



Whooping Crane Stopover Habitats on Lake Georgetown, U.S. Army Corps of Engineers, Fort Worth District

The primary purpose of this report is to: (1) *protect* existing wild Whooping Crane “stopover habitats; (2) *improve* existing habitats where needed; and (3) *create* new “stopover habitats” where there are opportunities.

Friends of the Wild Whoopers (FOTWW) and the U.S Army Corps of Engineers (USACE) have a Memorandum of Understanding to evaluate Whooping Crane “stopover habitats” on USACE lake properties. The project involves the six state migration corridor within in the states of Texas, Oklahoma, Kansas, Nebraska, South Dakota and North Dakota.

There is only one wild self-sustaining population of Whooping Cranes remaining on earth. These birds are America’s symbol of conservation. They are the largest bird in North America standing 5 feet tall with a wingspan of 7 feet (Figure 1). They are endangered species and need our help. This population nests and rears their young in Wood Buffalo National Park, Canada during spring and summer. After their chicks fledge, they migrate 2,500 miles through 6 states and spend the winter on Aransas National Wildlife Refuge (Figure 2). Thus these birds are known as the Aransas-Wood Buffalo population.

Destruction of nesting habitat and killing the birds for food decimated the population during the 1800’s and early 1900’s within the 6 state migration corridor. In 1943 there were only 16 Whoopers remaining. With protection and habitat management the population has slowly increased to an estimated 505 in 2018.

FOTWW believes that the wild Whooping Cranes in the Aransas/Wood Buffalo population are capable of taking care of themselves with two exceptions. They need (1) humans to protect their habitats and (2) humans to stop shooting them. We firmly believe that the USACE can do much to protect and manage many crucial “stopover habitats” on their lakes within the migration corridor.

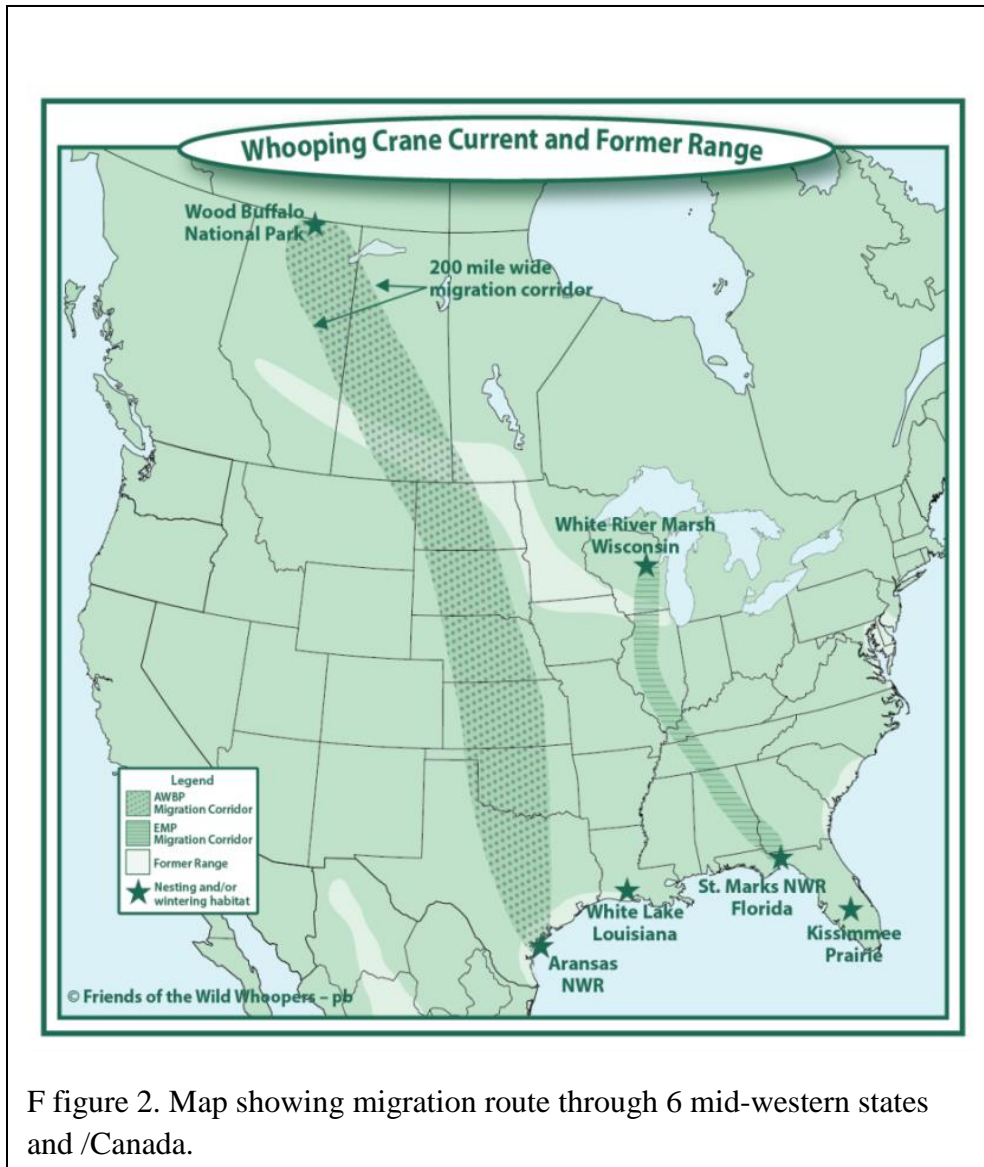
Today, however Whooping Cranes are facing more threats to their habitats. During their two annual 2,500 mile migrations they must stop 15 to 30 times to rest, feed and roost. Secure stopover habitats are needed throughout the migration



