

Winter 2012 Whooping Crane Monitoring Project



FINAL REPORT

Prepared by

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Assessment Impact Monitoring Environmental Consultants (AIM) was awarded a contract to assist the *Platte River Recovery Implementation Program (PRRIP)* to implement aspects of the protocol developed by the Technical Advisory Committee entitled *Whooping Crane Monitoring Protocol - Migrational Habitat Use in the Central Platte River Valley* dated 31 May 2011. I present the results of winter 2012 Whooping Crane migration pursuant to the *Contract for Services Agreement between Nebraska Community Foundation, Inc., Platte River Recovery Implementation Program, and AIM Environmental Consultants* dated February 2, 2012.

Study Area and Methods

The study area was the Platte River reach between U.S. Highway 283 (near Lexington) and Chapman, Nebraska. This reach was about 90 miles long and included an area extending 3.5 miles either side of the outermost banks of the Platte River. I hired and trained twelve technicians and conducted field work from March 12-20, 2012. Headwaters Corporation personnel conducted flights/field work intermittently from January 29 through March 11. A set of six data sheets was provided by Headwaters Corporation and all data were entered into a web-based Microsoft SharePoint database developed by Riverside Technology, Inc. using Microsoft InfoPath 2010.

One air service was contracted and aerial surveys were conducted along specified routes near sunrise as weather permitted. The river between Kearney and Lexington was the focal area for 2 late January and early February flights and the river between the Burlington Northern Railroad Bridge (between Chapman and Grand Island) and Lexington was the focal area for 1 mid-February flight. After March 8, the river between Grand Island and Kearney was the focus. Censuses were initiated no earlier than 30 minutes before sunrise and typically were completed within 2 hours. Start time was delayed when weather/visibility conditions dictated and flights were cancelled due to unsafe weather or mechanical problems. A Cessna 172 was equipped with a GPS unit and generally had two observers to conduct the surveys. Surveys were flown at an altitude of 750' and at a speed of about 100 mph. All flights were opportunistic and targeted on areas Whooping Crane had been observed or were suspected to be located.

Beginning on March 12, AIM began flying upstream (east to west) along the south side of the main river channel with both observers looking out the passenger side of the aircraft. This provided optimum light conditions such that observers looked away from the rising sun thereby minimizing glare off reflective surfaces. Start points alternated for each leg to address the

concern that one end of the river transect would always be flown earlier than the other end. Day one began at U.S. 281, flew the south side of the river west to Kearny then flew the north side of the river back to U.S. 281. Day two began at Shelton, flew the river to Kearney, returned along the north side of the river back to U.S. 281, then flew the rest of the river transect from U.S. 281 to Shelton.

Two ground observers were stationed along the survey route. Communication between the ground observers and the aircraft was accomplished through the use of two-way radios. In the event of a possible Whooping Crane sighting by the air crew, the ground person nearest the sighting was contacted and immediately dispatched to the location in an effort to confirm the identity of the white object. Efforts were made to photograph Whooping Cranes from the air using digital cameras. In addition, a GPS reading of the location was taken by air crew.

Whooping Crane movements, behavior, and diurnal habitat use were recorded when possible. All monitoring activities followed USFWS and Nebraska Game & Parks Commission guidelines. Landowner permission was obtained prior to entering any property.

Results

Opportunistic Locates.—

On the evening of March 17, Mary Harner reported the sighting of 2 Whooping Cranes on the river east of the Trust bunker blind by Chuck Cooper. AIM personnel flew the following morning but did not observe any Whooping Cranes in that area.

Aerial Survey.--

CONFIRMED WHOOPING CRANE SIGHTINGS-

Surveys were flown on 12 days totaling 22.4 hours of flight time. We recorded 16 confirmed Whooping Crane sightings. A minimum of 14 individual Whooping Cranes were counted. A family group of 3 individuals was observed on Cottonwood Ranch in the main channel (2.5 miles downstream of the Overton bridge) and again near the east end of Jeffery Island in the north channel (3 miles upstream of the Overton bridge) (Figure 1). All other cranes observed were between the Minden bridge and U.S. 281 (Figures 2-3).

Diurnal Movements and Activity.--

DIURNAL USE SITES-

Diurnal and activity data was collected when possible. AIM documented 6 sections (square miles) of off-river diurnal use locations during 9 days of observation (Figures 1-3). Whooping Cranes were observed 0 – 4.8 miles from their roost locations.

