REQUEST FOR PROPOSALS (RFP)

Whooping Crane Monitoring

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
Office of the Executive Director
4111 4th Avenue, Suite 6
Kearney, Nebraska 68845

May 27, 2011

Contents

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
REQUEST FOR PROPOSALS (RFP)

SUBJECT:	Spring and Fall Whooping Crane Monitoring
REQUEST DATE:	May 31, 2011
PRE-PROPOSAL MEETING:	June 16, 2011
CLOSING DATE:	June 30, 2011
POINT OF CONTACT:	Chad Smith
	Headwaters Corporation
	(402) 261-3185
	smithc@headwaterscorp.com

I. OVERVIEW

The Platte River Recovery Implementation Program ("Program" or "PRRIP") initiated on January 1, 2007 between Nebraska, Wyoming, Colorado, and the Department of the Interior to address threatened and endangered species issues in the central and lower Platte River basin. The species considered in the Program, referred to as "target species", are the whooping crane, piping plover, interior least tern, and pallid sturgeon.

A Governance Committee (GC) reviews, directs, and provides oversight for Program activities. The GC is comprised of one representative from each of the three states, three water user representatives, two representatives from environmental groups, and two members representing federal agencies. The GC has named Dr. Jerry Kenny to serve as the Program Executive Director (ED). Dr. Kenny established Headwaters Corporation as the staffing mechanism for the Program. Program staff is located in Nebraska and Colorado and are responsible for assisting in carrying out Program-related activities.

In 2007, the Program began its 13-year First Increment and implementation of an Adaptive Management Plan ("AMP") to learn more about the physical processes of the central Platte River and the response of the four target species to management actions. The AMP includes several protocols for monitoring target species, habitat, and physical processes to better understand interrelationships and provide data for evaluating species response to management actions. This RFP related to the whooping crane monitoring protocol for the Program.

Information from this protocol will be used to help evaluate the biological response of whooping cranes and habitat to the land and water management activities of the Program. Several critical scientific and technical uncertainties about Program target species, physical processes, and the response of the target species to management actions will be the focus of the application of rigorous adaptive management in the First Increment through implementation of the Program's AMP. These uncertainties are captured in statements of broad hypotheses on pages 14-17 of the AMP and, as a means of better linking science learning to Program decision-making, those uncertainties comprise a set of "Big Questions" that provide a template for linking specific hypotheses and performance measures to management objectives and overall Program goals (see PRRIP 2007-2010 Synthesis Report, 2011).

Three "Big Questions" relate directly to whooping cranes:

- **Big Question #1 –** Do whooping cranes use Program habitat complexes and/or habitat meeting Program minimum criteria in proportions greater than their availability?
- **Big Question #4 –** What is the relationship between availability of whooping crane roosting habitat meeting Program minimum criteria and whooping crane use?

- **Big Question #5 –** How does whooping crane use of the central Platte River relate to overall population recovery objectives?

These uncertainties led to the development of a specific management objective for the whooping crane and indicators related to that objective, as noted in the AMP:

Management Objective	*Contribute to the survival of whooping cranes during migration*
Indicators	* Increase area of suitable roosting and foraging habitat * Increase crane use days

To assess progress toward this objective and learn about the major whooping crane uncertainties, several finer-scale priority hypotheses were developed by Program participants. In 2010, those hypotheses were sequenced to develop a smaller set of Tier 1 hypotheses to receive focused attention in the First Increment. For whooping cranes, those Tier 1 hypotheses are:

- **WC-1:** Whooping crane use will increase as a function of Program land and water management activities.
- **WC-3:** Whooping crane use is related to habitat suitability. Riverine habitat suitability for whooping cranes is a function of channel characteristics such as water depth, channel width, and unobstructed-view widths.

This monitoring protocol is intended to provide standard implementation guidance for collecting whooping crane (# of use days) and habitat (i.e., channel characteristics at roost sites and landscape level attributes at diurnal use sites) data necessary to test the Tier 1 whooping crane hypotheses, assess progress toward meeting the whooping crane management objective, and evaluate learning related to the whooping crane Big Questions. **As such, this is a validation monitoring protocol.** Use of the phrase "suitable channel habitat" relates to the Program's established minimum habitat criteria (see ILT-PP-WC Minimum Habitat Criteria, 2008). This protocol will be used by the Program to gather information on whooping crane habitat use and to provide an index of whooping crane abundance in the study area. It is understood that regardless of survey method not all whooping cranes are certain of being detected during migration and therefore full implementation of this or any other protocol will not represent complete whooping crane use of the central Platte River valley.

The GC submits this Request for Proposals (RFP) to solicit proposals from Consultants to implement the Program's whooping crane monitoring protocol in the central Platte River (Nebraska) valley during the annual spring and fall migrations. Monitoring results will serve as a tool for the GC to assist in determining whooping crane habitat use and provide an index of abundance in the study area. The term Consultant shall be used throughout this document to describe both the RFP Respondent providing the proposal and the Consultant (the successful Respondent) who would be performing the work upon award of the project.

This RFP describes a multi-year program of work encompassing annual whooping crane monitoring activities twice a year (during the spring and fall migration periods) from August 2011 through June 2015. Annual budgets for implementing the protocol will be developed in conjunction with the selected Consultant. A four-year program of monitoring and reporting will begin in 2011, with potential extension beyond 2015. Under the final contract, annual written Notice to Proceed from the Program Executive Director's Office (EDO) will be required before work begins. All work will be contingent on availability of Program funding.

II. PROJECT DESCRIPTION & SCOPE OF WORK

The Consultant will rigorously implement the Program's Whooping Crane Monitoring Protocol (see Attachment A) for the purposes of collecting data on whooping crane occurrence and use in the central Platte River valley during the fall 2011, spring and fall 2012-2014, and spring 2015 migration seasons. The protocol provides extensive detail about the study area, timing, and survey/data collection methods. Consultants responding to this RFP should provide information detailing their ability to implement all aspects of the protocol in accordance with the established spring and fall migration survey periods and reporting dates.

Monitoring Tasks

In particular, potential Consultants should be aware of the following details related to implementation of the protocol:

1) Detect whooping crane stopovers in the study area (Appendix A) – systematic aerial surveys of the study area will be conducted and the data will be used to comparatively evaluate changes in the frequency and distribution of stopovers within the study area over time. The Whooping Crane Trust's (Trust) telemetry project locations and opportunistic locates will also be used to detect whooping crane stopovers in the study area; however, telemetry data will only be used by the Consultant to relocate whooping cranes using the study area that were already observed by the monitoring crew. Additional whooping crane stopover locations identified via telemetry will be reported to the Consultant after the whooping crane group leaves the study area so that habitat data can be collected at these sites as well.

2) Identify the locations of use and crane group movements in the study area – crane group movements will be documented in order to identify use-sites and to describe the patterns of movement of each crane group.

3) Qualitatively document crane group activities at use-sites – observers will qualitatively document activities displayed by the crane groups. Observed activities may help identify factors that influence how cranes use the area and aid in the interpretation of crane behavior.

4) Document the physical and/or biological characteristics of use-sites – habitat parameters will be measured and described at all whooping crane stopover sites documented (via monitoring, telemetry, or opportunistic locates) in the central Platte River valley and will be used in comparative habitat selection analyses.

5) Landscape Data Collection – Basic landscape source data of whooping crane use-sites in the study area will be collected through this protocol. This information will be used in future use/availability analyses using aerial photography, Geographic Information System (GIS) information, and appropriate landscape data collected from other protocols. Currently the Program has available a complete land use/land cover GIS analyses of 1998 (baseline) and 2005 color infrared photography. Continued regular collection of landscape data sources of the study area through other protocols such as aerial photographs, LiDAR, geomorphology monitoring, GIS data, and annual habitat suitability analyses will enable future habitat use/availability analyses.

Data Analysis

The successful Consultant will be expected to provide an analysis of collected whooping crane and associated habitat data in accordance with data needs as directed by the EDO. The Program is currently undergoing a process of specifying the data needed, preferred analysis methods, and the preferred form of

analysis presentations (graphs, charts, text, etc.). This information will be communicated to the successful Consultant prior to the start of the fall 2011 migration season and the Consultant will be expected to stay in close communication with the EDO during the reporting process for each migration season to respond to analysis needs and changes. **NOTE: Proposals submitted in response to the RFP should provide a clear indication of the ability of the Consultant to provide statistical data analysis and presentation and the experience and qualifications of team members in data analysis procedures.**

Reporting

The successful Consultant will generate a draft (Microsoft Word) and final (Microsoft Word and PDF) report at the completion of each migration season that includes methods, results, data analysis (as requested by the Program), photographs of field work, and other associated data. Reports will be delivered electronically to the EDO for review and comment by the EDO and the Program's Technical Advisory Committee. The successful Consultant will also be required to prepare for, attend, develop an Executive Summary for, and deliver a presentation at the Program's annual Adaptive Management Plan Reporting Session generally held in Denver, CO in early March of each year.

III. PROJECT BUDGET

An estimated project budget should be submitted in the proposal, on a not-to-exceed time and expense basis for the work to be completed. A final budget will be established as part of the Project Scoping and Kickoff and will depend upon the budget estimate provided in the proposal for the selected Consultant.

Proposals will be evaluated on criteria described in **Section V** below, including understanding of the objectives of the project, qualifications of the team members, and clarity/content of project schedule, scope, and budget. **The work will not be awarded based solely on a lowest cost basis.**

IV. FIELD AND OFFICE EQUIPMENT

Potential Consultants will own or acquire all field and office equipment and software required to implement the Whooping Crane Monitoring Protocol.

V. CONTRACT TERMS

The selected Consultant will be retained by: Nebraska Community Foundation
PO Box 83107
Lincoln, NE 68501

Proposal should indicate whether the Consultant agrees to the contract terms, as outlined in the attached Program's Consultant Contract (Attachment B), or provides a clear description of any exceptions to the terms and conditions.

The initial term of the contract will be for a period beginning in August 2011 and terminating in June 2016 with an option to renew at the sole discretion of the GC. Contracted services will be performed on a time and material not to exceed basis. Under the final contract, written Notice to Proceed from the Executive Director will be required before works begins. All work will be contingent on availability of Program funding.

VI. SUBMISSION REQUIREMENTS

All interested parties having experience providing the services listed in this RFP are requested to submit a proposal.

Instructions for Submitting Proposals

One electronic copy of your proposal must be submitted in PDF format to Chad Smith at *smithc@headwaterscorp.com* *no later than 12:00 p.m. (noon) Central time on Thursday, June 30, 2011.* Maximum allowable proposal PDF size is 8MB, and proposals are to be limited to a total of 50 pages or less. A proposal is late if received any time after 12:00 p.m. Central time and will not be eligible for consideration.