Figure 1. Stopping over to rest, forage and roost.

corridor approximately every 25 miles. And more secure wintering habitats are needed along the Texas coast near the Aransas National Wildlife Refuge. Currently about half of the population winters off the Aransas National Wildlife Refuge where they are not as safe. Continuous development along the coast is taking a serious toll on habitat.

During their two 2,500 mile migrations each year they migrate to and from their winter habitats on the Texas coast to their nesting habitats in northern Canada (See migration map Fig. 2).



F figure 2. Map showing migration route through 6 mid-western states and /Canada.

During migration Whooping Cranes often stop over on private lands, wildlife areas, lakes and some military bases. However, many private lands are being more intensively managed and face various forms of development. And some wetlands are becoming dryer due to global warming. FOTWW contends that lands and waters on USACE, military bases and Indian Reservations within the migration corridor can provide much needed relief. Some of these lands can be developed and/or managed to provide more stopover habitats for endangered Whooping Cranes.

Habitats for the cranes also benefit many other species of wildlife and fish. Likewise Whooping Cranes are compatible with other wildlife species using the same habitats (Figure 3).



Figure 3. Whooping Cranes frequently share their habitats with many other wildlife species like the white tail deer in the photo.

The most expensive part of establishing or improving habitat is land cost. If projects can be accomplished on government lands and Indian Reservations, the cost would be relatively minimal. Importantly any habitat projects deemed to be incompatible with the mission of the agencies involved would not be considered by FOTWW.

FOTWW has completed habitat evaluations on 32 military facilities, 8 Indian Reservations and 24 USACE lakes within the wild Whooping Crane migration corridor. Importantly some of these properties currently have suitable stopover habitats while other areas could be enhanced with minor work

The USACE and FOTWW Memorandum of Understanding allow us to focus on Whooping Crane habitat assessment and management recommendations on lands under USACE jurisdiction. We first need to determine if any suitable areas could be protected, managed, or appropriately developed to provide stopover habitats for Whooping Cranes. The next step would be to work to encourage appropriate management.