LAND-COVER CLASS-

Ag-Corn, Ag-Soybean, Open Water Pit/Pond/Lake, and Lowland Grass were the cover-types Whooping Cranes used during the day when continuous use monitoring efforts were conducted. Five locations were AG-Corn and 1 each were in the remaining habitats; all additional diurnal observations occurred in Ag-Corn or Ag-Alfalfa. Some locations were used on more than one occasion. Nocturnal roost locations were in Wetted Channel.

ACTIVITY-

A total of 38.1 hours of Whooping Crane continuous and instantaneous use (time budget) data was collected by ground personnel during 9 days of observation. The breakdown of observation time in various habitats is depicted in Table 7. Most of the diurnal activity recorded occurred in Ag-Corn (84%) followed by lowland grass (13%), and Ag-Soybeans (3%). We recorded 166 data points of activity (time budget). Feeding was the most frequently observed activity in all of the habitats combined (Table 8).

Table 7. Count of instant points by habitat.

| Habitat | Hours | n | Percent |
|---------------|-------|-----|---------|
| Ag-Corn | 32.2 | 140 | 84.3% |
| Ag-Soybean | 1.0 | 5 | 3.0% |
| Lowland Grass | 4.9 | 21 | 12/6% |

Table 8. Whooping Crane activity by habitat.

| Habitat | Activity | # of Points | Percent |
|---------------------------|-----------|-------------|---------|
| Ag - Corn | Alert | 13 | 9.3% |
| Ag - Corn | Defensive | 2 | 1.4% |
| Ag - Corn | Feeding | 114 | 81.4% |
| Ag - Corn | Preening | 2 | 1.4% |
| Ag - Corn | Resting | 9 | 6.4% |
| Ag - Soy Bean | Alert | 1 | 20.0% |
| Ag - Soy Bean | Feeding | 4 | 80.0% |
| Grassland - Lowland | Alert | 4 | 19.1% |
| Grassland - Lowland | Feeding | 2 | 9.5% |
| Grassland - Lowland | Preening | 1 | 4.8% |
| Grassland - Lowland | Resting | 14 | 66.7% |
| Open Water Pit/Pond/Lake* | Unknown | 0 | 100.0% |
| Wetted Channel | Alert | 1 | 5.6% |
| Wetted Channel | Feeding | 17 | 94.4% |

*Crane was believed to have landed in a stock pond but was not visible.

Search Effort.--

Ground searches were initiated on 14 occasions. A total of 20.2 hours was expended on this effort and 463 miles were driven. Search duration extended from 0.3 to 4.0 hours. Whooping Cranes were found on 8 (57%).

Program ID and U.S. Fish & Wildlife Service ID Comparisons.--

Table 9 compares the Program numbering system with the USFWS database (Martha Tacha, personal communication). A total of 10 groups of Whooping Cranes were confirmed in the study area during the winter survey.

Table 9. Comparison of Program Crane ID and USFWS Crane ID.

| Program Crane ID (Prefix 2012WI) | Program Name | USFWS Crane ID | Dates of Occurrence | # of cranes (Ad:Juv) |
|----------------------------------|----------------------|----------------|---------------------|----------------------|
| 01 | Overton family | 12A-01 | 1/27-2/2 | 2:1 |
| 02 | Wild Rose single | 12A-02 | 3/4-3/26 | 1:0 |
| 03 | Triplett Trio E | 12A-07 | 3/9 | 3:0 |
| 04 | Triplett Trio W | 12A-07 | 3/9 | 3:0 |
| 05 | Dippel Group | 12A-07 | 3/9 | 4:0 |
| 06 | Binfield Trio | 12A-08 | 3/10 | 3:0 |
| 07 | Mormon Island pair E | 12A-08 | 3/10 | 2:0 |
| 08 | Mormon Island pair W | 12A-08 | 3/10 | 2:0 |
| NA | Group of 7 | 12A-05 | 3/8 | 7:0 |
| NA | Below Gibbon bridge | 12A-04 | 3/8 | 4:0 |

Incidental Take.—

The USFWS requested information and documentation of any human activity that occurred in the proximity of Whooping Cranes that could constitute “take” as defined by the Endangered Species Act i.e. “...to harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect, or attempt to engage in any such conduct”.

LETHAL OR CRIPPLING TAKE-

AIM’s monitoring effort did not result in any crippling or lethal take of Whooping Cranes this season.

HARRASSMENT-

AIM personnel did not observe or engage in any activity or was aware of any activity by other parties that could be construed as “harassment” as defined by USFWS.

PUBLIC DISTURBANCE-

On two occasions, AIM personnel observed such activity by the public this season. On March 18, a vehicle with crane-watchers slowly drove by at a distance of 200 yards from the Whooping Crane. It flew about ¼ mile northwest and landed in the same cornfield.

On March 19, a vehicle drove within 200 yards of a Whooping Crane. It flew about ½ mile and landed in another field.