Questions regarding the information contained in this RFP should be submitted to Chad Smith at *smithc@headwaterscorp.com*. A list of compiled Consultant questions and responses will be maintained on the Program web site (*www.PlatteRiverProgram.org*) in the same location as this RFP solicitation.

RFP Schedule

The EDO expects to complete the selection process and award the work by approximately July 31, 2011. The following table represents the RFP schedule:

Description	Date	Time (Central)
Issue RFP	May 26, 2011	NA
Pre-proposal meeting	June 16, 2011	1:00 PM
Last day for respondents to submit questions regarding the RFP	June 23, 2011	12:00 PM
Proposals due from respondents	June 30, 2011	12:00 PM
Evaluation of proposals	June 30, 2011 thru July 22, 2011	
Award of Work	On or before July 31, 2011	
Start of Work	Approximately August 1, 2011	
Completion of Work	Approximately June 30, 2016	

Pre-Proposal Meeting

A non-mandatory pre-proposal meeting of interested parties will be held on June 16, 2011 from 1:00 to 2:00 p.m. Central Time via conference call for the purpose of familiarizing the respondents with the work scope and requirements included herein before submitting a response to this RFP. Please email Chad Smith (smithc@headwaterscorp.com) for the conference call dial-in information along with a list of people from your party expected to join in the pre-proposal conference call by 12:00 p.m. Central time on June 13, 2011.

The meeting will include a brief overview by the EDO regarding the objectives of the project, the scope of services, and the timeline. It is the Consultant's responsibility, while at the pre-proposal meeting/conference call, to ask questions necessary to understand the RFP so the respondent can submit a proposal that is complete and in accordance with RFP requirements. It is highly recommended that all prospective Consultants participate in the pre-proposal meeting/conference call as there shall be no minutes distributed by the EDO regarding the meeting.

Proposal Content

Proposals should respond to the following general topics:

1) **Executive summary** that presents a brief firm overview that condenses and highlights the contents of the proposal in such a way as to provide a broad understanding of the Consultant's qualifications and proposal.

2) **Project understanding** that demonstrates the Consultant understands project goals and objectives and identifies issues critical to project success.

3) **Project approach** that documents how the Consultant would organize and execute the scope of work detailed in this RFP and provides project team organization, resumes, and responsibilities and specifies which team members will work on each specific task.

4) **Qualifications and project experience** relevant to this project including the involvement/role of the proposed team in those projects. Be clear which team members will work on specific tasks outlined in the Project Approach and focus on those team members' qualifications specific to assigned task.

5) **Schedule** for completing the tasks identified in the project approach. Include potential constraints or challenges based on the tasks described above.

6) **Compensation** for services to complete the project – see Section III above for additional details. Assumptions used must be clearly stated and a total estimated cost must be included. Consultant must specify the estimated number of labor hours for each team member, billable rate and estimated direct expenses (e.g., travel), and total project cost to complete the each task/subtask detailed herein and Consultant's other recommended or optional tasks.

7) **Conflict of interest statement** addressing whether or not any potential conflict of interest exists between this project and other past or on-going projects, including any projects currently being conducted for the Program.

8) **Description of insurance** shall be provided with the proposal. Proof of insurance will be required before a contract is issued. Minimum insurance requirements are described in the attached Program's Consultant Contract (Attachment B).

9) **Acceptance of the terms and conditions** as outlined in the attached Program's Consultant Contract, or clear description of any exceptions to the terms and conditions.

Criteria for Evaluating Proposals

The GC will appoint a Proposal Selection Panel that will evaluate all proposals and select a Consultant based on the following principal considerations:

1. Understanding of the overall objectives of the project and approach to meeting those objectives and addressing critical project tasks and issues.

2. Qualifications and the relevant experience of the proposed project team members.

3. Clarity and content of the project schedule, scope, and budget.

Award Notice

After completing the evaluation of all proposals and, if deemed necessary, interviews, the Proposal Selection Panel will select a Consultant. That firm will negotiate with the EDO to establish a fair and equitable contract. If an agreement cannot be reached, a second firm will be invited to negotiate and so on. If the Program is unable to negotiate a mutually satisfactory contract with a Consultant, it may, at its sole discretion, cancel and reissue a new RFP.

Program Perspective

The Governance Committee of the Program has the sole discretion and reserves the right to reject any and all proposals received in response to this RFP and to cancel this solicitation if it is deemed in the best interest of the Program to do so. Issuance of this RFP in no way constitutes a commitment by the Program to award a contract, or to pay Consultant's costs incurred either in the preparation of a response to his RFP or during negotiations, if any, of a contract for services. The Program also reserves the right to make amendments to this RFP by giving written notice to Consultants, and to request clarification, supplements, and additions to the information provided by a Consultant.

By submitting a proposal in response to this solicitation, Consultants understand and agree that any selection of a Consultant or any decision to reject any or all responses or to establish no contracts shall be at the sole discretion of the Program. To the extent authorized by law, the Consultant shall indemnify, save, and hold harmless the Nebraska Community Foundation, the states of Colorado, Wyoming, and Nebraska, the Department of the Interior, members of the Governance Committee, and the Executive Director's Office, their employees, employers, and agents, against any and all claims, damages, liability, and court awards including costs, expenses, and attorney fees incurred as a result of any act or omission by the Consultant or its employees, agents, sub-Consultants, or assignees pursuant to the terms of this project. Additionally, by submitting a proposal, Consultants agree that they waive any claim for the recovery of any costs or expenses incurred in preparing and submitting a proposal.

VII. AVAILABLE INFORMATION

The following pertinent Program-related documents can be accessed from the Program's website (*www.PlatteRiverProgram.org*):

- *Platte River Recovery Implementation Program: Final Program Document*. October 24, 2006.
- *Platte River Recovery Implementation Program, Attachment 3: Adaptive Management Plan*. October 24, 2006.

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
Whooping Crane Monitoring Protocol – Migrational Habitat Use in the Central Platte River Valley

I. INTRODUCTION

In 2007, the Platte River Recovery Implementation Program ("Program" or "PRRIP") began its 13-year First Increment and implementation of an Adaptive Management Plan ("AMP") to learn more about the physical processes of the central Platte River and the response of four target species to management actions: interior least tern (*Sterna antillarum*), piping plover (*Charadrius melodus*), whooping crane (*Grus americana*), and pallid sturgeon (*Scaphirhynchus albus*). The AMP includes several protocols for monitoring target species, habitat, and physical processes to better understand interrelationships and provide data for evaluating species response to management actions. This document serves as the whooping crane monitoring protocol for the Program.

Information from this protocol will be used to help evaluate the biological response of whooping cranes and habitat to the land and water management activities of the Program. Several critical scientific and technical uncertainties about Program target species, physical processes, and the response of the target species to management actions will be the focus of the application of rigorous adaptive management in the First Increment through implementation of the Program's AMP. These uncertainties are captured in statements of broad hypotheses on pages 14-17 of the AMP and, as a means of better linking science learning to Program decision-making, those uncertainties comprise a set of "Big Questions" that provide a template for linking specific hypotheses and performance measures to management objectives and overall Program goals (see PRRIP 2007-2010 Synthesis Report, 2011) .

Three "Big Questions" relate directly to whooping cranes:

- **Big Question #1 –** Do whooping cranes use Program habitat complexes and/or habitat meeting Program minimum criteria in proportions greater than their availability?
- **Big Question #4 –** What is the relationship between availability of whooping crane roosting habitat meeting Program minimum criteria and whooping crane use?
- **Big Question #5 –** How does ~~tern, plover, and~~ whooping crane use of the central Platte River relate to overall population recovery objectives?

These uncertainties led to the development of a specific management objective for the whooping crane and indicators related to that objective, as noted in the AMP:

Management Objective	*Contribute to the survival of whooping cranes during migration*
Indicators	* Increase area of suitable roosting and foraging habitat * Increase crane use days * Increase proportion of whooping crane population use

To assess progress toward this objective and learn about the major whooping crane uncertainties, several finer-scale priority hypotheses were developed by Program participants. In 2010, those hypotheses were sequenced to develop a smaller set of Tier 1 hypotheses to receive focused attention in the First Increment. For whooping cranes, those Tier 1 hypotheses are:

- **WC-1:** Whooping crane use will increase as a function of Program land and water management activities.
- **WC-3:** Whooping crane use is related to habitat suitability. Riverine habitat suitability for whooping cranes is a function of channel characteristics such as water depth, channel width, and unobstructed-view widths.

This monitoring protocol is intended to provide standard implementation guidance for collecting whooping crane (use) and habitat (i.e., channel characteristics at roost sites and landscape level attributes at diurnal use sites) data necessary to test the Tier 1 whooping crane hypotheses, assess progress toward meeting the whooping crane management objective, and evaluate learning related to the whooping crane Big Questions. Use of the phrase "suitable channel habitat" relates to the Program's established minimum habitat criteria (see ILT-PP-WC Minimum Habitat Criteria, 2008). This protocol will be used by the Program to gather information on whooping crane habitat use and to provide an index of whooping crane abundance in the study area. It is understood that regardless of survey method not all whooping cranes are certain of being detected during migration and therefore full implementation of this or any other protocol will not represent complete whooping crane use of the central Platte River valley.

II. PURPOSE

The purpose of this monitoring protocol is to describe the conceptual design, study methods, and procedures that will be used annually to gather repeatable information on whooping crane stopovers in the central Platte River valley, Nebraska. The protocol outlines information the Program's Whooping Crane Monitoring Consultant (Consultant) will collect in the field, as well as from FWS and state agencies, and describes the procedures to be used for these specific objectives:

1) Detect whooping crane stopovers in the study area (Appendix A) – systematic aerial surveys of the study area will be conducted and the data will be used to comparatively evaluate changes in the frequency and distribution of stopovers within the study area over time. The Whooping Crane Trust's (Trust) telemetry project locations and opportunistic locates will also be used to detect whooping crane stopovers in the study area; however, telemetry data will only be used by the Consultant to relocate whooping cranes using the study area that were already observed by the monitoring crew. Additional whooping crane stopover locations identified via telemetry will be reported to the Consultant after the whooping crane group leaves the study area so that habitat data can be collected at these sites as well.

2) Identify the locations of use and crane group movements in the study area – crane group movements will be documented in order to identify use-sites and to describe the patterns of movement of each crane group.

3) Qualitatively document crane group activities at use-sites – observers will qualitatively document activities displayed by the crane groups. Observed activities may help identify factors that influence how cranes use the area and aid in the interpretation of crane behavior.

4) Document the physical and/or biological characteristics of use-sites – habitat parameters will be measured and described at all whooping crane stopover sites documented (via monitoring, telemetry, or opportunistic locates) in the central Platte River valley and will be used in comparative habitat selection analyses.