USACE lakes within the 6 state migration corridor are likely to become even more important to Whooping Cranes in the near future because of their locations and quality of “stopover habitats”. Lake Georgetown and others that are located in the Whooping Crane migration corridor can be especially valuable. As the crane population increases the migration corridor may also expand in width. The Corps Natural Resources Management Program is designed to protect and manage all natural resources in a manner to help wildlife including whooping cranes.

FOTWW Wildlife Biologist Chester McConnell and his assistant Dorothy McConnell visited Lake Georgetown on March 28, 2019 to assess potential “stopover habitats” for Whooping Cranes. David Hoover, Conservation Biologist, Kansas City, MO, USACE in coordination with Lake Georgetown

Manager Scott Blank made arrangements for our visit. FOTWW appreciates all involved with making preparations for a productive and enjoyable habitat evaluation official visit.

During our briefing, Biologist McConnell explained the need for Whooping Crane “stopover habitat” and features necessary to make suitable habitats. Lake Manager Scott Blank and Natural Resources Specialist Brad Arldt participated in the lake stopover habitat discussion. We discussed the natural resources condition for Lake Georgetown and potential areas where stopover habitats are located.

Natural Resources Management Program: (from USACE web page)

The Corps of Engineers is the steward of the lands and waters at Corps water resources projects. Its Natural Resources Management philosophy is to manage, conserve, and improve these natural resources and the environment while providing quality public outdoor recreation experiences to serve the needs of present and future generations.

In all aspects of natural and cultural resources management, Corps managers promote awareness of environmental values and adhere to sound environmental stewardship, protection, compliance, and restoration practices.

The Corps manages for long-term public access to and use of the natural resources in cooperation with other federal, state, and local agencies, as well as the private sector.

Natural resource managers integrate the management of diverse natural resource components such as fish, wildlife, forests, wetlands, grasslands, soil, air, and water with the provision of public recreation opportunities. The Corps conserves natural resources and provides public recreation opportunities that contribute to the quality of American life.

The broad objective of fish and wildlife management is to conserve, maintain and improve the fish and wildlife habitat to produce the greatest dividend for the benefit of the general public. Lake Georgetown manages the 1,299 surface acre lake and 3,000 acre land base for hunting. Implementation of a fish and wildlife management plan is the first step toward achieving the goals of the Fish and Wildlife Coordination Act (Public Law 85-624). The Texas Parks and Wildlife Department and the U. S. Fish and Wildlife Department share responsibility for managing fish and wildlife, primarily through enforcement of laws and regulations and establishing seasons and bag limits for game species.

FOTWW views the Natural Resources Management Program as being very useful in implementing the Whooping Crane “stopover habitat” projects that we recommend in this report. These recommended projects mesh well with ongoing policies and activities.

Whooping Cranes and other wildlife need lakes, wetlands and small ponds with the following features as “stopover roost sites” during migration:

- Lakes/small ponds/wetlands from 0.3 acres and larger in size
- Lakes/ponds/wetlands with some shallow areas 2 to 10 inches deep for roosting sites
- Flight glide path clear of obstructions for Whooping Cranes to land near roosting sites
- No thick bushes or trees in or near landing site (Figure 4).
- Gradual or gentle slopes into lakes/ponds where water is shallow
- Little or no emergent or submerged vegetation in lake at roost areas
- Extensive horizontal visibility from roost site so predators can be detected
- 200 or more yards from human development or disturbance such as power lines
- Agricultural grain fields or pasture land within one mile of stopover site for foraging



Figure 4. Ideal “stopover habitat” for Whooping Cranes. Number “1” points out the glide path for Whooping Cranes landing on lake shore. The site is clear of obstructions and provides a gradual slope into the shallow water. Horizontal visibility around the roost site is good. Number “2” points out the shallow water from 2 to 10 inches deep in roost area. Whoopers can feed on aquatic animal in the lake and forage on insects and grains in nearby fields.

