity as well as the natural hydrologic system.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.1.3. G3 – Project Design and Goals

The project must be described in sufficient detail so that a third-party can adequately evaluate it. Projects that operate in a transparent manner enable stakeholders and outside parties to contribute more effectively to the project.

Indicator G3.1. Provide a description of the scope of the project and a summary of the major climate, community, and biodiversity goals.

Findings: The PDD details the scope of the project to restore 776 acres of the Marais des Cygnes NWR to its native bottomland hardwood habitat. The three primary goals of this effort include each of the three required CCB categories: to decrease the impacts of climate change through carbon sequestration, restore Kansas’s bottomland hardwood forest ecosystem, and create long-term community benefits through recreation and environmental education.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G3.2. Describe each major project activity (if more than one) and its relevance to achieving the project’s goals.

Findings: The PDD explains major project activities and describes how each pertains to the overarching goals of the Marais des Cygnes Restoration Initiative. The activities include 1) establish monitoring plan, 2) establish baseline, 3) evaluate current carbon stocks, 4) site preparation and planting, 5) project monitoring, and 6) validation. Furthermore, conversations during the site visit with The Conservation Fund, USFWS and ESI (the

consultant for carbon monitoring) provided ample evidence of the thorough approach designed for each project activity.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G3.3. Provide a map identifying the project location, where the major project activities will occur, and geo-referenced boundaries of the project site(s).

Findings: A map of the project area with geo-referenced boundaries for the project sites is found as Figure 2 in the PDD.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G3.4. Provide a timeframe for the project's duration and the rationale used for determining the project lifetime. If the accounting period for carbon credits differs from the project lifetime, explain.

Findings: The project is found within the Marais des Cygnes NWR and is thus owned and managed by the USFWS in perpetuity. The accounting period for the carbon is 100 years.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G3.5. Identify likely risks to climate, community, and biodiversity benefits during the project lifetime. Outline measures that the project plans to undertake to mitigate these risks.

Findings: The PDD adequately addresses the potential risks to climate, community and biodiversity benefits that could transpire during the life of the project. While designing the project, TCF and project partners conducted risk assessments to determine the best location for project sites. For example, the team selected sites that were "wet" to decrease risk from

drought and fire. Similarly, they developed a project design, with scattered sites across the Refuge, to minimize damage from tornados. Above all, one of the greatest strategies to minimize risk was to partner with the USFWS to take advantage of their long-term commitment to management, monitoring and law enforcement patrolling to counter such activities as vandalism and illegal hunting.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G3.6. Document and defend how local stakeholders have been or will be defined.

Findings: The PDD identified six groups of local stakeholders who have either participated in the design or implementation of the project and those will be potentially impacted from it. In the first group, the project proponents are collaborating with public and private partners such as the USFWS, TCF donors and subcontractors ESI. These groups are involved in the long-term project development, implementation and management of the Go Zero tracts in varying capacities. The second group, those who may be potentially impacted from the project, primarily includes user groups such as hunters, bird-watchers, and other recreationists as well as adjacent landowners (i.e. farmers and the Marais des Cygnes Wildlife Area administered by the Kansas Department of Wildlife and Parks). Documented in Table 2 in the PDD, the stakeholder list is expected to evolve as the project is implemented and impacts to the local community change. The upcoming revision of the CCP will also include stakeholder consultation related to the management of the entire Marais des Cygnes Wildlife Refuge.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G3.7. Demonstrate transparency by: making all project documentation publicly accessible at, or near, the project site; only withholding information when the need for confidentiality is clearly justified; informing local stakeholders how they can access the project documentation; and by making key project documents available in local or regional languages, where applicable.

Findings: Project-related documents will be made available to the public through various media. At the Marais des Cygnes NWR office, the PDD will be available in hard copy, a Go Zero sign indicates participation in the program, and interpretative panels will be displayed in

the Refuge kiosk at a site along the Kansas state line. Additional virtual locations for the PDD include The Conservation Fund and CCBA websites.

Within the Service, the Marais des Cygnes Restoration Initiative will be cross-referenced in numerous Refuge planning documents. The Go Zero Project is included in the Refuge's Habitat Management Plan and Annual Habitat Work Plan, and will be highlighted in the imminent CCP revision. As such, the PDD has been revised to indicate that the Go Zero tracts will be highlighted in these annual USFWS planning documents and will be described as a long-term management project in the CCP.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement:

OFI: CCBA Criterion G3 – Project Design Goals – requires that project proponents demonstrate transparency by making all project documentation publicly accessible at, or near, the project site.

The PDD provides a description of how project information was made available to the public as the Refuge's CCP was developed. The CCP was developed in 1998 and referenced forest restoration activities and tree planting. This document, however, is relatively dated and scheduled for updating in the 2011-2013 time period. We believe that the project would be improved by making a specific commitment to highlight the Go Zero project in the process for revising the CCP. We think that the project would be further improved by making a commitment in the PDD to highlight the project on the Refuge's website, in the Habitat Management Plan, in the Annual Habitat Work Plan, and in brochures and signage at the Refuge. The project proponents have indicated that such activities will take place, so the OFI is to specifically describe these measures in the PDD.

Proponent's Response to OFI: Marais des Cygnes NWR and the Fund are working together closely to ensure project transparency and availability of information. After the Marais des Cygnes Restoration Initiative was implemented, the Refuge included the Go Zero project in its Habitat Management Plan and Annual Habitat Work Plan. A copy of the Annual Habitat Work Plan for 2009 was provided to the auditors; the Fund's project is listed as the first action item in the forestry category. The Refuge has also committed to highlighting the Go Zero project in its upcoming CCP revisions, and the Service's commitment to incorporating the Go Zero Tracts into Marais des Cygnes NWR's CCP is highlighted in a letter from Acting Regional Director Richard Coleman (copy provided to auditors).

In order to increase project exposure, the Refuge and the Fund are in the process of developing an informational panel on the Refuge kiosk that explains the Go Zero program, the partnerships involved and the benefits of forest restoration. An interpretive display will also be placed at one of the fields along the Kansas state line road that details the goals of the project, its boundaries, and recognizes participating sponsor companies.

In addition, the Project Design Document will be posted on the CCBA web site and the Fund's web site, and the PDD will be linked to the Refuge website. The local community will be notified of the CCBA process through available channels, including the Marais des Cygnes NWR headquarters, where hard copies of the PDD will be available for residents who cannot access the Internet. There is also signage in Refuge headquarters highlighting the Refuge's participation in the Go Zero project.

Auditor's Evaluation of Response: The project proponents have made improvements to the PDD and intend to undertake further action to demonstrate project transparency, as described above.

4.1.4. G4 – Management Capacity

The success of a project depends upon the competence of the implementing management team.

Indicator G4.1. Document the management team's experience implementing land management projects. If relevant experience is lacking, the proponents must demonstrate how other organizations will be partnered with to support the project.

Findings: The PDD lists the management team experience for The Conservation Fund, the USFWS, and ESI, long-term consultant to the project. Through a review of background information and personal interviews, the management team was found to be fully qualified and committed to implement all aspects of the Restoration Initiative.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G4.2. Demonstrate that management capacity is appropriate to the scale of the project.

Findings: The management team is a robust team that has the appropriate capacity to design, implement and adaptively manage the Restoration Initiative over the long-term. Many of the team members have previously worked together on the Red River Restoration Initiative and this project, coupled with the Marais des Cygnes Restoration Initiative, will provide ample opportunity for both management teams to take advantage of the collective lessons learned from these Restoration Initiatives to most effectively manage and monitor them over the long-term.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G4.3. Document key technical skills that will be required to successfully implement the project and identify members of the management team or project partners who possess appropriate skills.