5) Landscape Data Collection – Basic landscape source data of whooping crane use-sites in the study area will be collected through this protocol. This information will be used in future use/availability analyses using aerial photography, Geographic Information System (GIS) information, and appropriate landscape data collected from other protocols. Currently the Program has available a complete land use/land cover GIS analyses of 1998 (baseline) and 2005 color infrared photography. Continued regular collection of landscape data sources of the study area through other protocols such as aerial photographs, LiDAR, geomorphology monitoring, GIS data, and annual habitat suitability analyses will enable future habitat use/availability analyses.

III. DESIGN CONSIDERATIONS AND SPECIFICATIONS

III.A. Area of Interest

The area of interest for monitoring whooping crane migrational habitat use consists of an area 3.5-miles either side of the Platte River beginning at the junction of U.S. Highway 283 and Interstate 80 near Lexington, Nebraska and extending eastward to Chapman, Nebraska. When side channels of the Platte River extend beyond the 3.5-mile area, a 2-mile area is included around these channels (see attached map). If crane groups being monitored move outside this study area the field crews will make a professional judgment on whether or not the cranes are migrating from the Platte River area. If the crane group is judged to be migrating from the area, ground crews will stop observations. If the crane group is judged to be just temporarily using habitat outside the primary study area the ground crew will continue to make observations.

III.B. Project Design

This protocol collects information on whooping cranes using the central Platte River, not necessarily on the entire whooping crane population. This may bias the sample for making inference to the entire whooping crane population. In addition, the results from this protocol may not be representative of the population, or subgroup of the population using the central Platte, because of the use of multiple observations per crane group and/or the lack of use by unique crane groups in the analysis (i.e., pseudo-replication). Options for addressing pseudo-replication are discussed in Section IV.D.

III.B.1. Detecting/Locating Whooping Crane Stopovers

Whooping crane stopovers will be documented using systematic surveys, telemetry locations, and opportunistic sighting reports. Crane groups located via telemetry or detected with systematic surveys will have known probabilities of inclusion in the sample while crane groups detected opportunistically will compromise a non-probability based sample. Since systematic samples and telemetry cover the study area from east to west with equal effort and from north to south with known frequency, biases in sample effort can be accounted for. Opportunistic sightings will contain biases associated with unequal sampling effort that cannot be accounted for and therefore may not represent actual crane use of the study area.

The relative efficiency of sighting whooping crane groups using systematic aerial surveys is not known, but will become known through protocol implementation over the years (e.g., use of decoys and known birds in the area, etc). Telemetry data, public reports, and reports from other survey efforts in the valley (e.g., Nebraska Game and Parks Commission (NGPC), Trust, and FWS surveys) will also be used to document occurrences of whooping crane stopovers in the study area. These sighting reports increase the opportunity to gather crane movement and habitat use information. Data on movement and habitat use for birds detected through the systematic aerial survey will be analyzed separately and in conjunction with all other observations of crane movement and habitat use in analyses of species-habitat relationships.

Aerial Survey

Aerial surveys will be used to detect whooping crane stopovers in the study area. Systematic surveys are necessary to develop information on the spatial and temporal distribution of crane stopovers in the Platte River for comparative evaluations. The design of these systematic surveys is intended to provide a known chance for observing crane use throughout the study area. Daily flights will be conducted in early morning during the period when whooping cranes are most likely to be in route between the wintering and breeding grounds. Flights will take place over the main river channel (river transects) and upland regions of the study area (return transects; Figure 1). The “main river channel” is defined as the widest channel when all channels have flowing water. It is recognized that this protocol over-samples the river (river transects are flown daily) compared to return transects that include upland areas and the river (seven return transects are flown in a rotating order). River transects systematically survey the main channel east to west. Return transects systematically sample the entire study area north to south.

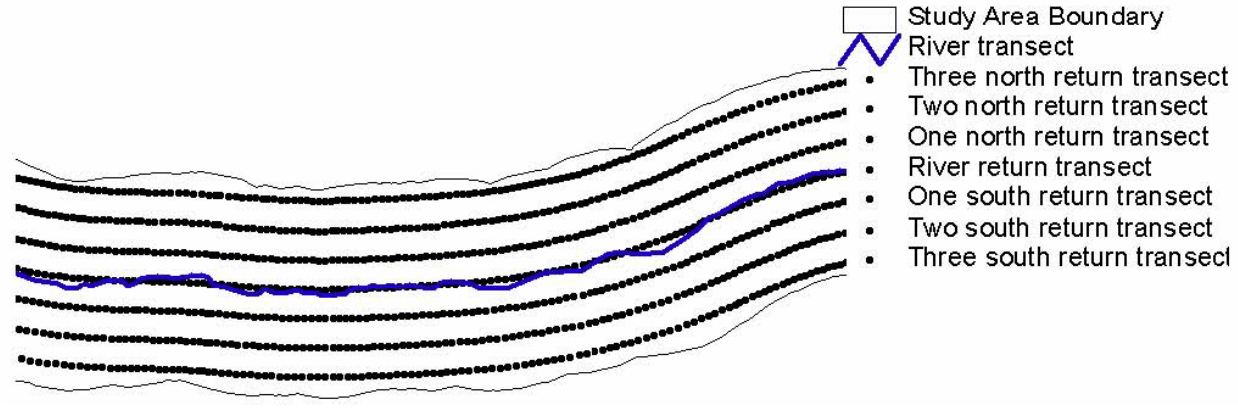


Figure 1. River flight transects and 7 return flight transects flown during the aerial surveys.

Telemetry Locations

Observations of whooping crane groups in the study area may be documented by the Whooping Crane Telemetry Tracking Project coordinator which will provide additional information on whooping crane stopover occurrences. Similar to aerial surveys, detecting whooping crane use sites on the Platte River via telemetry will have a known probability of inclusion in the sample regardless of location in the study area.

Opportunistic Locates

Birdwatchers, outdoor enthusiasts, farmers, and other survey efforts might make initial observations of whooping crane groups in the study area. Sighting reports from these and other groups (labeled "opportunistic locates") may provide additional information on crane stopover occurrences, but the conclusions are only applicable to the areas searched by the people that would report a sighting. An analysis of habitat use by cranes sighted opportunistically is outlined in this protocol, however, locations of whooping cranes obtained through this method are biased and quantifying the bias due to the location and amount of effort expended to obtain these observations is not planned.

Survey Detection Rates

Whooping crane decoys will be used to estimate the accuracy of whooping crane detection from aerial surveys. Crane decoys will be randomly placed on an active Platte River channel within the study area on private as well as Program, governmental and non-governmental organizations' lands in which Program personnel (EDO staff, partners, etc) have permission to access and the detection by the aerial survey crew will be recorded. Program personnel will place decoys as close to the randomly generated riverine location as possible (i.e., nearest unvegetated sandbar or channel <8–10 inches deep) and will record the UTM location of the decoy. Aerial survey crews will not know the location of decoys while conducting the survey and detection rates will be calculated as the percentage of decoys observed.

III.B.2 Movement Tracking

After a crane group has been located in the study area, either through aerial surveys or opportunistically, a ground crew will be notified to confirm the sighting and begin immediate monitoring to document habitat use. Air and ground crews will strictly adhere to guidelines regarding minimization or elimination of crane disturbance, to be provided by the FWS, while conducting the monitoring. The ground crew(s) will locate the cranes with directions from the sighting party and will document crane movements, document crane use-site activities, and describe the physical and biological attributes of use-sites. Cranes will be observed at a distance from vehicles to document movements. Monitoring crews will be trained to be aware of crane sensitivity to human presence, to identify behavioral responses to disturbance, and to view cranes using methods that reduce the likelihood of disturbance. Each crane group will be tracked continuously until they are observed leaving the study site or are lost by the tracking crew. If the ground crew observes a crane group fly out of view in the direction of an area with limited access and/or uneven terrain, another aerial survey over these areas will be conducted

each time a plane and pilot are available unless the observer suspects the crane group migrated out of the area or it is after 4:00PM (CST) and it is believed the crane group went to a roost site for the night. The ground crew will attempt to locate lost crane groups for a minimum of two hours (or until dark). If the crane group is relocated, the ground crew will monitor the crane group as outlined in Section IV.B.2.

Locations of crane groups under observation will be recorded in two categories. Instantaneous points will identify the exact location of the group every 15 minutes. Location points will identify the general location of the group during the observation period. Whenever a crane group moves from the area of one contiguous habitat type to another, ground crews will document the time they first observe the crane group in each new contiguous habitat type and a new *Location ID* will be assigned. In the event that a crane group is observed in the same location from 2 observers (e.g., from the ground and from the air), the same *Location ID* will be recorded by each observer.

III.B.3. Activity Monitoring

While monitoring crane movements, ground crews will collect information on crane activities and attempt to obtain a high quality photograph (from the vehicle) of each crane group at each use site. The field crew will record the activity being conducted by a whooping crane at each of the 15 minute instantaneous points mapped for the movement tracking into one of the following categories: courtship, preening, resting, feeding, alert, agonistic, or other as described. If the crane group is comprised of more than one individual, the observer will select a "focus" crane that will be used to record activity information.

III.B.4. Use-Site Characteristics

Tracking crews will collect information on the physical and biological characteristics of riverine and non-riverine whooping crane use-sites. Characteristics of crane use locations will be described and measured as soon as practical after the crane group leaves the study area. Habitat parameters will be described and measured for the purpose of comparative habitat analyses.

III.C. Timing

Aerial surveys of the study area will be conducted in the spring from March 21 to April 29 and in the fall from October 9 to November 10 (the fifth and ninety-fifth percentile of initial observation dates of whooping cranes in Nebraska, 1975–1999). Opportunistic and telemetry locations will be collected throughout the year. Measurements of habitat characteristics at whooping crane use sights will occur immediately following each observation regardless of how the birds were located (aerial, telemetry, or opportunistic). Crane movements will be monitored until the crane group leaves the study area or is no longer observable. Measurements of roost site habitat characteristics will be taken after the group leaves the study area.

IV. METHODS

IV.A. Definitions

Crane activity – Qualitative definitions:

- Feeding – any behavior suggesting the bird is in the act of feeding, such as a crane flipping over objects and/or probing for food or slow locomotion interrupted by these activities
- Loafing – crane standing still in one place
- Preening – crane preening feathers
- Agonistic – defensive or offensive display with other birds. Can be with other whooping cranes, sandhill cranes, etc.
- Courtship – crane performing unison call and/or dancing
- Alert – crane alert and scanning horizon

Crane group – one or more cranes in a migrating unit. The group may consist of an individual crane, a family unit, or small flock. The social make-up of crane groups should be recorded whenever possible.

Sighting – observation of a crane group in the study area.

Confirmed Sighting - Observation made by a State or Federal biologist or officer or by other known qualified observer (trained ornithologist or birder with experience identifying of whooping cranes). A photograph may also be used to confirm sightings. Aerial survey crew with previous aerial whooping crane observations may confirm a crane group during the survey.