Discussion and Recommendations

Unusually warm weather in the region coupled with severe drought conditions and subsequent reduction of food resources throughout the wintering grounds in Texas were factors believed to have caused a widespread distribution of Whooping Cranes outside of their traditional wintering areas. The presence of a family group of Whooping Cranes in the study area in late January was unprecedented. This prompted personnel from Headwaters Corporation to initiate a “winter” Whooping Crane survey. Volunteers from a host of organizations were organized to accomplish this effort. The family group was last observed on February 2 so regular aerial surveys were curtailed until sightings by the public resumed. That happened on March 5 when 1 adult-plumaged Whooping Crane was reported in the channel near the Whooping Crane Trust’s offices. On March 8, a report of 7 Whooping Cranes and another report of 4 Whooping Cranes occurred. Aerial surveys resumed on March 9 and ten Whooping Cranes were observed by Headwaters personnel. Six individuals were observed on Rowe Sanctuary from the air although none of them were seen by crane-watchers in blinds that morning. AIM was contracted to conduct the aerial survey beginning on March 12 through March 20. The regular spring Whooping Crane surveys began on March 21.

On March 15, AIM personnel located a single Whooping Crane in among several hundred Sandhill Cranes on the Crane Trust’s Mormon Island Crane Meadows south of Grand Island (Figure 4). The crane was about 1 mile west of the main west gate in a lowland grassland (wet meadow) where it primarily rested (Table 8). It was observed from 14:50 to about 20:00 h when it flew southwest to the river to roost. A site evaluation was conducted by Greg Wright of the Crane Trust a portion of which follows:

Saturated soils; nearest standing water ~10m; water depth ~4cm; slough width =1-2m; nearest fence ~100m; vegetation dominated by common threesquare (dead plant matter) with other mixed grasses and forbs.

It is likely that only a fraction of the cranes present during this study would have been documented without this effort. We believe that surveys of this type should be conducted in the future when circumstances warrant. This effort furthered our understanding of the ecology of this highly charismatic endangered species.

Supplements

Original Data Sheets

CD containing a Microsoft Word final report file and selected photographs.

Figure 1. Whooping Crane Group 2012WI01 use sites near Overton. The Whooping Crane Group was confirmed at the “Day Use” area 28-30 January and again on 2 February.