Findings: The key technical skills of staff from The Conservation Fund, the USFWS, and ESI were confirmed through group interviews, one-on-one discussions and the information contained in the PDD. These technical skills range from biodiversity monitoring, community outreach, and restoration planting and monitoring.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G4.4. Document the financial health of the implementing organization(s).

Findings: The Conservation Fund is a non-profit organization whose work is made possible through the support of individuals, foundations, corporations, and government agencies. Copies of The Conservation Fund's consolidated audit and recent tax returns can be found on their website (http://www.conservationfund.org/who_we_are/financials). Both documents demonstrate that TCF is a large and financially stable organization. The USFWS, while subject to annual budget constraints, is an agency within the US Federal government and is considered to be financially stable for the purposes of the Restoration Initiative.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.1.5. G5 – Land Tenure

There should be no significant land tenure disputes in the project area, or the project should fundamentally help to resolve these tenure issues.

Indicator G5.1. Guarantee that the project will not encroach uninvited on private property, community property, or government property.

Findings: The Marais des Cygnes Restoration Initiative will not encroach uninvited on private property, community property or government property. The Go Zero tracts are located entirely within the Marais des Cygnes Wildlife Refuge. Furthermore, the USFWS realty department confirmed that the Service owns the surface as well as subsurface mineral rights to the Go Zero tracts. While portions of the Refuge have been coal mined historically, no mining has occurred or will occur on the Go Zero tracts.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests:

NIR2: CCBA Criterion G5 – Land Tenure – requires that the project proponents guarantee that the project will not encroach uninvited on private property. Criterion G5 further requires that there should be no significant land tenure disputes in the project area, or the project should fundamentally help to resolve these tenure issues.

There do not appear to be any tenure disputes on the Marais des Cygnes NWR, but private parties apparently own the rights to coal located approximately 40 feet underground on portions of the Refuge. In a preliminary analysis, the USFWS notes that the coal leases date from the 1920s and concludes that it is very unlikely that the parties would exercise their rights to mine the coal. We are inclined to agree with this conclusion, but seek additional information regarding the location and status of mineral rights in the vicinity of the Go Zero tracts.

The Conservation Fund must work with the USFWS to provide a map of the areas subject to private mineral rights and provide information that summarizes the terms of the coal leases. As part of their response to this NIR the proponents should provide an assessment of the potential impact of the coal leases on the Go Zero project, if any.

Proponent’s Response to NIR2: Marais des Cygnes NWR was largely protected from modern development because much of the land was purchased by a coal company in the 1970s to provide for future coal mining needs. When high sulfur coal decreased in value, the land was put up for sale and was acquired by the Fish and Wildlife Service from Pittsburgh and Midway Coal Company, a subsidiary of Chevron U.S.A., Inc. Other Refuge lands were purchased from the Midland Cattle Company.

Although Marais des Cygnes NWR does have a history of coal mining on some areas of the Refuge, there is no active mining history on any of the Go Zero Tracts. There are two coal leases that date from the 1920s on the original parcel purchased from Pittsburgh & Midway, but none of the Go Zero Tracts are included in the area covered by these coal leases.

To confirm that there were no additional outstanding leases that might impact the Go Zero Tracts, USFWS realty staff conducted a search of existing lease records on the Go Zero parcels and found no evidence that the subsurface rights were severed from the surface rights for any of the Go Zero Tracts, leading USFWS realty staff to conclude that the Refuge owns the subsurface mineral rights on all of the Go Zero Tracts. Therefore, none of the Go

Zero parcels should be directly affected by preexisting coal rights on the Refuge. Mining on neighboring lands is extremely unlikely, given the long period of inactivity associated with the coal leases and the low value of the existing sulfur. In addition, mining on the Refuge presents numerous logistical and legal complications, as certain mining practices, including surface mining, are generally prohibited on National Wildlife Refuge lands pursuant to the Surface Mining Control and Reclamation Act.

Auditor's Evaluation of Response: The response is satisfactory and addresses the potential concern regarding coal rights. Based on the investigation conducted by the USFWS, there do not appear to be any unresolved mineral rights issues associated with the Go Zero tracts.

Opportunities for Improvement: None

Indicator G5.2. Guarantee that the project does not require the relocation of people, or any relocation is 100% voluntary and fundamentally helps resolve land tenure problems in the area.

Findings: No relocation has taken place or will take place as a result of the project.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G5.3. Describe potential "in-migration" of people from surrounding areas, if relevant, and explain how the project will respond.

Findings: The potential in-migration of people for surrounding areas is not relevant to the project.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.1.6. G6 – Legal Status

The project must be based on a solid legal framework (e.g., appropriate contracts are likely to be in place) and the project must seek to satisfy applicable planning and regulatory requirements.

During the project design phase, the project proponents should communicate early on with relevant local, regional, and national authorities and allow adequate time to earn necessary approvals. The project design should be flexible to accommodate potential modifications that may arise to secure regulatory approval.

Indicator G6.1. Guarantee that no laws will be broken by the project.

Findings: The PDD indicates that the Restoration Initiative is in full legal compliance. The Refuge was established in accordance with two federal acts (i.e. the Fish and Wildlife Act of 1956 and the Emergency Wetland Resources Act of 1986). The partnership between The Conservation Fund and the USFWS is memorialized in a signed Memorandum of Understanding circa 2007. The PDD indicates that all partners have complied with national, state, and local labor laws.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: See NIR3 below

Opportunities for Improvement: None

Indicator G6.2. Document that the project has, or expects to secure, approval from the appropriate authorities.

Findings: The Conservation Fund has a signed agreement with the USFWS to plant and restore bottomland hardwood forest on the Refuge. Interviews with USFWS staff confirmed that the project activities have been approved at regional and national levels. This approval includes a confirmation from the USFWS that no archeological survey or cultural resource review was necessary prior to implementation of the Go Zero project. The project is in compliance with Section 106 of the National Historic Preservation Act, which can require screening project areas for pre-historic or historic archeological resources on National Wildlife Refuges.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests:

NIR3: CCBA Criterion G6 – Legal Status – requires that the project proponents guarantee that no laws will be broken by the project (Indicator 1) and document that the project has, or expects to secure, approval from the appropriate authorities (Indicator 2). Certain activities on National Wildlife Refuges are subject to Section 106 of the National Historic Preservation Act, which can require screening project areas for pre-historic or historic archaeological artifacts. According to the USFWS, planting trees on the Go Zero tracts is subject to Section 106 and the Refuge Manager asserted that he had received verbal approval from the

appropriate authorities to implement the project without the need for archaeological surveys.

The Conservation Fund must provide documentation that supports the assertion that the Go Zero project received the appropriate approvals required by Section 106 of the National Historic Preservation Act.

Proponent's Response to NIR3: Section 106 of the National Historic Preservation Act mandates a review process for all federally-funded and permitted projects that will impact sites listed on, or eligible for listing on, the National Register of Historic Places. Certain activities on National Wildlife Refuges are subject to Section 106, which can require screening project areas for pre-historic or historic archeological artifacts.

Appropriate authorities from the US Fish and Wildlife Service gave verbal approval that no archeological survey or cultural resource review was necessary prior to implementation of the Go Zero project. In addition, Margaret Van Ness, Regional Historic Preservation Officer for USFWS, confirmed in writing that there were no cultural resource concerns related to the plantings (copy provided to auditors). According to Van Ness, because the ground disturbance involved in planting the tree seedlings at Marais des Cygnes NWR did not exceed the existing plow zone disturbance from decades of crop planting, the planting process was considered a continuation of the historic use of the land. Therefore, no cultural resource review was necessary.