Probable Sighting - No confirmation made by State or Federal biologist or officer or by other known qualified observer, yet details of the sighting seem to identify the birds as whooping cranes. To be classified as a probable sighting each of the following factors must be met: (1) location of sighting is within normal migration corridor and is an appropriate site for whooping cranes; (2) date of sighting is within period of migration; (3) accurate physical description; (4) number of birds is reasonable; (5) behavior of the birds does not eliminate whooping cranes; and (6) good probability that the observer would provide a reliable report.

Unconfirmed Sighting - Sighting details meet some, but not all six factors listed for a probable sighting.

Stopover – Use of the study area during spring or fall migration.

Use-site – A location of a crane group in the study area. A single crane group may have (and likely will have) more than one use-site per day.

Obstruction – Object (e.g., vegetation, bank, etc.) >1.5m above water line that encompass more than 30 degrees of the horizontal field of view.

Unobstructed width – The unobstructed width is defined as the area between obstructions and includes all island/sandbars, vegetation, and banks. A line oriented perpendicular to the general flow within the channel will be drawn across the channel and through the use-site.

Water/Wetted Width – The water/wetted width is defined as the area covered by water between obstructions greater than 1.5m tall. This measurement does not include sandbars and islands above the water surface but less than 1.5m. A line will be drawn across the channel, through the use-site and will be oriented perpendicular to the general flow within the channel.

Active Channel Width – Channel width is defined as the distance along a line perpendicular to the channel and passing through and/or parallel to the crane observation point that encompasses the total width of wetted-channels (including sandbars).

IV.B. Field Techniques

IV.B.1. Detecting/Locating Whooping Crane Stopovers

Three methods will be used to locate migrating whooping crane stopovers along the central Platte River during spring and fall migration: aerial surveys, telemetry data, and opportunistic locates. The Program's Technical Committee may choose to implement each protocol component as necessary to obtain needed information, for example changing the survey effort based on results of past surveys.

Aerial Survey

Daily aerial surveys, weather permitting, will be conducted along the central Platte River valley between Lexington and Chapman, Nebraska to locate spring and fall migrating whooping crane groups. The aerial surveys will take place from March 21 to April 29 in the spring and October 9 to November 10 in the fall. These dates are based on the fifth and ninety-fifth percentile of initial sighting dates for all recorded sightings of whooping crane groups in Nebraska, 1975 – 1999 (Jane Austin, USGS Northern Prairie Wildlife Research Center, pers. comm.). This protocol intends to collect a sample during possible migration time and does not intend to survey the entire time-period it would be possible for a crane group to migrate through the study area. Therefore, the survey dates will not be extended during times of delayed migration. However, if the survey period extends past the migration time in a given season, the surveys will be stopped using the following rules. For the spring survey, flights will be discontinued 5 days after the last normally migrating whooping cranes have departed Aransas, if no whooping cranes

have been sighted in the central Platte valley for 5 days, and there are no recent (5 days) reports of whooping cranes in the Central Flyway south of the Platte River. For the fall survey, flights will be discontinued if no whooping cranes have been sighted in the central Platte valley for 5 days, and there are no recent (5 days) reports of whooping cranes in the Central Flyway north of the Platte River. The Program Manager or Biologist responsible for managing these surveys will be in contact with Tom Stehn (or other Aransas official) at (361) 286-3533 to obtain information related to bird departure/arrival from Aransas and will determine whether to continue aerial surveys or not.

A Cessna 172 or similar aircraft will fly at a speed of 100 mph, as safety allows. One plane will fly the area between Chapman and the Nebraska Highway 10 (Minden) Bridge (the east leg). The second plane will fly the area between the Minden Bridge and the Lexington Bridge (the west leg). Two observers in addition to the pilot will be in each plane. Surveys will begin between a half-hour before sunrise and sunrise, unless weather during this time period precludes beginning the survey. All attempts should be made to begin the survey a half-hour before sunrise. If the survey cannot begin during this time period due to weather/visibility requirements, the survey start time can be extended up to two hours after sunrise. Surveys may be canceled due to unsafe weather conditions (e.g., rain, snow, fog, high winds) or if there is significant snow cover on the ground that greatly impedes the surveyors chances of locating a whooping crane group.

All aerial surveys will be flown such that the flight direction when flying the river transect will be away from the rising sun. To help address the concern that one end of the river transect will always be flown early and the other late, there will be two start locations for each leg (east side and west side) of the study area. Using the eastern section as an example, on day one the flight will begin at Chapman, fly the river west to Minden, and fly a predetermined return transect (upland) back to Chapman. On day two the flight will begin at the Wood River Bridge, fly the river transect west to Minden, fly a predetermined return transect back to Chapman, and then fly the rest of the river transect from Chapman to Wood River. This pattern will continue through the survey period. The start points for the west leg will be the Minden Bridge and Odessa Bridge. During the river transect, observers will be situated such that the main channel(s) can be clearly viewed by both observers looking out the passenger side of the plane. This will necessitate that the plane fly just south of the main channel.

There are seven return transects: one, two or three miles either north or south of the centerline of the river and one directly down the centerline of the river (Figure 1). On the return transect, observers will look out different sides of the plane so that they can survey a half-mile north of the transect as well as a half-mile south of the transect. The return transect surveyed each day will be set based on a predetermined, systematically rotating schedule. This design will provide a systematic aerial survey to locate whooping crane groups in areas outside of the channel as well as within the channel. Again, it is recognized that this sampling scheme over-samples the river compared to those areas surveyed with the return transects.

All transects will be flown at 750’ altitude unless FAA regulation dictate a higher altitude (e.g., a minimum of 1000’ altitude when flying over towns and cities). The 750’ altitude for transects is selected for safety reasons. Extremely large numbers of migratory waterfowl are present in the central Platte River valley each spring. The 750’ altitude allows pilots to fly over most of the airborne waterfowl and to decrease the chance of flushing additional waterfowl into the air as the plane approaches. If a suspected whooping crane is seen, the plane is encouraged to circle to an altitude of 500’ (when safety allows) to provide a better viewing opportunity of the suspected whooping crane.

Each plane will have aerial photos, maps, and a global position system (GPS) unit to aid in the documentation of crane locations. When a whooping crane group is located, an air to ground radio will be used to immediately contact ground personnel that are geographically closest to the sighting. UTM coordinates taken either from the plane’s GPS system or hand held unit will be recorded on the data sheet and relayed to the ground crew. The aerial survey crew will photograph the whooping crane group and the general location using a digital camera with an 18 × 105 mm Vibration Reduction (VR) zoom lens or

similar setup approved by the Program. All observations will be recorded on the aerial observation datasheet. If the ground crew has not located the whooping crane group by the time the aerial survey is complete, the plane will return to the crane group's original coordinates and attempt to relocate the group. If the crane group is relocated from the air, the plane will maintain visual contact with the crane group and direct the ground crew to the location. The procedures to be followed by the ground crew once the crane group is located are in Section IV.B.2.

During the aerial flights, a ground crew will be stationed at four points in the study area. When the aerial survey crew radios a possible crane group sighting to the ground crew, the nearest two ground personnel will immediately attempt to locate the group. The ground crew will search for a minimum of two hours in the suspected area (or until dark) in an attempt to locate the sightings of crane groups made by the aerial flight crew. If the ground crew observes a crane group that get up and fly out of view in the direction of an area with limited access and/or uneven terrain, another aerial survey over the area the whooping crane group is suspected to have gone will be conducted each time a plane and pilot are available unless the observer suspects the crane group migrated out of the area or it is after 4:00PM (CST) and it is believed the crane group went to a roost site for the night. If the lost crane group is relocated by the air crew, a ground crew will monitor the crane group as outlined in Section IV.B.2. All effort expended by ground and air crews to locate whooping crane groups will be documented on the datasheets and in the database.

Telemetry Location Data

In the event the Consultant observes a radio-marked whooping crane within the study area and loses sight of it, the Consultant will contact the Program's Technical Point of Contact for the Whooping Crane Telemetry Tracking Project (Walter Wehtje; 308-384-4633) to attempt to determine the location of the radio-marked whooping crane group. If the location of the radio-marked crane is available, air and/or ground crew members will be deployed to the area to search for the whooping crane group. If the crane group is relocated by the air or ground crew, a ground crew will monitor the crane group as outlined in Section IV.B.2 and the datasheet will be noted to document the events that occurred to collect this additional data. The Program's Technical Point of Contact for the Whooping Crane Telemetry Tracking Project will not provide information on radio-marked whooping cranes to the Consultant until they have first been observed and documented by the Consultant's crew. The Consultant will collect habitat characteristic data at all whooping crane use and roost sites documented in the study area via telemetry as described in Section IV.B.5.

Opportunistic Locates

The quality and timing of public sighting reports are highly variable. For example, several reports of a single group may be made by different individuals; sightings may be reported after the group has left the area; geese, white sandhill cranes, pelicans, or egrets may be reported as whooping cranes; etc. In an effort to document the validity of a sighting in a timely manner, a toll free number will be used to relay reports of possible whooping crane sightings to the ground crew. This number should be publicized at local areas frequented by birders, FWS offices, NGPC offices, and possibly in newspapers, to mail carries, bus drivers, etc. The ground monitoring crew will attempt to confirm all crane sighting reports that are in the study area and not yet confirmed. As a prioritization after confirmed sightings, the crew will check "probable" sightings, and then check "unconfirmed" sightings. The ground monitoring crew will monitor all confirmed whooping cranes in the study area as described in Section IV.B.2.

All sightings relayed to the ground crew will be searched for by the ground crew for at least two hours. The ground crew will fill out ground monitoring observation forms for all effort expended to locate confirmed and probable sightings of crane groups in the study area. In addition, the crew will collect use-site characteristics and fill out a use-site characteristics form for all crane sightings classified by the FWS as "confirmed". Information on all confirmed and probable sightings made by the ground crew will be forwarded to the FWS Nebraska field office. Incidental observations reported to the ground crew from outside the study area will be immediately forwarded to the FWS Nebraska field office, Whooping Crane Migration Information Coordinator.

Survey Detection Rates

Whooping crane decoys will be placed at randomly selected locations on an active Platte River channel within the study area and on lands in which Program personnel has permission to access. Aerial crews will not be aware of the presence of the decoys during the flight. When the aerial crew observes a decoy, the location of the sighting should be relayed to the ground crew for confirmation of the decoy location. Decoy observations will be recorded on the aerial observation datasheet.