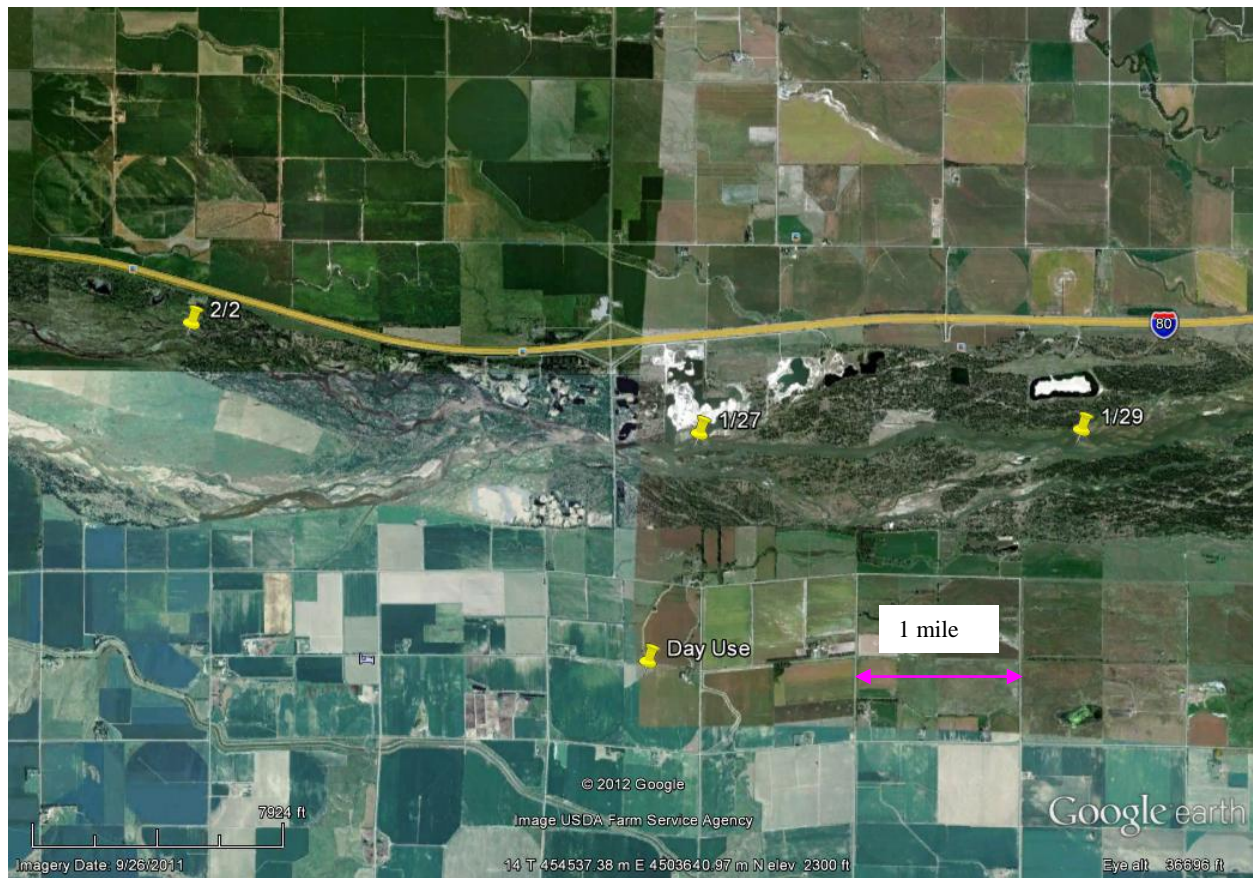


Figure 2. Whooping Crane Groups 2012WI03, 04, 05, 09 & 10 near the Gibbon bridge.