Auditor's Evaluation of Response: The response confirms that all necessary approvals were obtained for the project.

Opportunities for Improvement: None

4.1.7. G7 – Adaptive Management for Sustainability

Adaptive management is a formal, systematic, and rigorous approach to learning from the outcomes of management actions, accommodating change and improving management. It involves synthesizing existing knowledge, exploring alternative actions and making forecasts about their outcomes.

Adaptive management is based upon the premise that ecosystems and social systems are complex and inherently unpredictable. Adaptive management views land management actions as learning opportunities and as potential experiments for systematically testing assumptions and identifying adjustments that could benefit the project. It enables a project to evolve to meet changing or unanticipated needs, and can help ensure that the project realizes its goals over the long term.

Indicator G7.1. Demonstrate how management actions and monitoring programs are designed to generate reliable feedback that is used to improve project outcomes.

Findings: The PDD provides an overview of The Conservation Fund's management plan for documenting project decisions, actions, and outcomes. Further interviews with Go Zero staff confirm that this is a comprehensive system for documenting project histories. As noted in

the PDD, the USFWS also has a system for documenting actions at the Refuge level (i.e., the annual RAPP report).

Following the site visit, The Conservation Fund submitted additional documentation related to compliance with this voluntary indicator in regard to knowledge transfer within the USFWS. The project proponents described in further detail the Service's efforts to share their experiences with the Go Zero Program at the regional and national levels. One example is the project proponents' participation in a USFWS Carbon Sequestration Stakeholders meeting near Washington, DC, where they made a presentation and participated in a working group related to Carbon Sequestration Partnerships on Public Lands. Following this national meeting, the Service's Biological Carbon Sequestration Subgroup continues to follow up on the Stakeholders' Meeting by overseeing and planning the Service's continued carbon sequestration work. The Service aims to leverage the experience and lessons learned from the Go Zero projects to carbon sequestration projects across the country.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G7.2. Have a management plan for documenting decisions, actions and outcomes and sharing this information with others within the project team, so experience is passed on rather than being lost when individuals leave the project.

Findings: The PDD describes the project proponent's maintenance and storage of files related to the Restoration Initiative in a permanent database. This system allows TCF to document decisions and actions related to the project as well as disseminate this information to project team members, the USFWS and ESI. As appropriate, some of the information is summarized in technical papers in peer-reviewed journals as well as meetings such as the USFWS Carbon Sequestration Stakeholders meeting, ensuring that the information is also available to a wide range of scientists. Additionally, the Marais des Cygnes NWR prepares an annual report of activities (RAPP report) that is available to future Refuge managers and the general public.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests:

NIR4: CCBA Criterion G7 – Adaptive Management for Sustainability – requires that project proponents have a management plan for documenting decisions, actions, and outcomes and sharing this information with others within the project team, so experience is passed on rather than being lost when individuals leave the project.

The PDD provides an overview of The Conservation Fund's management plan for documenting project decisions, actions, and outcomes. Further interviews with Go Zero staff confirm that this is a comprehensive system for documenting project histories. As noted in the PDD, the USFWS also has a system for documenting actions at the Refuge level (i.e., the annual RAPP report). The Service's participation in the Go Zero program, however, includes elements at the Regional and National levels and it is important that the USFWS also make efforts to capture institutional learning. During the audit USFWS staff indicated that the Service has some form of climate committee (i.e., the "Peter Jerome" committee) that is capturing some elements of the agency's participation in the Go Zero program. We request that the role of this committee – or other efforts to capture the Service's institutional memory of their participation in the Go Zero program – be further explained in a written response.

Proponent's Response to NIR4: USFWS participation in the Go Zero program includes knowledge transfer at the regional and national levels, and institutional knowledge from Service participation in the Go Zero program is captured and shared in several ways. The Marais des Cygnes Refuge Biologist was invited to Denver to present the Refuge's carbon work to the regional headquarters, and regional directors from the Service were invited to participate and observe the site visit for the Marais des Cygnes CCB audit.

In addition, members of the Go Zero team were recently asked to participate in USFWS's Carbon Sequestration Stakeholders meeting outside Washington DC. This meeting, spearheaded by Refuge Supervisor Pete Jerome, brought together individuals from many organizations including non-profits such as The Conservation Fund and other governmental organizations such as the US Geologic Survey and the Bureau of Land Management. During this meeting, individuals presented on various aspects of successful carbon sequestration projects with the Fish and Wildlife Service. Afterwards, meeting participants divided into breakout sessions to exchange ideas, concerns and challenges encountered during carbon projects.

Following the Stakeholders' meeting, the Service's Biological Carbon Sequestration Subgroup, led by Pete Jerome and Eric Sundquist, met for the first time on May 22, 2009. The meeting, which incorporated data collected from the Stakeholders' meeting, laid out four objectives for the Service's continued carbon sequestration work. These included summarizing the state of the existing knowledge on carbon sequestration and creating a toolkit to be used by government agencies to facilitate additional carbon work, as well as developing an outreach and education strategy for other federal and state agencies, Tribes, and the general public.

As described above, USFWS is taking many steps to ensure that knowledge gained from its participation in Go Zero projects is captured at the regional and federal levels and used to facilitate future carbon projects around the nation.

Auditor's Evaluation of Response: The response satisfactorily addresses the NIR and the need for capturing institutional learning within the USFWS.

Opportunities for Improvement: None

Indicator G7.3. Demonstrate how the project design is sufficiently flexible to accommodate potential changes and that the project has a defined process in place to adjust project activities as needed.

Findings: The PDD explains how the Restoration Initiative is able to adapt to the evolving needs of the project. While the CCP provides a comprehensive management plan for the Refuge, the detailed step-down plans for Refuge management are typically generated on an annual basis. This scheduling cycle permits the Refuge manager and project team to suggest management activities based on the evolving needs of the Refuge and the Restoration Initiative. In terms of carbon sequestration, ESI tracks the current research related to carbon sequestration measurement and prediction. ESI is committed to modifying the project's systems related to this area should new information suggest revisions or modifications to improve accuracy.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G7.4. Demonstrate an early commitment to the long-term sustainability of project benefits once initial project funding expires. Potential activities may include: designing a new project that builds on initial project outcomes; securing payments for ecosystem services; promoting micro-enterprise; and establishing alliances with organizations or companies to continue sustainable land management.

Findings: The long-term sustainability of the project is assured by the involvement of the USFWS, a federal agency that has agreed to provide long term protection and management of Go Zero projects. The mission of the Service is to conserve, protect and enhance fish and wildlife and plants and their habitats.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.1.8. G8 – Knowledge Dissemination

Field-based knowledge can be of value to other projects. If actively disseminated, this information can accelerate the adoption of innovative practices that bring benefits both globally and locally.

Indicator G8.1. Describe how they will document the relevant or applicable lessons learned.

Findings: The PDD states that the lessons learned from the Restoration Initiative will be documented on the TCF website. In addition, the entire Project Design Document will be accessible to all through download on both the TCF and CCBA websites. Lessons learned will also be documented through the monitoring plans in each of the categories of climate, community and biodiversity.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator G8.2. Describe how they will disseminate this information in order to encourage replication of successful practices. Examples include: undertaking and disseminating research that has wide-reaching applications; holding training workshops for community members from other locales; promoting “farmer to farmer” knowledge-transfer activities; linking to regional databases; and working with interested academic, corporate, governmental or non-governmental organizations to replicate successful project activities.