IV.B.2 Movement Tracking

Each crane group will be continuously tracked from the roost in early morning until arriving back at roost in the evening unless the crane group leaves the study area or the ground crew loses the group. If a crane group is lost, observers will spend a minimum of two hours attempting to relocate the group in the suspected area or until dark. If the ground crew cannot relocate a crane group that is believed to be in the area, an aerial survey will be conducted over the area where the group was observed to be heading or likely would be located each time a plane and pilot are available and it is before 4:00PM (CST). All observations of crane groups by the ground crew will take place at a distance identified in the FWS guidelines and from vehicles.

All observations of cranes will be recorded on Instantaneous and Continuous Use-site Monitoring data sheets. Both instantaneous and continuous movement data will be collected during movement tracking monitoring and recorded on this datasheet. Continuous locations will be recorded and documented with a sketch map on the back of the datasheet or aerial photograph. Ground crews will document the time they first observe crane groups in each new contiguous habitat type and a unique *Location ID* will be assigned to each contiguous habitat type used during the movement tracking monitoring.

Instantaneous locations will be recorded at fifteen-minute intervals. The specific location of the crane group will be marked on the map. A unique *Instant Point ID* will be assigned during the movement tracking monitoring. The following information will also be recorded for the observation period: crane group composition (single bird, family group, or flock); group size; age estimation if possible (adult/juvenile); weather conditions; leg band color if present; and the association of the crane group with other avian species (sandhill cranes, waterfowl, etc).

IV.B.3 Crane Group Numbering

The *Crane Group ID* will consist of the following information: year; "SP" for spring monitoring period or "FA" for fall; sequential number (e.g. 2002FA01, 2002FA02, 2002FA03, etc). Any time a crane group is observed in the study area by the survey crew, a new *Crane Group ID* will be assigned unless the surveyor notes on the data sheets the reasons why they believe this is a previously recorded group (using their professional judgment). In this case, the same *Crane Group ID* will be used. FWS crane group numbers for confirmed sightings will be included in the Program database and linked to the Program crane group numbers. This will assist in future cross-referencing between FWS and Program databases.

Each field or location used by a crane group will get a new *Location ID*. *Location ID* will be a sequential alphabetical letter (A, B, etc.). The variables *Crane Group ID* and *Location ID* and *Time* will be used to connect information about sightings in a field through all the datasheets and associated data tables. Specifically, this identifier will document when the crane group used a location on the ground. For example, if a crane group is observed in the Fall 2002 survey from the air and relayed to the ground crew, the first location observed will be assigned *Location ID* A (*Crane Group ID*=2002FA01) and the *Time* will be recorded. In the event that a crane group is observed by two people (e.g. from air and from the ground) in the same location and at the same time, the two observations should have the same *Crane Group ID* (*Crane Group ID*=2002FA01), the same *Location ID* (A), and the same *Time*. If the ground observer observes the crane group moving to another field, the location would be assigned *Location ID* B (*Crane Group ID*=2002FA01) and the *Time* recorded. If the ground observer observes the crane group return to a previously used field, say A, the location would be assigned *Location ID* A (*Crane Group ID*=2002FA01) and the *Time* recorded. If the crane group goes out of sight, the next time a crane group is

observed in the area, the *Crane Group ID* will be assigned 2 (*Crane Group ID*=2002FA02) (unless the observers think it is the same group as 01 and the supporting justification is documented); and the first location observed by this group will be assigned *Location ID* A. The project leader will need to continually review the datasheets to ensure the *Crane Group ID* and *Location ID* are correct, since field crew members may not know what the next sequential *Crane Group ID* should be.

Instantaneous data will be taken every 15 minutes at each crane group location. Each point will get a new *Instant Point ID*. The variables *Crane Group ID* and *Instant Point ID* will be used to connect information about sightings at instant points through all the datasheets and associated data tables.

IV.B.4. Activity Monitoring

Crane activity will be monitored during the course of movement tracking. As the observer watches the crane group, he/she will record the activity being conducted by the whooping crane at each of the 15 minute instantaneous points documented during the movement tracking as one of the following categories: courtship, preening, resting, feeding, alert, agonistic or other activity as defined by the observer. If the crane group is comprised of more than one individual, the observer will select a "focus" crane that will be used to record activity information from. The ground survey crew will photograph the whooping crane group using a digital camera with a 70 × 300 mm Vibration Reduction (VR) zoom lens or similar equipment approved by the Program. Each photograph will be numbered and this number will be recorded on the datasheet for later cross-referencing.

IV.B.5. Use-Site Characteristics

The National Vegetation Classification Standard (NVCS) vegetation type will be documented for each continuous and instantaneous use-site using the Instantaneous and Continuous Use-site Monitoring datasheet. Time in, time out, and UTM location will also be recorded at continuous use-sites. The time, distance to potential disturbance (road, house, etc), and the type of disturbance will also be recorded at the instantaneous use-sites.

Additional physical and geomorphologic characteristics of crane use locations will be measured for locations with standing or flowing water. These measurements will be made as soon as practical after the cranes leave the study area using the Use Site Characteristics datasheets. In all instances, proper landowner permission will be secured before Program and/or Consultant personnel enter private property to collect the measurements. FWS and/or NGPC personnel that have previously conducted site use evaluations will help train Program staff and Consultants for future site evaluations.

Photographs taken of crane use-sites observed from the air will be used to locate the use area on the ground. A general sketch of the area and/or photograph will be taken for each use-site. The following characteristics will be recorded for each site with standing or flowing water.

- *IV.B.5.a. Water depth profiles and sandbar location/elevation*
  - When a crane group utilizes an area containing standing or flowing water, three parallel transects 25m apart will be established such that the middle transect crosses through the most recent crane group location. This procedure will allow the calculation of a mean and variance for each roost characteristic in the area a crane group used while acknowledging the difficulty in determining the exact crane group location when viewed from a distance.
  - Profile transects will be situated perpendicular to the general flow for river locations and perpendicular to the long axis of non-flowing water bodies. GPS locations will be taken along each transect using a GPS unit (vertical accuracy$\leq$ ±6 inches after post -processing) or other means approved by the Program. One GPS location will be taken at approximately every 3m, when changes in topography are encountered, at water lines, and at visual obstructions at each end of the transect. When a sandbar is encountered along a profile transect, a location will be recorded at each waterline, as well as where the topography along the transect changes, and the length will be estimated. Each profile transect will begin and end where the transect line reaches

an obstruction. When channel-depths prohibit data collection, the observer will travel up or downstream, or to the other side of the channel, to locate an area they can cross the channel and will return to the transect line and resume data collection as near to where they left off as possible. When profile transects cannot be completed, the field crew will collect data along as much of the transect as possible and will note why they couldn't collect all data on the datasheet.

- The channel morphology profile measurements will be interpolated during the analysis stage to produce a continuous profile of relative water surface elevation across the channel. Linear interpolation between adjacent points along the transect will be used to sample from the profile at equally spaced increments. Water depth will be calculated as the average of equally spaced measurements of the relative water surface elevation profile that are at and below zero (water surface elevation). Sandbar elevation will be calculated as the average of equally spaced measurements of the relative water surface elevation profile that are at and above zero.

- *IV.B.5.b. Distances to visual obstruction*
  - Distances from the crane group location to the nearest obstructions in each of four quadrats oriented perpendicular/parallel to the channel for riverine use-sites and in the four cardinal directions for standing water will be made using a laser range finder.
- *IV.B.5.c. Unobstructed width*
  - The distance between obstructions along a line perpendicular to the channel and passing through and/or parallel to the crane observation point will be measured.
- *IV.B.5.d. Water/Wetted Width*
  - Water or wetted width will be measured directly in the field or calculated from water depth profile data as the distance covered by water and between visual obstructions along a line perpendicular to the channel and passing through and/or parallel to the crane observation point.
- *IV.B.5.e. Active Channel Width*
  - Channel width will be calculated from water depth profile data or a GIS and aerial imagery.
- *IV.B.5.f. Substrate*
  - The percentage of each substrate type at a crane use-site will be documented for the four classes: <1mm, 1-4.9mm, 5-14.9mm, ≥15mm.
- *IV.B.5.g. Flow*
  - The nearest upstream and downstream USGS gaging stations will be used to document provisional instantaneous flows during the period of crane use and when aquatic habitat measures are made.
- *IV.B.5.h. Land cover class*
  - The National Vegetation Classification Standard (NVCS) vegetation type will be documented for each continuous and instantaneous use-site.
- *IV.B.5.i. Distances to potential disturbance features*
  - Distance to potential disturbance will be documented in the lab using the most recent aerial imagery. Potential disturbance is defined as a power line, house, road, etc.

The *Use Site ID* variable connects each location used by a crane group to the use characteristics measured on the ground. The *Use Site ID* is a sequential number assigned when the measurements are made (beginning with 1). The project manager will record the *Use Site ID* on the datasheets with the corresponding *Crane Group ID*, *Location ID* and *Time*. In cases where a crane group has used the same location multiple times, there will be multiple *Location ID's* linked to one *Use Site ID* (assuming the use characteristics were measured only once).

IV.C. Data Collection from State and Federal Agencies

The report will contain a summary of all whooping crane migrational sightings within Nebraska and specifically the central Platte River corridor as obtained from the FWS, Grand Island Field Office. FWS crane group identification numbers will be recorded in the database.

IV.D. Analysis Methods

Information collected through this protocol will be used to evaluate changes in distribution of use and habitat characteristics for whooping crane use-sites in the study area. As such, the Consultant will perform basic data analyses requested by the Program and will report findings that include explanatory as well as graphical representations of their findings on a migrational-season basis and will relate trends in findings such as an increase/decrease in use, increase/decrease in proportion of population stopping in the study area, foraging behavior, stop-over duration, etc to whooping crane population sustainability and growth. This protocol is designed to provide information on crane groups with known probability of inclusion in the sample regardless of location in the study area. Since aerial survey and telemetry data provide this information, but opportunistically located cranes have an unknown probability of inclusion, separate analyses will be conducted for each of these types of data.

Habitat Use

Since the whooping crane is a rare species and identifying individual cranes is usually not possible, all analyses will need to balance small sample sizes with pseudo-replication. There are two options for analyzing habitat use, one will include every observation for each crane group and will contain multiple observations per group and the second will retain the sample size as the number of whooping cranes and average multiple observations of a crane as the first step of the analysis.

There are several analysis methods available for summarizing the habitat characteristics of whooping crane use-sites. The methods range from calculating means and variances, to modeling habitat use, to documenting changes through time, to methods that are not currently developed. With each analysis, the probability sample of whooping crane use-sites collected under this protocol will provide data adequate for inferences to all crane stop-over-sights within the central Platte River study area.

Indices of Use

Annual Indices of crane use will be developed using information obtained by this protocol. Indices of use will document the proportion of the population and number of cranes and crane groups observed per survey effort (flight, migration season, etc) using Program defined and evaluated suitable habitat, Program habitat complexes, and habitat classified as ‘unsuitable’ by existing Program standards. Habitat suitability evaluations will be conducted annually under a separate Program contract and the results will be available to the Consultant. If the protocol is implemented in a consistent manner, a change in these indices through time will estimate changes in the frequency of use of Program habitat complexes as well as Program-defined suitable and unsuitable habitat throughout the first increment.