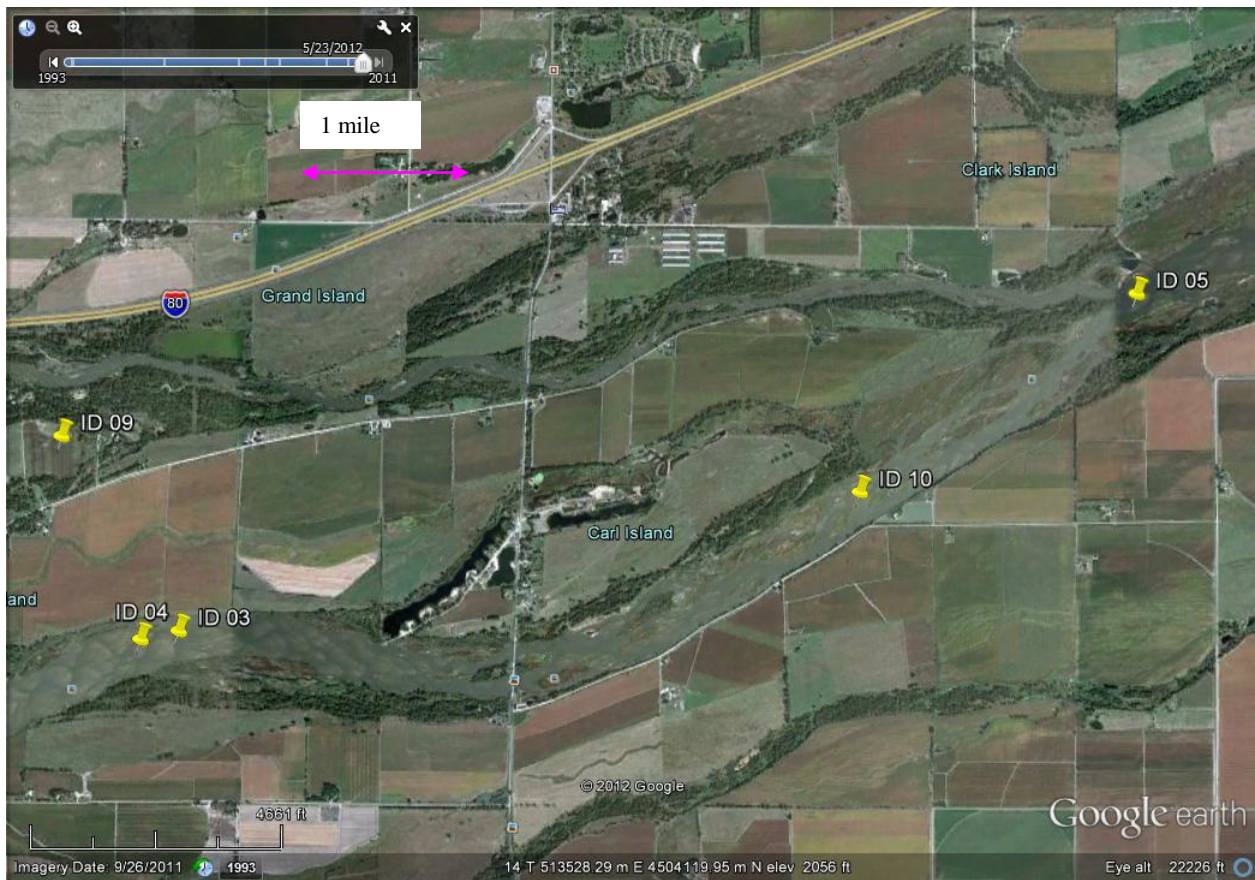


Figure 3. Whooping Crane Groups 2012WI02, 06, 07, & 08 near the Alda bridge. Dates indicate day use used 12-20 March. Additional day use areas were documented for Crane Group 2012WI02 near the cluster of locations in the bottom of the figure during 5-11 March, but are not included. Crane Group 2012WI02 was confirmed or believed to roost near the areas identified as ID 02, 5-25 March.

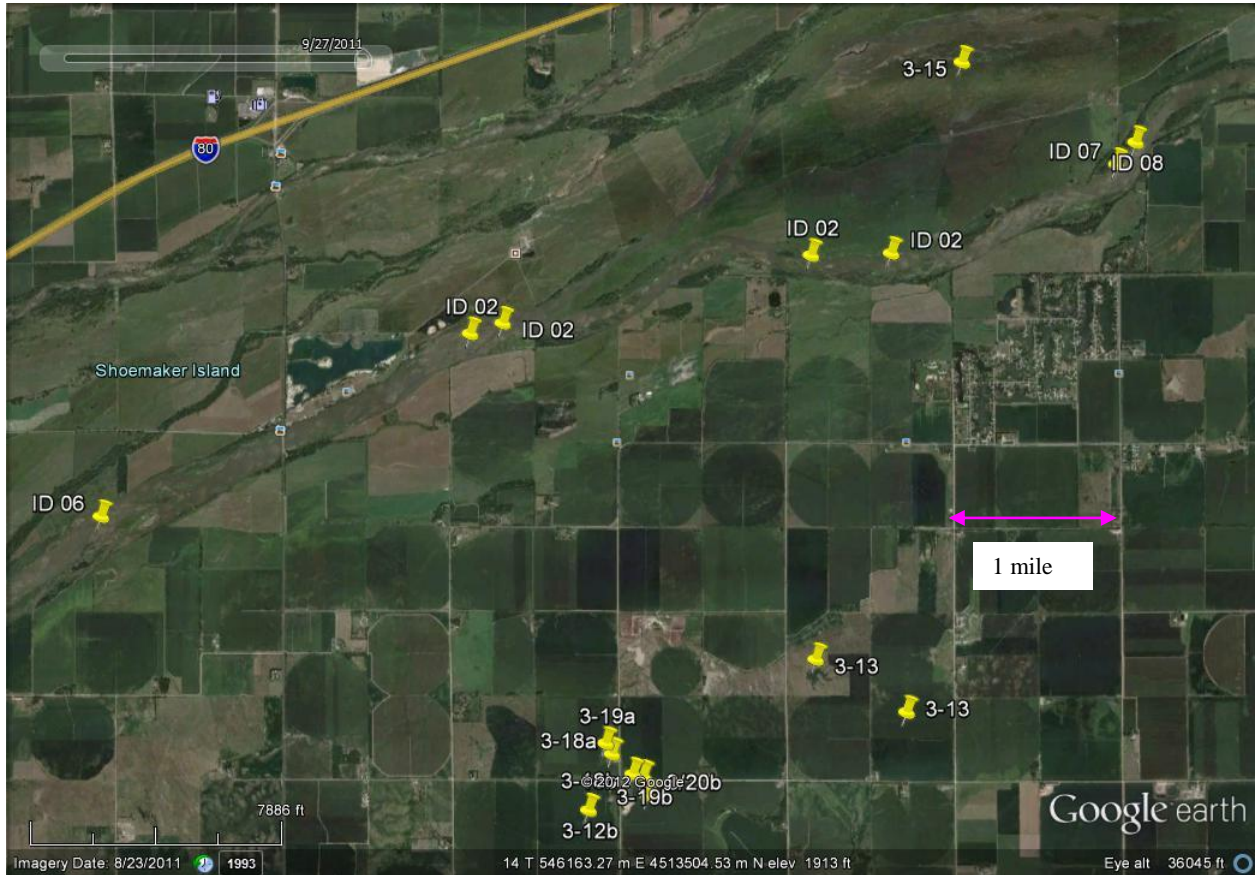


Figure 4. Lowland grassland on Mormon Island Crane Meadows used by a single Whooping Crane on March 15.



Use area on Mormon Island looking east. (Photo courtesy of Greg Wright).