Findings: As previously mentioned, there is mounting interest in implementing carbon sequestration projects on Service-owned lands. Members of the Marais des Cygnes Restoration Initiative are presently participating in the preparation of a Climate Change Strategic Plan to guide future climate change work and approaches. The project team attended the Carbon Sequestration Stakeholders meeting in Washington, DC, in April and has collaborated with the Service’s Biological Carbon Sequestration Subgroup to share the experiences of the Go Zero tracts.

Relevant lessons learned from the Project will be disseminated on The Conservation Fund’s website. Further documentation will be prepared and disseminated by the USFWS in the form of project reports and annual reports for the Refuge, all of which are available to the public.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.2. Climate Section

The Climate Section of the CCB Standards addresses net positive climate impacts, offsite climate impacts (“leakage”), climate impact monitoring, adapting to climate change and climate variability, and carbon benefits withheld from regulatory markets.

4.2.1. CL1 – Net Positive Climate Impacts

The project must generate net positive impacts on atmospheric concentrations for greenhouse gases (GHGs) within the project boundaries and over the project lifetime.

Indicator CL1.1. Use the methodologies of the Intergovernmental Panel on Climate Change’s Good Practice Guidance (IPCC GPG) to estimate the net change in carbon stocks due to the project activities. The net change is equal to carbon stock changes *with* the project minus carbon stock changes *without* the project (the latter having been estimated in G2). Alternatively, any methodology approved by the CDM Executive Board may be used. This estimate must be based on clearly defined and defensible assumptions about how project activities will alter carbon stocks and non-CO₂ GHG emissions over the duration of the project or the project accounting period.

Findings: The PDD includes a description of how the project plans to estimate the net change in carbon stocks. In addition to planting the Go Zero tracts, ESI has been contracted to measure and monitor the project’s carbon sequestration. ESI, in partnership with Winrock, installed 20 permanent sample plots within the Refuge, of which 19 are presently viable. Using the data collected from these sample plots, ESI used the proprietary model to develop baseline carbon conditions and estimates of carbon accrual. SCS was provided with the proprietary model and determined that the methodology conforms to the IPCC GPG. As such, carbon estimates are based on clearly defined and defensible assumptions. ESI is also committed to monitoring the evolving research on carbon sequestration measurement and estimation and will update the methodologies, as needed, to ensure accuracy.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CL1.2. Factor in the non-CO₂ gases CH₄ and N₂O to the net change calculations (above) if they are likely to account for more than 15% (in terms of CO₂ equivalents) of the project’s overall GHG impact.

Findings: In the PDD, the project proponents state that non-CO₂ gases are not anticipated to make a significant contribution to the project’s overall GHG impact. The non-GHG emissions related to the site preparation and planning were both minimal and temporal and not do approximate 15% of the project’s overall impact.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CL1.3. Demonstrate that the net climate impact of the project (including changes in carbon stocks, and non-CO₂ gases where appropriate) will give a positive result in terms of overall GHG benefits delivered.

Findings: The Restoration Initiative will result in an overall positive GHG benefit: carbon will be sequestered by the planted bottomland hardwood forest. The project is estimated to reduce 248 metric tons of CO₂e/acre over 50 years. In terms of permanence, TCF's partnership with the USFWS will ensure the long-term protection and management of the Go Zero tracts.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.2.2. CL2 – Offsite Climate Impacts (“Leakage”)

The project proponents must quantify and mitigate likely negative offsite climate impacts; namely, decreased carbon stocks or increased emissions of non-CO₂ GHGs outside the project boundary, resulting from project activities (referred to as “leakage” in climate change policy).

Indicator CL2.1. Estimate potential offsite decreases in carbon stocks (increases in emissions or decreases in sequestration) due to project activities.

Findings: The potential for offsite leakage from the Restoration Initiative is very unlikely. As described in the PDD, only two tenant farmers were impacted by the installation of the Go Zero tracts. One farmer had previously chosen to stop farming this land and the other shifted agricultural activities to lands already in his possession. The responses from these farmers support the regional trend of decreasing cropland use. Based on this information and the site visit to the Go Zero tracts, the potential for offsite climate impacts is very low.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CL2.2. Document how negative offsite impacts resulting from project activities will be mitigated, and estimate the extent to which such impacts will be reduced.

Findings: The project proponents do not anticipate any negative off-site impacts from project activities.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CL2.3. Subtract any likely project-related unmitigated negative offsite climate impacts from the climate benefits being claimed by the project. The total net effect, equal to the net increase in onsite carbon stocks (calculated in the third indicator in CL1) minus negative offsite climate impacts, must be positive.

Findings: No off-site impacts are anticipated and the total net effect of the project on carbon stocks is conservatively estimated to be positive.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.2.3. CL3 – Climate Impact Monitoring

Before a project begins, the project proponents must have an initial monitoring plan in place to quantify and document changes in project-related carbon pools, and non-CO₂ GHG emissions, if appropriate (within and outside project boundaries). The monitoring plan should state which measurements will be taken and which sampling strategy will be used.

Indicator CL3.1. Have an initial plan for how they will select carbon pools and non-CO₂ GHGs to be monitored, and the frequency of monitoring. Potential pools include aboveground biomass, litter, dead wood, belowground biomass and soil carbon. Pools to monitor must include any pools expected to decrease as a result of project activities. Relevant non-CO₂ gases must be monitored if they account for more than 15% of the project's net climate impact expressed in terms of CO₂ equivalents.

Findings: The PDD includes a description of the key elements of the project’s climate impact monitoring plan that will be carried out by ESI. The monitoring plan has been developed jointly by ESI and Winrock and is in compliance with the IPCC Good Practice Guidance. The monitoring regime includes a base-year analysis, tree survival analysis, and periodic soil and tree biomass measurement. The periodic measurement will occur on five-year basis beginning one year after the fifth growing season. Carbon sequestration estimates will be based on direct field measurements and not default emission factors. Because the Restoration Initiative will use direct, continuous measurement for their monitoring efforts, the plan meets the requirements for the accuracy criteria of IPCC Tier 3 estimation methods.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement:

OFI2: CCBA Criterion CL3 – Climate Impact Monitoring – requires that project proponents have an initial plan for how they will select carbon pools to be monitored and the frequency of monitoring. The PDD contains a detailed description of how carbon pools will be selected and monitored, so the project clearly conforms to the indicator. That said, we believe that the PDD could be improved by providing a citation for the documents that describe the methods that will be used to monitor carbon, either as a footnote or in a Literature Cited section. We understand that the methodologies are proprietary to ESI/Winrock, but still believe that it would be useful to cite the relevant documents as a point of clarification for future project participants and auditors.

Proponent’s Response to OFI2: The proponent updated the PDD to include references for the carbon monitoring and soil monitoring reports as well as citations for the documents used to generate the carbon curve.

Auditor’s Evaluation of Response: This response adequately addresses the OFI to include a more detailed Literature Cited section to aid future project participants and auditors in understanding the carbon impact monitoring for the Restoration Initiative.

4.2.4. CL4 – Adapting to Climate Change & Climate Variability

Projects designed to anticipate and adapt to probable impacts of climate change and climate variability are more likely to sustain the benefits generated by the project over the long term.

Indicator CL4.1. Identify likely regional climate change and climate variability impacts, using available studies.

Findings: The PDD provides an overview of how regional climate change and climate variability may potentially impact the Restoration Initiative. The project identifies how preliminary predictions related to temperature, precipitation, and Co₂ levels may affect the establishment and growth of the bottomland hardwood forest.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CL4.2. Demonstrate that the project has anticipated such potential impacts and that appropriate measures will be taken to minimize these negative impacts.