Activity Monitoring Data

Annual analyses of activity monitoring data will only include instantaneous data that is collected every 15 minutes.

V. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

QA/QC measures will be implemented at all stages of the study, including field data collection, data entry, data analysis, and report preparation. Observers will be trained and tested in the methods used and on their ability to identify whooping cranes. Data forms will be completed on a daily basis. At the end of each survey day, each observer will be responsible for inspecting his or her data forms for completeness, accuracy, and legibility. The study team leader will review data forms to insure completeness and legibility, and correct the forms as needed. Any changes made to the data forms will be initialized by the person making the change.

To help train observers that will be conducting the aerial surveys, each individual will be required to fly practice transects, or a portion of one transect. During this flight there will be whooping crane decoys placed in the river channel to allow observers the opportunity to see a "whooping crane" from the air at the speed and altitude of the surveys.

Data will be entered into the Program's database by qualified technicians. These files will be compared to the raw data forms and checked for errors. Irregular codes detected or any ambiguous data will be discussed with the observer and study team leader to clarify and document changes.

After data have been keyed and verified, the study team leader or QA/QC technician will check five percent of data forms against the final computer file and any problems identified will be traced back to raw data forms, observer(s), and data-entry personnel and corrections will be documented.

VI. DATA COMPILATION AND STORAGE

The Program's database will be used to store, retrieve, and organize field observations. Microsoft Office InfoPath is required to enter data into the database. The data for each survey will be incorporated within the larger Program database. All field data forms, field notebooks, and electronic data files will be retained for ready reference.

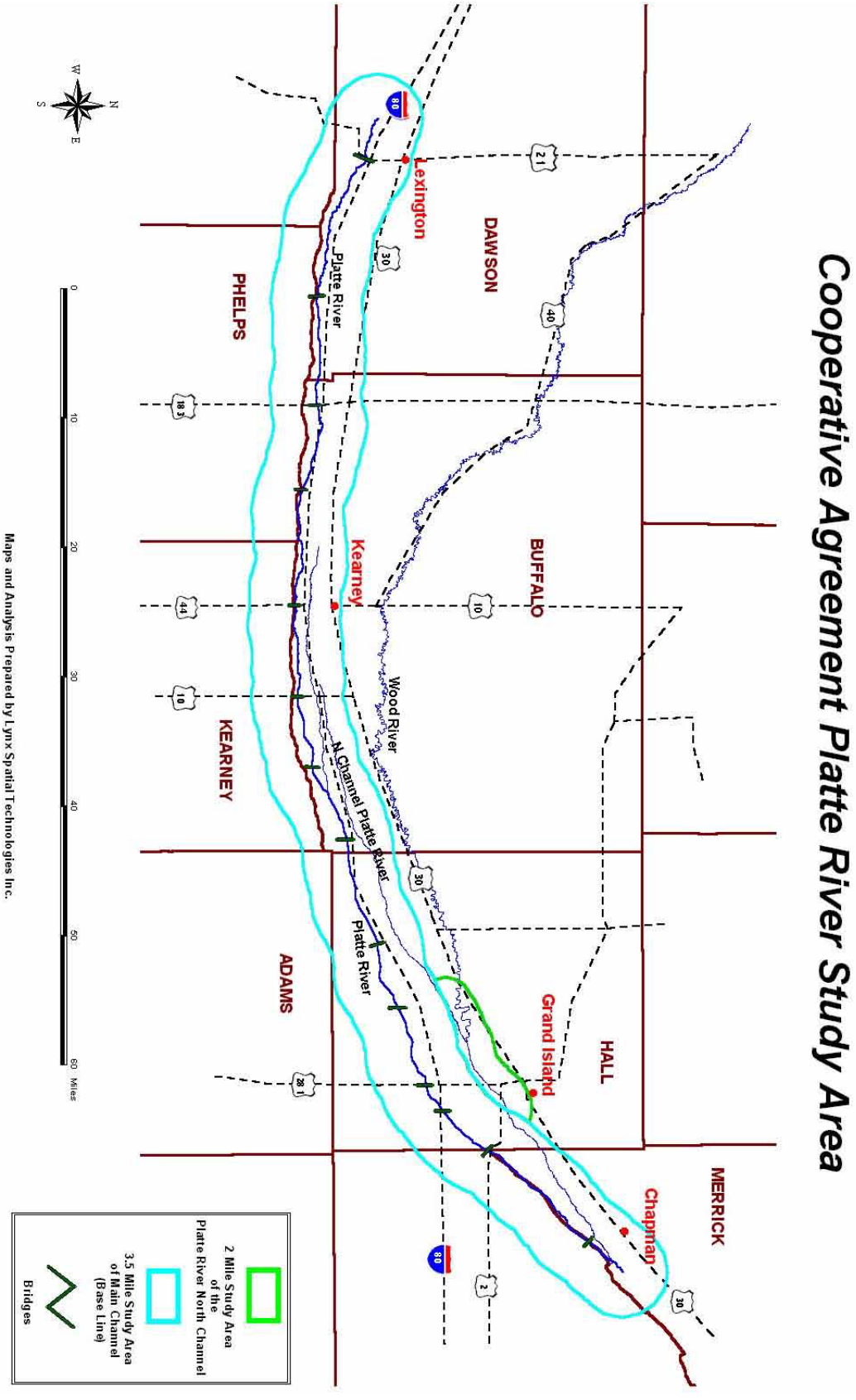
VII. REPORT FORMAT

Data on whooping crane habitat use will be compiled, summarized, and incorporated within the larger Program database following each migration season. Migration-period reports will be submitted to the Program's Executive Director's Office (EDO) for review and distribution following each migration season. Draft and final reports that summarize findings and describes methods, analyses (including descriptive statistics of whooping crane use), results, and any conclusions that can be drawn will have both written and graphical components and will also contain maps and/or aerial photos showing crane use-sites. Reports will be submitted to the Program's EDO for review and distribution to the Technical Advisory and Governance Committees.

VIII. DATA SHEETS – *To be provided prior to survey implementation*

- Aerial Survey
- Aerial Observation
- Ground Monitoring
- Instantaneous and Continuous Use Site Monitoring
- Use-site Characteristics Summary
- Use-site Characteristics Profile

Appendix A


Cooperative Agreement Platte River Study Area
Lexington
Kearney
Grand Island
Chapman
DAWSON
BUFFALO
PHELPS
KEARNEY
ADAMS
HALL
MERRICK
Platte River
Wood River
N Channel Platte River
Platte River
80
21
30
40
183
44
10
281
2
Maps and Analysis Prepared by Lynx Spatial Technologies Inc.
0
10
20
30
40
50
60 Miles
2 Mile Study Area of the Platte River North Channel
3.5 Mile Study Area of Main Channel (Base Line)
Bridges

Company
Address 1
Address 2
TIN# 00-0000000

Nebraska Community Foundation, Inc.
PO Box 83107
Lincoln, NE 68501-3107
TIN# 47-0769903

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM

Contract between Nebraska Community Foundation, Inc., Platte River Recovery Implementation Program, and [Company].

[Project Name]

1. Parties. This Contract is made and entered into by and between the Nebraska Community Foundation, Inc. ("Foundation") of Lincoln, Nebraska, representing all signatories to the Platte River Recovery Implementation Program ("Program") and _____ ("Consultant"). The following persons are authorized to represent the parties through this Contract: Diane Wilson of the Foundation, Dr. Jerry Kenny of the Program; and [Name] of the Consultant.

2. Purpose of Contract. The purpose of this Contract is to allow the Foundation, acting as the fiscal agent for the Governance Committee (GC) of the Program, to retain the services of the Consultant to render certain technical or professional services hereinafter described in connection with an undertaking to be financed by the Program, and to delegate the Executive Director's Office ("ED Office") through its Executive Director or his designee the authority to administer this Contract.

TERMS AND CONDITIONS

3. Term of Contract and Required Approvals. This Contract is effective when all parties have executed it and all required approvals have been granted. The term of this Contract is from *(contract initiation date)* through *(contract expiration date)*. The services to be performed under this Contract will commence upon receipt of authorization to proceed. All services shall be completed during this term.

If the Consultant has been delayed and as a result will be unable, in the opinion of the Program, to complete performance fully and satisfactorily within this Contract period, the Consultant may be granted an extension of time, upon submission of evidence of the causes of delay satisfactory to the Program.

4. Payment.

A. Reimbursement of Expenses. The Program agrees to pay the Consultant an amount based on the approved budget depicted in Exhibit B and hourly rate and reimbursable expenses price schedules depicted in Exhibit C, attached to this Contract and incorporated by reference as part of this Contract, for the services described in Exhibit A, attached to this Contract and incorporated by reference as part of this Contract. Total payment under this Contract shall not exceed _____ dollars ($_____).

B. Project Budget. The Project budget for each task included in Exhibit A is as follows:

Task	Estimated Cost
Phase I.	
Subtotal Phase I	
Phase II.	
Subtotal Phase II	
Total Project Cost	

The amounts for each task are estimates only, but are not to be exceeded unless authorized in writing by the Program. The Contract total amount is controlling. Payment shall be made directly to the Consultant. The Consultant shall maintain hourly records of time worked by its personnel to support any audits the Program may require. Billing reports shall be submitted no more often than monthly for activities and costs accrued since the last billing report. A brief project progress report summarizing project activities in the billing period must be submitted with each billing.

C. Billing Procedures. The Consultant shall send billing reports for services performed for the various tasks outlined in Exhibit A to the ED Office (address included below). The Program's Executive Director, upon receiving the billing report, will approve the bill and submit the bill for payment. The submittal for payment will then be reviewed by the Signatory Parties of the Program who will advise the Foundation of approval. The Foundation will make payment of these funds directly to the Consultant within 30 days of notice of approval by the Signatory Parties. Payments of bills are due within 60 days after the billing date of the Consultant.

Billing Point of Contact (Program):
Dr. Jerry F. Kenny, Executive Director
Platte River Recovery Implementation Program
Headwaters Corporation
4111 4th Avenue, Suite 6
Kearney, Nebraska 68845
Phone: (308) 237-5728
Fax: (308) 237-4651
Email: kennyj@headwaterscorp.com

D. Money Withheld. When the Program has reasonable grounds for believing that the Consultant will be unable to perform this Contract fully and satisfactorily within the time fixed for performance, then the Program may withhold payment of such portion of any amount otherwise due and payable to the Consultant reasonably deemed appropriate to protect the Program against such loss. These amounts may be withheld until the cause for the withholding is cured to the Program's satisfaction or this Contract is terminated pursuant to Section 8U. Any amount so withheld may be retained by the Program for such period as it may deem advisable to protect the Program against any loss. This provision is intended solely for the benefit of the Program and no person shall have any right against the Program by reason of the Program's failure or refusal to withhold monies. No interest shall be payable by the Program on any amounts withheld under this provision. This provision is not intended to limit or in any way prejudice any other right of the Program.