Findings: The project proponents have considered potential negative climate change impacts to the Restoration Initiative. The PDD posits that the restoration of a native forest ecosystem will be resilient to proposed climate variability and will overall improve the health and ecosystem functioning of the Marais des Cygnes watershed. In the event of species mortality, ESI will plant additional trees in the Go Zero tracts.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.2.5. CL5 – Carbon Benefits Withheld from Regulatory Markets

When some carbon benefits generated by a project are not sold to satisfy regulatory requirements, additional mitigation action will be required elsewhere to meet these requirements. Therefore, withholding a portion of the project’s carbon benefits from being used in capped markets will result in greater overall climate change mitigation.

Moreover, projects that do not sell all their carbon benefits in regulated regimes have the opportunity to experiment with climate change mitigation activities other than the ones eligible under these regimes (such as avoided deforestation, which is not currently creditable under the Clean Development Mechanism). Such experimentation may generate new knowledge that is of value to carbon rule makers and other project developers.

Indicator CL5.1. Not sell at least 10% of the total carbon benefits generated by the project into regulated GHG markets (e.g., CDM, New South Wales GHG Abatement Scheme, Oregon Standard). Projects can sell these carbon benefits in a voluntary market or retire them.

Findings: All of the carbon benefits generated by the project will be withheld from regulated markets and will be retired upon their sale in voluntary markets.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.3. Community Section

The Community Section of the CCB Standards addresses net positive community impacts, offsite community impacts, community impact monitoring, capacity building, and best practices in community involvement.

4.3.1. CM1 – Net Positive Community Impacts

The project must generate net positive impacts on the social and economic wellbeing of communities within the project boundaries and within the project lifetime. In addition, local communities and other stakeholders should be engaged early on so that the project design can be revised based on their input. Finally, projects should ensure that stakeholders can express concerns and grievances to project proponents and that these concerns are responded to in a timely manner.

Indicator CM1.1. Use appropriate methodologies (e.g. the livelihoods framework) to estimate the net benefits to communities resulting from planned project activities. A credible estimate of net benefits must include changes in community wellbeing given project activities. This estimate must be based on clearly defined and defensible assumptions about how project activities will alter social and economic wellbeing over the duration of the project. The “with project” scenario must then be compared with the baseline scenario of social and economic wellbeing in the absence of the project (completed in G2). The difference (i.e., the net community benefit) must be positive.

Findings: The PDD details an extensive list of community-related benefits as a result of the Marais des Cygnes Restoration Initiative. Foremost of these benefits is the increased recreational benefits from the restoration of bottomland hardwood forest in the form of hunting, environmental education, and nature study. Augmenting the opportunities already available to the public in the Refuge, the Go Zero tract will improve and enhance these activities as the forest matures. For example, the forest will provide improved bird watching opportunities as the forest develops different habitats through vertical stratification.

The project proponents will measure the net community benefits through the study of community use-days per year. The Refuge staff is well-equipped and staffed to monitor community usage throughout the year in perpetuity.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CM1.2. Document local stakeholder participation in the project's planning. If the project occurs in an area with significant local stakeholders, the project must engage a diversity of stakeholders, including appropriate sub-groups, underrepresented groups and women living in the project vicinity. Stakeholders in the project's area of influence must have an opportunity before the project design is finalized, to raise concerns about potential negative impacts, express desired outcomes and provide input on the project design. Project developers must document stakeholder dialogues and indicate if and how the project proposal was revised based on such input.

Findings: The PDD describes a strong partnership between The Conservation Fund, the Marais des Cygnes NWR, the USFWS, and ESI. Clearly TCF and Refuge staff have formed a solid collaborative relationship in which they collectively make implementation, monitoring, and long-term management decisions. The benefit of this cohesive leadership team extends to the capacity and willingness of the Refuge staff to consult adjacent landowners such as the State Wildlife Area for technical assistance in bottomland hardwood restoration and in regard to long-term management goals.

During the project design period, a public ceremony was held to commemorate the completed planting effort. TCF invited the local community, corporate donors and the local and regional press to the event. The Linn County News wrote an article about the Restoration Initiative, resulting in increased public awareness and interest. Furthermore, Refuge staff has spoken at area schools and at such venues as the Lion's Club and to school groups to engage the local community in the restoration project.

As previously mentioned, interpretive panels will be erected onsite to inform Refuge users of the ongoing restoration of bottomland hardwood forest. The various user groups are encouraged to visit the Refuge office and express their viewpoints about the project.

While project proponents notified local stakeholders of the Restoration Initiative and have sought comments from the community, few have been received. Of the few comments, individuals from the University of Kansas, the Kansas Biological Survey and the Kansas Forest Service have voiced positive support for the Go Zero tracts. During the formal stakeholder comment period for the PDD, two positive comments from Gaim, Inc. and the USFWS were received on the CCBA website.

A detailed stakeholder consultation effort will also take place during the imminent revision of the CCP.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement:

OFl3: CCBA Criterion CM1 – Net Positive Community Impacts – requires that project proponents document stakeholder participation in the project’s planning. The PDD (see Section CM1.2 and Table 4) lists relevant stakeholders and describes how they were consulted during project planning. The PDD describes members of the local community, and specifically Refuge users, as stakeholders to the project. Much of the consultation with this group of stakeholders, however, references their participation in the 1998 CCP development process, which pre-dates the Go Zero project by over 10 years.

We conclude that the project conforms to the requirements of CM1, Indicator 2, but believe that the project could be improved by defining more specific measures to include user-groups that are potentially influenced by the project in stakeholder consultation efforts. We believe that some of these measures are either underway or have been given some degree of consideration, so the OFI is to clarify the specific measures that will be employed for consulting with Refuge user groups. Such groups could include deer and turkey hunters, bird watchers, and other parties interested in the natural history of the Refuge.

Proponent’s Response to OFI3: Marais des Cygnes NWR and the Fund are working together closely to inform stakeholders about the Go Zero project, and are implementing new ways to communicate with user groups about the project. For example, the Refuge and the Fund are in the process of developing an informational panel on the Refuge welcome kiosk that explains the Go Zero program, the partnerships involved and the benefits of forest restoration. An interpretive display will also be placed at one of the fields along the Kansas state line road that details the goals of the project, its boundaries, and recognizes participating sponsor companies.

In addition, the Marais des Cygnes NWR staff were highlighted and quoted in national outreach efforts during the summer of 2009 highlighting the Go Zero program and its specific benefits to wildlife on the Refuge.⁶

The Refuge will continue to inform visitors about the Go Zero project through routine contacts at headquarters and in the field, and the project will also be incorporated into discussions with local groups such as the Lions Club, school groups, and watershed groups. In addition, the Project Design Document will be posted on both the Fund’s web site and the Refuge website and hard copies of the PDD will be made available at Marais des Cygnes NWR headquarters. These various methods will allow many Refuge users, including hunters, bird watchers and nature historians, to learn about the project and also allow the Refuge staff an opportunity to consult with these groups about project developments.

Auditor’s Evaluation of Response: The response adequately addresses the intent of OFI3.

Indicator CM1.3. Formalize a clear process for handling unresolved conflicts and grievances that arise during project planning and implementation. The project design must include a process for hearing, responding to and resolving community grievances within a reasonable time period. This grievance process must be publicized to local stakeholders.

⁶ <http://news.prnewswire.com/DisplayReleaseContent.aspx?ACCT=104&STORY=/www/story/06-22-2009/0005047562&EDATE=>

Project management must attempt to resolve all reasonable grievances raised, and provide a written response to grievances within 30 days. Grievances and project responses must be documented.

Findings: Refuge staff address all grievances related to the Marais des Cygnes NWR and thus handle matters related to the Go Zero tracts. The PDD describes the protocol for documenting and handling all grievances within the mandated 30 days timeframe.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.3.2. CM2 – Offsite Community Impacts

The project proponents must quantify and mitigate likely negative social and economic offsite impacts; namely, the decreased social and economic wellbeing of communities or people living outside the project boundary, resulting from project activities.

Indicator CM2.1. Identify potential negative offsite community impacts that the project is likely to cause.

Findings: Project proponents do not anticipate any negative offsite community impacts from the Go Zero tracts.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

CM2.2. Describe how the project plans to mitigate these negative offsite social and economic impacts.

Findings: No negative offsite social or economic impacts are anticipated.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CM2.3. Evaluate likely unmitigated negative offsite social and economic impacts against the social and economic benefits of the project within the project boundaries. Justify and demonstrate that the net social and economic effect of the project is positive.

Findings: Project proponents do not anticipate any negative offsite social or economic impacts. The restoration of the Go Zero tracts from weed-filled fields to bottomland hardwood forest is positive.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.3.3. CM3 – Community Impact Monitoring

The project proponents must have an initial monitoring plan to quantify and document changes in social and economic wellbeing resulting from the project activities (within and outside the project boundaries). The monitoring plan should indicate which measurements will likely be taken and which sampling strategy will be used to determine how the project affects social and economic wellbeing.

Since developing a full community-monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being evaluated by the CCB Standards. This will especially be true for small-scale projects.

Indicator CM3.1. Have an initial plan for how they will select community variables to be monitored, and the frequency of monitoring. Potential variables include income, health, roads, schools, food security, education and inequality. Community variables at risk of being negatively impacted by project activities should be monitored.

Findings: The PDD indicates that the annual USFWS RAPP report will be used to monitor community-use-days on the Go Zero tracts to support the hypothesis that use-days will increase as the planted areas develop into mature forests. Project proponents project that the restoration project will increase recreational and educational activities. Refuge staff will also collect data specifically linked to visitor usage of the Go Zero tracts. This data will form the project’s monitoring plan and will be a subset of the annual RAPP report.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests:

NIR5: CCBA Criterion CM3 – Community Impact Monitoring – requires that project proponents have an initial plan for how they will select community variables to be monitored, and the frequency of monitoring. The PDD indicates that the annual USFWS RAPP report will be used to monitor community-use-days on the Go Zero tracts to support the hypothesis that use-days will increase as the planted areas develop into mature forests. How use-day estimates would be tied to the specific Go Zero tracts was the subject of some discussion during the audit and it appears that the proponents are still working out how this will be achieved.

Our conclusion is that the project proponents have developed the elements of an initial plan for monitoring community impacts and have already selected use-days as a variable to monitor. We seek, however, additional information documenting when these elements will be coalesced into a written monitoring plan.

Proponent’s Response to NIR5: Marais des Cygnes NWR staff will monitor the community benefits generated by the Marais des Cygnes NWR Restoration Initiative with specific attention paid to the anticipated rise in community use of the Go Zero Tracts. As the seedlings develop into a mature bottomland hardwood forest, public activity on the Tracts, including hunting, birding, and celebratory events, is expected to increase. Community use of the Tracts (and the entire Refuge) for public recreation and enjoyment is a significant benefit of the Go Zero projects and, therefore, an appropriate variable for community impact monitoring.

The number of visitors using the Go Zero Tracts will be monitored by the Refuge’s law enforcement staff (including 1 full-time and 1 dual-function law enforcement officer), who patrol the Refuge on a regular basis throughout the year and keep a log of visitor use. They will record visitor usage of the Go Zero parcels and will tally and report visitor numbers periodically in order to track community usage of the parcels over time. Visitation for the entire Refuge is already monitored in this same way and recorded annually via the RAPP reports. The monitoring plan for the Go Zero Tracts will be incorporated as a subset of the overall Refuge monitoring plan.

Auditor’s Evaluation of Response: The response adequately addresses NIR5.

Opportunities for Improvement: None

4.3.4. CM4 – Capacity Building

Projects that include a significant capacity-building (training, skill building, etc.) component are more likely to sustain the positive outcomes generated by the project and have them replicated elsewhere. The project proponents must include a plan to provide orientation and training for the project’s employees and relevant community members with an eye to building locally relevant skills and knowledge over time.

Indicator CM4.1. [Capacity building is] structured to accommodate the needs of communities, not only of the project.

Findings: Discussions with project proponents indicates that the Marais des Cygnes Restoration Initiative, coupled with the Red River Restoration Initiative, will be valuable capacity-building opportunities for various stakeholders. As previously mentioned, the USFWS is incorporating the experiences and lessons learned into a national Climate Change Strategic Plan. Within TCF, both projects will improve and enhance the Go Zero Program as well as benefit TCF's expanding forest carbon offset program.

The community has benefited through increased educational opportunities. The restoration of bottomland hardwood forest provides technical training opportunities for regional universities, resources agencies, natural history clubs and associations, and schools to study and learn about this diminished native forest ecosystem. Two summer interns from the Student Conservation Agency (SCA) were the first of various future interns to gain first-hand experience in a forest restoration and carbon sequestration project through a Go Zero project.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CM4.2. [Capacity building is] targeted to a wide range of groups, not just elites.

Findings: Capacity building is targeted at the full range of NWR users, including hunters, anglers, bird watchers, hikers, photographers, and students of all age groups. As the Go Zero tracts are located on public lands, visitation is unrestricted and not limited to elite groups. Interpretation and education opportunities are open to all who wish to visit the Refuge. Public talks about the Go Zero tracts and the Marais des Cygnes NWR occur at various venues throughout the local community and are typically open to all interested parties.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CM4.3. [Capacity building is] targeted to women to increase their participation.

Findings: Capacity building is targeted toward a wide range of USFWS staff, including women. Refuge managers target a wide range of citizens and make specific attempts to encourage women to visit and use NWR properties through the variety of available recreational and educational opportunities. The PDD further notes that women are instrumental in the development and implementation of the Restoration Initiative. A

significant percentage of The Conservation Fund's Go Zero project staff is female and ESI's lead planting and monitoring team member is a woman.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CM4.4. [Capacity building is] aimed to increase community participation in project implementation.

Findings: The Conservation Fund and the USFWS have included members of the community in the project design and implementation by making the PDD publicly available, informing the local and regional community of restoration efforts and making a broadcast invitation to the Go Zero ceremonial dedication event in May of 2008. The community has been invited to participate in these events as well as other events such as donor visits, media tours, and media interviews. Additional community participation and capacity building opportunities will arise when the CCP is updated in the near term.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.3.5. CM5 – Best Practices in Community Involvement

Projects that use best practices for community involvement are more likely to benefit communities. Best practices include: respect for local customs, local stakeholder employment, worker rights and worker safety.

Indicator CM5.1. Demonstrate that the project was developed with a strong knowledge of local customs and that, where relevant, project activities are compatible with local customs.

Findings: As many of the project proponents are members of the local community, the Restoration Initiative was developed and implemented in concert with local customs and practices. During the site visit, all team members demonstrated a strong knowledge of local customs as well as a commitment to the community.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CM5.2. Show that local stakeholders will fill all employment positions (including management) if the job requirements are met. Project proponents must explain how stakeholders will be selected for positions and where relevant, must indicate how traditionally underrepresented stakeholders and women, will be given a fair chance to fill positions for which they can be trained.

Findings: Project proponents do not anticipate the creation of new long-term employment opportunities from the Restoration Initiative. Any potential long-term jobs will be recruited through the USFWS as the Service manages and monitors a large majority of the project. As such, the USFWS is an equal opportunity employer with hiring practices that are governed by Federal Equal Employment Opportunity requirements. As previously noted, women occupy leadership positions within The Conservation Fund and ESI.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CM5.3. Show that the project will inform workers about their rights, and that the project complies with international rules on worker rights.