E. Withholding of Payment. If a work element has not been received by the Program by the dates established in Exhibit A, the Program may withhold all payments beginning with the month following that date until such deficiency has been corrected.

F. Final Completion and Payment. The final payment shall be made upon acceptance of the final report and receipt of the final billing.

5. <u>Responsibilities of Consultant</u>.

A. Scope of Services. The Consultant shall perform the specific services required under this Contract in a satisfactory and proper manner as outlined in Exhibit A. If there is any conflict between this Contract and the provisions of the specific requirements of Exhibit A, the specific requirements shall prevail.

B. Personnel. All of the services required hereunder will be performed by the Consultant or under its supervision, and all personnel engaged in the work shall be fully qualified and shall be authorized, licensed, or permitted under state law to perform such services, if state law requires such authorization, license, or permit.

C. Subcontracts.

(i) Approval Required for Subcontracts. Any subcontractors and outside associates or consultants required by the Consultant in connection with the services, work performed or rendered under this Contract will be limited to such individuals or firms as were specifically identified in the proposal and agreed to during negotiations or are specifically authorized by the Program during the performance of this Contract. The Consultant shall submit a list of the proposed subcontractors, associates or consultants; the scope and extent of each subcontract; and the dollar amount of each subcontract prior to Contract execution to the Program for approval. During the performance of the Contract, substitutions in or additions to such subcontracts, associates, or consultants will be subject to the prior approval of the Program. The Program approval of subcontractors will not relieve the Consultant from any responsibilities outlined in this Contract. The Consultant shall be responsible for the actions of the subcontractors, associates, and subconsultants.

(ii) Billings for Subcontractors. Billings for subcontractor, associates or subconsultants services will not include any mark up. The subcontract costs will be billed to the Program at the actual costs as billed to the Consultant. Subcontract costs will be documented by attaching subcontractor billings to the Consultant's billing submittals.

(iii) Copies of Subcontracts. The Consultant shall provide to the Program copies of each subcontractor contract immediately following execution with the subcontractor. All subcontracts between the Consultant and a subcontractor shall refer to and conform to the terms of this Contract. However, nothing in this Contract shall be construed as making the Program a party of any subcontract entered between the Consultant and a subcontractor.

D. Requests from the Program. The Consultant shall be responsible and responsive to the Program and the ED Office in their requests and requirements related to the scope of this Contract.

E. Presentation of Data. The Consultant shall select and analyze all data in a systematic and meaningful manner so as to contribute directly in meeting the objectives of the Project, and shall present this information clearly and concisely, in a professional manner.

F. Draft of Final Report. The Consultant shall present the Program a draft of the final report covering all work elements of the Project including maps, charts, conclusions and recommendations prior to the publication of any final report and no later than the date specified in Exhibit A. Draft Reports will be provided to the Program in Microsoft Word format for distribution and review. The Program will respond with written comments to the Consultant as soon as possible. The Consultant will address the comments of the Program in the final report. Final Reports will be provided to the Program in Microsoft Word and PDF format.

G. Project Completion Report. A final project completion report in the form described in Exhibit A shall be submitted to the Program by the date specified in Exhibit A.

H. Reports, Maps, Plans, Models and Documents. One (1) copy of maps, plans, worksheets, logs, field notes and other reference or source documents prepared for or gathered under this Contract, and one (1) copy of each unpublished report prepared under this Contract shall be submitted to the Program. If the Consultant writes or uses a computer program or spreadsheet as a part of this project, the Consultant shall submit to the Program for approval all proposed program names and data formats prior to beginning work on that task. All data shall be submitted to Program in written and digital forms with the final report. Digital media shall be labeled by the Consultant to provide sufficient detail to access the information on the media. All user manuals shall be submitted by the Consultant to Program providing complete documentation of computer programs developed under this Contract. The user manual shall also specify the source code language and the type of computer equipment necessary to operate the program(s). Any programs or computer software generated as a part of this Contract shall be the sole property of the Program.

I. Inspection and Acceptance. All deliverables furnished by the Consultant shall be subject to rigorous review by the Program's ED Office prior to acceptance.

6. <u>Responsibilities of the Program.</u>

A. Designated Representative. The Executive Director of the Program shall act as the Program's administrative representative with respect to the Consultant's service to be performed under this Contract and shall have complete authority to transmit instructions, receive information, and interpret and define the Program's policies and decisions with respect to services covered by this Contract.

B. Data to be Furnished to the Consultant. All information, data, reports, and maps as are available to the Program and necessary for the carrying out of the Scope of Services set forth herein shall be furnished to the Consultant without charge and the ED Office shall cooperate with the Consultant in the carrying out of the project.

C. Review Reports. The ED Office shall examine all studies, reports, sketches, opinions of the construction costs, and other documents presented by the Consultant to the Program and shall promptly render in writing the Program's decisions pertaining thereto within the time periods specified in Exhibit A.

D. Provide Criteria. The ED Office shall provide all criteria and full information regarding its requirements for the project.

7. Special Provisions.

A. No Finder's Fees. No finder's fee, employment agency fee, or other such fee related to the procurement of this Contract shall be paid by either party.

B. Publication. It is understood that the results of this work may be available to the Consultant for publication and use in connection with related work. Use of this work for publication and related work by the Consultant must be conducted with prior authorization from the Program's Technical Point of Contact.

C. Publicity. Any publicity or media contact associated with the Consultant's services and the result of those services provided under this Contract shall be the sole responsibility of the Program. Media requests of the Consultant should be directed to the Director of Outreach and Operations in the ED Office.

D. Monitor Activities. The Program shall have the right to monitor all Contract related activities of the Consultant and all subcontractors. This shall include, but not be limited to, the right to make site inspections at any time, to bring experts and consultants on site to examine or evaluate completed work or work in progress, and to observe all Consultant personnel in every phase of performance of Contract related work.

D. Kickbacks. The Consultant certifies and warrants that no gratuities, kickbacks or contingency fees were paid in connection with this Contract, nor were any fees, commissions, gifts, or other considerations made contingent upon the award of this Contract. If the Consultant breaches or violates this warranty, the Program may, at its discretion, terminate this Contract without liability to the Program, or deduct from the Contract price or consideration, or otherwise recover, the full amount of any commission, percentage, brokerage, or contingency fee.

E. Office Space, Equipment, and Supplies. The Consultant will supply its own office space, equipment, and supplies.

8. General Provisions.

A. Amendments. Any changes, modifications, revisions or amendments to this Contract which are mutually agreed upon by the parties to this Contract shall be incorporated by written instrument, executed and signed by all parties to this Contract.

B. Applicable Law/Venue. The construction, interpretation and enforcement of this Contract shall be governed by the laws of the State of Nebraska. The Courts of the State of Nebraska shall have jurisdiction over this Contract and the parties.

C. Assignment/Contract Not Used as Collateral. Neither party shall assign or otherwise transfer any of the rights or delegate any of the duties set forth in this Contract without the prior written consent of the other party. The Consultant shall not use this Contract, or any portion thereof, for collateral for any financial obligation, without the prior written permission of the Program.

D. Audit/Access to Records. The Program and any of its representatives shall have access to any books, documents, papers, and records of the Consultant which are pertinent to this Contract. The Consultant shall, immediately upon receiving written instruction from the Program, provide to any independent auditor, accountant, or accounting firm, all books, documents, papers and records of the Consultant which are pertinent to this Contract. The Consultant shall cooperate fully with any such independent auditor, accountant, or accounting firm, during the entire course of any audit authorized by the Program.

E. Availability of Funds. Each payment obligation of the Program is conditioned upon the availability of funds and continuation of the Platte River Recovery Implementation Program. If funds are not allocated and available for the continuance of the services performed by the Consultant, the contract may be terminated by the Program at the end of the period for which the funds are available. The Program shall notify the Consultant at the earliest possible time of the services which will or may be affected by a shortage of funds. No penalty shall accrue to the Program in the event this provision is exercised, and the Program shall not be obligated or liable for any future payments due or for any damages as a result of termination under this section. This provision shall not be construed to permit the Program to terminate this Contract to acquire similar services from another party.

F. Award of Related Contracts. The Program may undertake or award supplemental or successor contracts for work related to this Contract. The Consultant shall cooperate fully with other contractors and the Program in all such cases.

G. Certificate of Good Standing. Consultant shall provide Certificate of Good Standing verifying compliance with the unemployment insurance and workers' compensation programs prior to performing work under this Contract.

H. Compliance with Law. The Consultant shall keep informed of and comply with all applicable federal, state and local laws and regulations in the performance of this Contract.

I. Confidentiality of Information. All documents, data compilations, reports, computer programs, photographs, and any other work provided to or produced by the Consultant in the performance of this Contract shall be kept confidential by the Consultant unless written permission is granted by the Program for its release.

J. Conflicts of Interest

(i) Consultant shall not engage in providing consultation or representation of clients, agencies or firms which may constitute a conflict of interest which results in a disadvantage to the Program or a disclosure which would adversely affect the interests of the Program. Consultant shall notify the Program of any potential or actual conflicts of interest arising during the course of the Consultant's performance under this Contract. This Contract may be terminated in the event a conflict of interest arises. Termination of the Contract will be subject to a mutual settlement of accounts. In the event the contract is terminated under this provision, the Consultant shall take steps to insure that the file, evidence, evaluation and data are provided to the Program or its designee. This does not prohibit or affect the Consultant's ability to engage in consultations, evaluations or representation under agreement with other agencies, firms, facilities, or attorneys so long as no conflict exists.

(ii) A conflict of interest warranting termination of the Contract includes, but is not necessarily limited to, representing a client in a adversarial proceeding against the Platte River Recovery Implementation Program, its signatories, boards, commissions or initiating suits in equity including injunctions, declaratory judgments, writs of prohibition or *quo warranto.*

K. Entirety of Contract. This Contract, consisting of *(example) twelve (12)* pages, Exhibit A, consisting of *eleven (11)* pages, Exhibit B, consisting of *one (1)* page, and Exhibit C, consisting of *one (1)* page, represents the entire and integrated Contract between the parties and supersedes all prior negotiations, representations, and agreements, whether written or oral.