Findings: USFWS employees are subject to Federal rules and regulations guaranteeing worker rights. ESI also provides workers rights and compensation insurance in their legal agreements with all contract employees. Interviews with staff members and contractors confirmed that they were aware of their rights as employees and that they felt free to advocate for those rights with management.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator CM5.4. Comprehensively assess situations and occupations that pose a substantial risk to worker safety. A plan must be in place to inform workers of risks and to explain how to minimize such risks. Where worker safety cannot be guaranteed, project proponents must show how the risks will be minimized using best work practices.

Findings: The USFWS has comprehensive safety training programs that seek to minimize job-related risks. The PDD further describes how specific safety practices that have been employed on the project in terms of training, equipment maintenance, and health and safety protocol. Interviews during the site visit confirmed that safety is a priority for The Conservation Fund, its contractors and consultants, and the USFWS, which complies with OSHA standards.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.4. Biodiversity Section

The Biodiversity Section of the CCB Standards addresses net positive biodiversity impacts, offsite biodiversity impacts, biodiversity impact monitoring, native species use, and water and soil resource enhancement.

4.4.1. B1 – Net Positive Biodiversity Impacts

The project must generate net positive impacts on biodiversity within the project boundaries and within the project lifetime, measured against the baseline conditions.

Projects should have no negative effects on species included in the IUCN Red List of threatened species (which encompasses endangered and vulnerable species) or species on a nationally recognized list (where applicable). Invasive species must not be planted by the project.

Genetically Modified Organisms (GMOs), as a relatively new form of technology, raise a host of ethical, scientific and socio-economic issues. Some GMO attributes may result in invasive genes or species. In the future, certain GMOs may be proven safe. However, given the currently unresolved issues surrounding GMOs, projects cannot use genetically modified organisms to generate carbon credits.

Indicator B1.1. Use appropriate methodologies (e.g., key species habitat analysis, connectivity analysis) to estimate changes in biodiversity as a result of the project. This estimate must be based on clearly defined and defensible assumptions. The “with project” scenario should then be compared with the baseline “without project” biodiversity scenario completed in G2. The difference (i.e., the net biodiversity benefit) must be positive.

Findings: The PDD adequately describes both the “with project” and “without project” scenarios as they relate to this biodiversity indicator. Without the project, the Go Zero tracts would have remained fields covered in agriculture or perennial and annual weeds. These

fields would have supported a low diversity of flora and fauna and promoted the presence of the brown-headed cowbird, a brood parasite that succeeds in open habitats.

The “with project” scenario restores bottomland hardwood forest, which enhances biodiversity, particularly avian diversity. The future mature forest will also provide habitat for avian species and resident wildlife such as bobcat and grey fox. Overall, the restored forest will provide vertical and horizontal habitat diversity which will in turn provide a wide variety of nesting, foraging, and breeding sites for the local and migratory populations.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator B1.2. Describe possible adverse effects of non-native species on the area’s environment, including impacts on native species and disease introduction or facilitation. If these impacts have a substantial bearing on biodiversity or other environmental outcomes, the project proponents must justify the necessity of using non-native species over native species.

Findings: The Restoration Initiative does not include any non-native species. Only native species will be used in the planting efforts. No adverse effects from non-native species are anticipated.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator B1.3. Identify all IUCN Red List threatened species and species deemed threatened on nationally recognized lists that may be found within the project boundary. Project proponents must document how project activities will not be detrimental in any way to these species.

Findings: The PDD identifies all IUCN Red List threatened species as well as species deemed to be threatened on nationally-recognized lists that are believed to occur in the Project zone. No species are believed to occur in the Go Zero tracts and no detrimental impacts to these species have been documented. If any of these species were to occur in the project area, the restoration of bottomland hardwood forest would be positive because it is a native ecosystem. Above all, the USFWS is committed to the conservation of rare, threatened, and endangered species and management practices are in place to support this conservation

goal. During the site visit, the Refuge Manager demonstrated his knowledge and expertise regarding the conservation of the special status species found on the Refuge.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator B1.4. Identify all species to be used by the project and show that no known invasive species will be used.

Findings: Only species native to bottomland hardwood forest will be used in the Restoration Initiative. The USFWS has selected these species due to their natural occurrence in this forest type.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator B1.5. Guarantee that no genetically modified organisms will be used to generate carbon credits.

Findings: All Go Zero projects are planted with native, natural trees and ESI staff confirmed that no GMO planting stock has been used.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.4.2. B2 – Offsite Biodiversity Impacts

The project proponents must quantify and mitigate likely negative offsite biodiversity impacts; namely, decreased biodiversity outside the project boundary resulting from project activities.

Indicator B2.1. Identify potential negative offsite biodiversity impacts that the project is likely to cause.

Findings: Project proponents do not anticipate any negative offsite biodiversity impacts from the project.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator B2.2. Describe how the project plans to mitigate these negative offsite biodiversity impacts.

Findings: No negative offsite biodiversity impacts are anticipated.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator B2.3. Evaluate likely unmitigated negative offsite biodiversity impacts against the biodiversity benefits of the project within the project boundaries. Justify and demonstrate that the net effect of the project on biodiversity is positive.

Findings: No negative offsite biodiversity impacts are anticipated and the net effect of the project on biodiversity in the Marais des Cygnes NMR and offsite is expected to be positive (see Section B1.1).

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.4.3. B3 – Biodiversity Impact Monitoring

The project proponents must have an initial monitoring plan to quantify and document the changes in biodiversity resulting from the project activities (within and outside the project boundaries). The monitoring plan should state which measurements will likely be taken and which sampling strategy used.

Since developing a full biodiversity-monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being evaluated by the CCB Standards. This will especially be true for small-scale projects.

Indicator B3.1. Have an initial plan for how they will select biodiversity variables to be monitored, and the frequency of monitoring. Potential variables include species abundance and diversity, landscape connectivity, forest fragmentation, habitat area and diversity, etc. Biodiversity variables at risk of being negatively impacted by project activities should be monitored.

Findings: The PDD states that biodiversity will be monitored through bird species richness surveys. USFWS staff will conduct a bird species richness survey on the planted tracts every 5 years and include the results in the publicly available annual report of Refuge activities (RAPP reports). The results will be used to evaluate the hypothesis that bird species richness will increase as the bottomland hardwood forest matures.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests:

NIR6: CCBA Criterion B3 – Biodiversity Impact Monitoring – requires that project proponents have an initial plan for how they will select biodiversity variables to be monitored, and the frequency of monitoring. The PDD indicates that the annual USFWS RAPP report will be used to report bird species richness on the Go Zero tracts to support the hypothesis that species richness will increase as the planted areas develop into mature forests. The PDD further states that bird species richness surveys will be conducted every 5 years.

Our conclusion is that the project proponents have developed the elements of an initial plan for monitoring biodiversity impacts and have already selected bird species richness as a variable to monitor. We seek, however, additional information documenting when these elements will be coalesced into a written monitoring plan.

Proponent’s Response to NIR6: The Marais des Cygnes NWR Restoration Initiative’s impact on biodiversity will be monitored by tracking the change in bird species richness over time. Bird species richness is expected to increase as the forest matures. A shift in the overall bird community from early successional species such as indigo buntings and yellow-breasted chats to forest interior species like the wood thrush and Acadian flycatcher is also anticipated. These changes will take decades to manifest themselves, as the planting progresses toward maturity in the 80-100 year time frame.

Changes in species richness will be monitored via an annual bird survey along the Marais des Cygnes River. Each June, biological staff from the University of Kansas and the USFWS float the 8-mile section of the River which flows through the Refuge. The breeding bird survey documents the occurrence of riparian species adjacent to the largest planting fields in the Go Zero restoration project. USFWS has the benefit of 11 years of data collection before the

planting occurred; a gap in the dataset occurs in 2008 because water levels remained too high for safe canoeing. Therefore, post-planting monitoring began in June 2009.

The monitoring will detect changes to the bird community as a result of the Go Zero project. The river transect covers several of the largest fields within the Go Zero planting project and from the river, you can see the Go Zero Tracts. The monitoring team starts the survey before 6AM and finishes by 1030AM. Three people are required, with two paddling and the third listening, watching, and documenting occurrence. Many more birds are heard than seen, requiring good knowledge of bird calls. Over time, the trees will mature and support a bird community typical of the forest interior.

The riparian bird survey is one of the surveys noted in the Marais des Cygnes NWR RAPP report, and is already included in Refuge protocols including the Annual Habitat Workplan. The resulting data sets from these bird surveys are kept in USFWS files.

Auditor's Evaluation of Response: The response adequately addresses NIR6.

Opportunities for Improvement: None

4.4.4. B4 – Native Species Use

In most cases, species that are native to a region will have a higher biodiversity benefit than non-native species. In other cases, non-native species can be more effective than native species for rehabilitating degraded areas or providing fast growing biomass, timber, fruits and other beneficial products. For instance a project may need to use non-native species on severely degraded land to achieve ecological restoration before native species can be reintroduced.

Indicator B4.1. Show that the project will only use species that are native to the region or justify that any non-native species used by the project are superior to native species for generating concrete biodiversity benefits (e.g., for rehabilitating degraded areas unlikely to support natives, or for producing fuel wood that reduces logging pressure on intact ecosystems).

Findings: As noted previously, the Restoration Initiative will only use native species in the planting of bottomland hardwood forest in the Go Zero tracts.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

4.4.5. B5 – Water & Soil Resource Enhancement

Climate change and other factors may stress and degrade water and soil resources at the project site over time. Projects should enhance the quality and quantity of water and soil resources.

Indicator B5.1. Identify project activities that are likely to enhance water and soil resources.

Findings: Soil and water resources will both be enhanced through the restoration of bottomland hardwood forest. The PDD lists the main key enhancements to these resources. Mainly, forest development will minimize erosion and sediment loading in the Marais des Cygnes watershed as well as improve water quality. These benefits are anticipated to lead to improved stream biodiversity.

Additionally, the decreased use of chemicals and heavy farm equipment during previous agriculture operations will promote stream health and the restoration of natural hydrologic conditions.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

Indicator B5.2. Credibly demonstrate that these activities are likely to improve water and soil resources compared to the baseline, using justifiable assumptions about cause and effect, and relevant studies.

Findings: Based on the site visit and review of the PDD, we conclude that the Go Zero tracts will improve soil and water quality over the life of the project and as the bottomland hardwood forest matures.

Conformance: Yes No N/A

Non-Conformity Reports: None

New Information Requests: None

Opportunities for Improvement: None

5.0 CCB VALIDATION CONCLUSION

Following completion of SCS's duly-accredited validation process, it is our opinion that The Conservation Fund's *Marais des Cygnes National Wildlife Refuge Restoration Initiative* conforms to the CCBA Climate, Community and Biodiversity Project Design Standards (First Edition) at the Gold Level (see Appendix A).

General Section

Conformation

| | | | | | |
|-----|---|-----|-------------------------------------|----|--------------------------|
| G1. | Original Conditions at Project Site (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| G2. | Baseline Projections (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| G3. | Project Design and Goals (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| G4. | Management Capacity (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| G5. | Land Tenure (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| G6. | Legal Status (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| G7. | Adaptive Management for Sustainability (Optional; 1 pt) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| G8. | Knowledge Dissemination (Optional; 1 pt) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |

Climate Section

| | | | | | |
|------|---|-----|-------------------------------------|----|--------------------------|
| CL1. | Net Positive Climate Impacts (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| CL2. | Offsite Climate Impacts (“Leakage”) (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| CL3. | Climate Impact Monitoring (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| CL4. | Adapting to Climate Change & Climate Variability (Optional; 1 pt) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| CL5. | Carbon Benefits Withheld from Markets (Optional; 1 pt) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |

Community Section

| | | | | | |
|------|--|-----|-------------------------------------|----|--------------------------|
| CM1. | Net Positive Community Impacts (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| CM2. | Offsite Community Impacts (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| CM3. | Community Impact Monitoring (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| CM4. | Capacity Building (Optional; 1 pt) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| CM5. | Best Practices in Community Involvement (Optional; 1 pt) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |

Biodiversity Section

| | | | | | |
|-----|--|-----|-------------------------------------|----|--------------------------|
| B1. | Net Positive Biodiversity Impacts (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| B2. | Offsite Biodiversity Monitoring (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| B3. | Biodiversity Impact Monitoring (Required) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| B4. | Native Species Use (Optional; 1 pt) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| B5. | Water & Soil Resource Enhancement (Optional; 1 pt) | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |

CCBA Validation Level Attained:

| | | |
|-----------------|---|-------------------------------------|
| APPROVED | (all requirements met) | <input type="checkbox"/> |
| SILVER | (all requirements met plus one point minimum from at least 3 different sections) | <input type="checkbox"/> |
| GOLD | (all requirements met plus six points minimum, at least one point from four different sections) | <input checked="" type="checkbox"/> |

Comment 1:

From: Sue_Oliveira@fws.gov [mailto:Sue_Oliveira@fws.gov]

Sent: Saturday, May 09, 2009 6:46 PM

To: info@climate-standards.org

Subject: CCB Audit Comments

The Marais des Cygnes National Wildlife Refuge carbon project, completed by The Conservation Fund's GoZero program, is an outstanding example of a project that provides benefits far beyond the carbon sequestration that is the primary goal of the program. The project has restored more than 770 acres of bottomland hardwood forest in an area that had been deforested and utilized for row crop production for many years. In addition to the carbon sequestration benefits and positive impacts on global climate change produced by planting trees, the property will be managed to provide habitat for a variety of wildlife species. Restoration of native forest will help improve water quality through improved filtration, reduced runoff and the elimination of pesticide and fertilizer use. The restored forest will also provide enhanced public recreational opportunities such as hunting, fishing, photography and wildlife observation.

Environmental education and interpretation activities can help educate current and future generations about the many benefits of bottomland hardwood forests, as well as the impacts of climate change. While the carbon sequestration benefits that this project will generate over time are substantial, the ancillary benefits that will accrue to the public are no less significant.

Thank you for the opportunity to comment.

Comment 2:

From: Fisher, Chris [mailto:chris.fisher@gaiam.com]

Sent: Monday, May 11, 2009 12:52 PM

To: 'info@climate-standards.org'

Subject: CCB Audit Comments

Hello,

Gaiam Inc. has worked with The Conservation Fund for years now and I wanted to add this to the public comments for the Marais des Cygnes National Wildlife Refuge submittal;

* Gaiam and its customers helped to plant 10,112 trees at Marais des Cygnes NWR, restoring 33.48 acres that will trap and estimated 11,240.50 short tons of CO2 over the life of the forest.

* Since the program began, Gaiam and its customers have helped to plant 115,869 trees across 321 acres that will trap an estimated 93,000 short tons of CO2 over the life of the forest.

If you have any questions, please let me know, thanks!

Christopher Fisher

Director

Customer Experience

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Scientific Certification Systems

June 2009