L. Force Majeure. Neither party shall be liable for failure to perform under this Contract if such failure to perform arises out of causes beyond the control and without the fault or negligence of the nonperforming party. Such causes may include, but are not limited to, acts of God or the public enemy, fires, floods, epidemics, quarantine restrictions, freight embargoes, and unusually severe weather. This provision shall become effective only if the party failing to perform immediately notifies the other party of the extent and nature of the problem, limits delay in performance to that required by the event, and takes all reasonable steps to minimize delays. This provision shall not be effective unless the failure to perform is beyond the control and without the fault or negligence of the nonperforming party.

M. Indemnification. The Consultant shall indemnify and hold harmless the Foundation, the Program, the ED Office, and their officers, agents, employees, successors and assignees from any and all claims, lawsuits, losses and liability arising out of Consultant's failure to perform any of Consultant's duties and obligations hereunder or in connection with the negligent performance of Consultant's duties or obligations, including but not limited to any claims, lawsuits, losses or liability arising out of Consultant's malpractice.

N. Independent Contractor. The Consultant shall function as an independent

contractor for the purposes of this Contract, and shall not be considered an employee of the Program, Foundation or ED Office for any purpose. The Consultant shall assume sole responsibility for any debts or liabilities that may be incurred by the Consultant in fulfilling the terms of this Contract, and shall be solely responsible for the payment of all federal, state and local taxes which may accrue because of this Contract. Nothing in this Contract shall be interpreted as authorizing the Consultant or its agents and/or employees to act as an agent or representative for or on behalf of the Foundation or the Program, or to incur any obligation of any kind on the behalf of the Foundation or the Program. The Consultant agrees that no health/hospitalization benefits, workers' compensation and/or similar benefits available to Foundation or Program employees will inure to the benefit of the Consultant or the Consultant's agents and/or employees as a result of this Contract.

O. Notices. All notices arising out of, or from, the provisions of this contract shall be in writing and given to the parties at the address provided under this Contract, either by regular mail, facsimile, e-mail, or delivery in person.

P. Notice and Approval of Proposed Sale or Transfer of the Consultant. The Consultant shall provide the Program with the earliest possible advance notice of any proposed sale or transfer or any proposed merger or consolidation of the assets of the Consultant. Such notice shall be provided in accordance with the notice provision of this Contract.

Q. Ownership of Documents/Work Product/Materials. All documents, reports, records, field notes, data, samples, specimens, and materials of any kind resulting from performance of this Contract are at all times the property of the Program.

R. Patent or Copyright Protection. The Consultant recognizes that certain proprietary matters or techniques may be subject to patent, trademark, copyright, license or other similar restrictions, and warrants that no work performed by the Consultant or its subcontractors will violate any such restriction.

S. Proof of Insurance. The Consultant shall not commence work under this Contract until the Consultant has obtained the following insurance coverages and provided the corresponding certificates of insurance:

(i) Commercial General Liability Insurance. Consultant shall provide coverage during the entire term of the Contract against claims arising out of bodily injury, death, damage to or destruction of the property of others, including loss of use thereof, and including products and completed operations in an amount not less than Five Hundred Thousand Dollars ($500,000.00) per claimant and One Million Dollars ($1,000,000.00) per occurrence.

(ii) Business Automobile Liability Insurance. Consultant shall maintain, during the entire term of the Contract, automobile liability insurance in an amount not less than Five Hundred Thousand Dollars ($500,000.00) per occurrence. Coverage will include bodily injury and property damage covering all vehicles, including hired vehicles, owned and non-owned vehicles

(iii) Workers' Compensation or Employers' Liability Insurance. The Consultant shall provide proof of workers' compensation coverage Consultant's insurance shall include "Stop Gap" coverage in an amount not less than Five Hundred Thousand Dollars ($500,000.00) per employee for each accident and disease.

(iv) Professional Liability or Errors and Omissions Liability Insurance. The Consultant shall provide proof of professional liability insurance or errors and omissions liability insurance to protect the Foundation, Program and ED Office from any and all claims arising from the Consultant's alleged or real professional errors, omissions or mistakes in the performance of professional duties in an amount not less than One Million Dollars ($1,000,000.00) per claim.

T. Taxes. The Consultant shall pay all taxes and other such amounts required by federal, state and local law, including but not limited to federal and social security taxes, workers' compensation, unemployment insurance and sales taxes.

U. Termination of Contract. This Contract may be terminated, without cause, by the Program upon fifteen (15) days written notice. This Contract may be terminated immediately for cause if the Consultant fails to perform in accordance with the terms of this Contract.

V. Third Party Beneficiary Rights. The parties do not intend to create in any other individual or entity the status of third party beneficiary, and this Contract shall not be construed so as to create such status. The rights, duties and obligations contained in this Contract shall operate only between the parties to this Contract, and shall inure solely to the benefit of the parties to this Contract. The provisions of this Contract are intended only to assist the parties in determining and performing their obligations under this Contract.

W. Time is of the Essence. Time is of the essence in all provisions of the Contract.

X. Titles Not Controlling. Titles of paragraphs are for reference only, and shall not be used to construe the language in this Contract.

Y. Waiver. The waiver of any breach of any term or condition in this Contract shall not be deemed a waiver of any prior or subsequent breach.

9. Contacts.

Administrative Point of Contact (Foundation):
Diane M. Wilson
Chief Financial and Administrative Officer
Nebraska Community Foundation
PO Box 83107
Lincoln, Nebraska 68501-3107
Phone: (402) 323-7330
Fax: (402) 323-7349
Email: dwilson@nebcommfound.org

Admin. Point of Contact (Program):
Dr. Jerry F. Kenny, Executive Director
Platte River Recovery Implementation Prog.
Headwaters Corporation
4111 4th Avenue, Suite 6
Kearney, Nebraska 68845
Phone: (308) 237-5728
Fax: (308) 237-4651
Email: kennyj@headwaterscorp.com

Technical Point of Contact (Program):
Name, Title
Platte River Recovery Implementation Prog.
Headwaters Corporation
Address 1
City, State ZIP
Phone: (000) 000-0000
Fax: (000) 000-0000
Email: email

Media Point of Contact (Program):
Dr. Bridget Barron, Director of Outreach
Platte River Recovery Implementation Prog.
Headwaters Corporation
4111 4th Avenue, Suite 6
Kearney, Nebraska 68845
Phone: (308) 237-5728
Fax: (308) 237-4651
Email: barronb@headwaterscorp.com

Administrative Point of Contact (Consultant):
Name, Title
Company
Address 1
City, State ZIP
Phone: (000) 000-0000
Fax: (000) 000-0000
Email: email

Technical Point of Contact (Consultant):
Name, Title
Company
Address 1
City, State ZIP
Phone: (000) 000-0000
Fax: (000) 000-0000
Email: email

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10. <u>Signatures</u>. By signing this Contract, the parties certify that they have read and understood it, that they agree to be bound by the terms of the Contract, that they have the authority to sign it.

NEBRASKA COMMUNITY FOUNDATION

_____ _____

Diane M. Wilson Date
Chief Financial and Administrative Officer

[***CONSULTANT***]

_____ _____

[*Name, Title*] Date

EXHIBIT "A"
SCOPE OF SERVICES

A. PROJECT DESCRIPTION

1. Location: *[Text]*

2. Purpose: *[Text]*

3. History: [*Text*]

B. PROJECT REQUIREMENTS

1. Monthly Progress Reports and Billing Statements

The Consultant shall submit a brief monthly progress report outlining the study status, progress, and results to date, regardless of whether or not a billing statement is submitted, on or before the last working day of the month. The progress report will also show the percentage of the job completed by task and the percentage of budget spent. The progress report will also include a billing projection for the upcoming month for the purpose of Program reimbursement request planning.

Each billing statement must include a task-by-task report justifying the cost items contained in the billing statement. The monthly progress report may be used as the justification for the billing statement as long as all cost items covered in the billing statement are addressed in the progress report.

2. Computer Models, Statement of Assumptions, Project Work File

a. If the Consultant writes or uses a computer program or spreadsheet as a part of this project, the Consultant shall submit to the Program for approval all proposed program names and data formats prior to beginning work on that task. All data shall be submitted to the Program in written and digital forms with the final report. Digital media shall be labeled by the Consultant to provide sufficient detail to access the information on the media. User manuals shall be submitted by the Consultant to the Program providing complete documentation of computer programs developed under this project. The user manuals shall also contain the source code language and the type of computer equipment necessary to operate the program(s). The computer programs and spreadsheets (written and digital forms) are due on the same date as the final report, which contains the information generated by the programs.

b. To facilitate the Program's accurate evaluation of the Consultant's work product, computations, conclusions and recommendations, the Consultant shall:

* Include in the final report a section describing the assumptions and methodology used by the Consultant in generating the data and conclusions contained in that chapter.

* Maintain a project work file containing the materials used in project analysis. This file will be available for review by the Program and should be organized in such a way as to allow replication of the steps and procedures used by the Consultant to reach the conclusions described in the study.

* Prepare a project notebook containing a description of the assumptions and methodologies used in the project analysis. The notebook shall be organized in such a way as to allow replication of the steps, calculations, and procedures used by the Consultant to reach conclusions, described in the draft final report. The project notebook shall be submitted with the draft final report.

3. Final Report

The Consultant shall use the Contract Scope of Services as the outline for draft and final reports so that Consultant compliance with Contract provisions can be verified. If the final report contains information of an engineering nature, the cover of the final report, all plates, and the executive summary must be stamped and signed by a Professional Engineer licensed in the State of Nebraska or other state if appropriate to location of project site. If the final report contains information of a geologic nature, the cover of the final report, all plates, and the executive summary must be stamped and signed by a Professional Geologist licensed in the State of Nebraska. If the final report contains information of both an engineering and geologic nature, the cover of the final report, all plates, and the executive summary must be stamped and signed by both a Professional Engineer and a Professional Geologist licensed in the State of Nebraska. At a minimum, the reproducible original to be submitted as part of the deliverables required herein must utilize an original seal(s) and original signature(s).

4. Final Report - Digital Format

In addition to the paper submittal described in Section C.4 above, the Consultant shall also provide the final documents and related materials in a digital format. This digital report shall, to the extent feasible, be assembled into one file rather than separate files for text, tables, graphics, etc. This digital report shall be contained on a CD(s) or DVD(s), and shall be in both Word and Adobe Acrobat format. Any plates, figures, etc. not suitable for Word shall be in AutoCAD, ArcGIS, Adobe Acrobat, or compatible format. Other formats may be used if approved in advance by the ED Office. The final documents will also be provided

fully assembled into one file, in a complete “internet ready” digital format to facilitate their distribution via the Office website.

5. Project Access

The ED Office shall be responsible for obtaining access as required for project tasks.

6. Stand-By Time

The Program will not reimburse the Consultant for stand-by time charges for the Consultant's supervisory personnel.

SCOPE OF SERVICES

EXHIBIT “B”
BUDGET

EXHIBIT "C"
HOURLY RATE AND REIMBURSABLE EXPENSES
PRICE SCHEDULE 2010