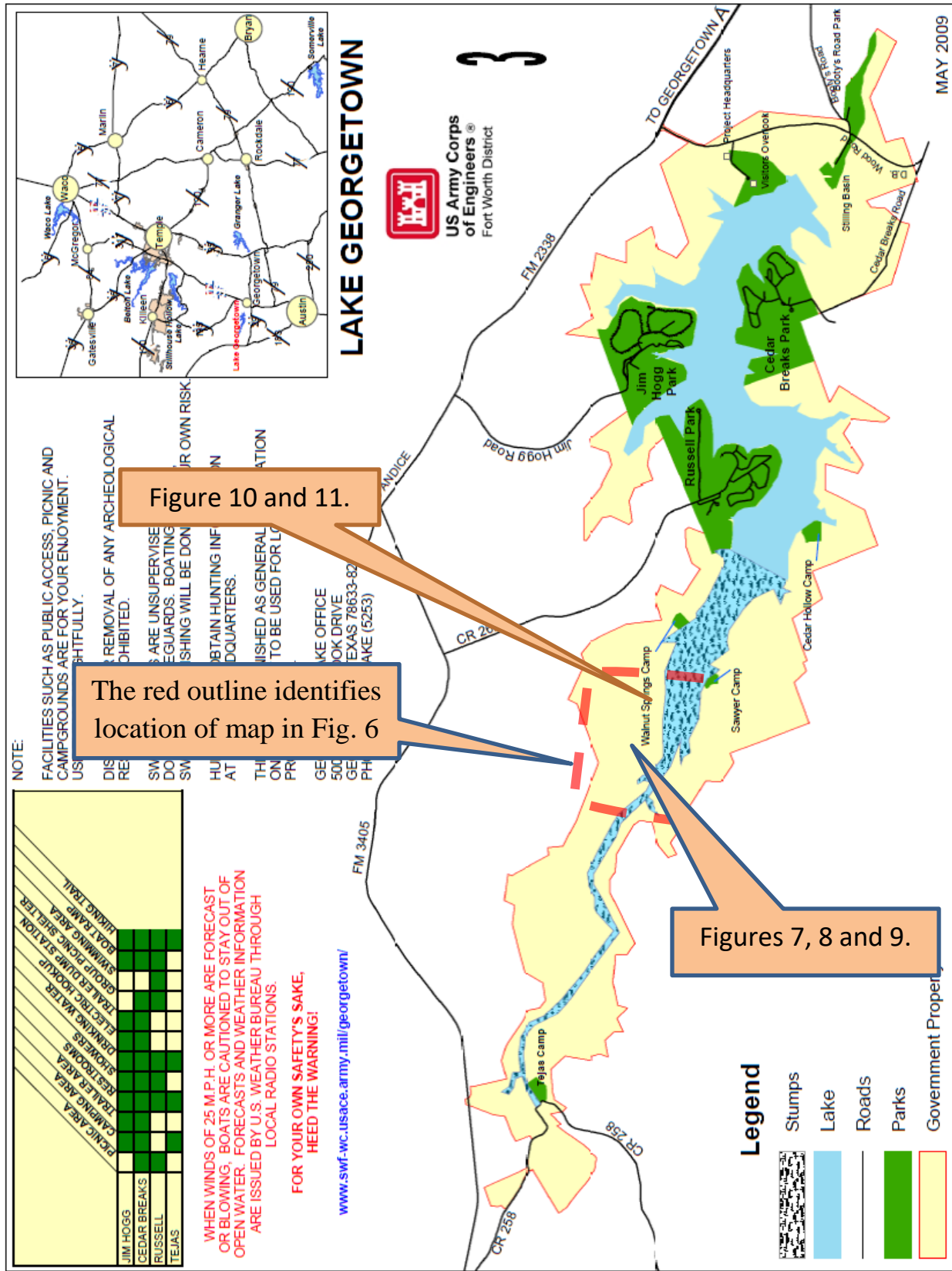


Figure 5. Map of Lake Georgetown with markers to show locations of photos.

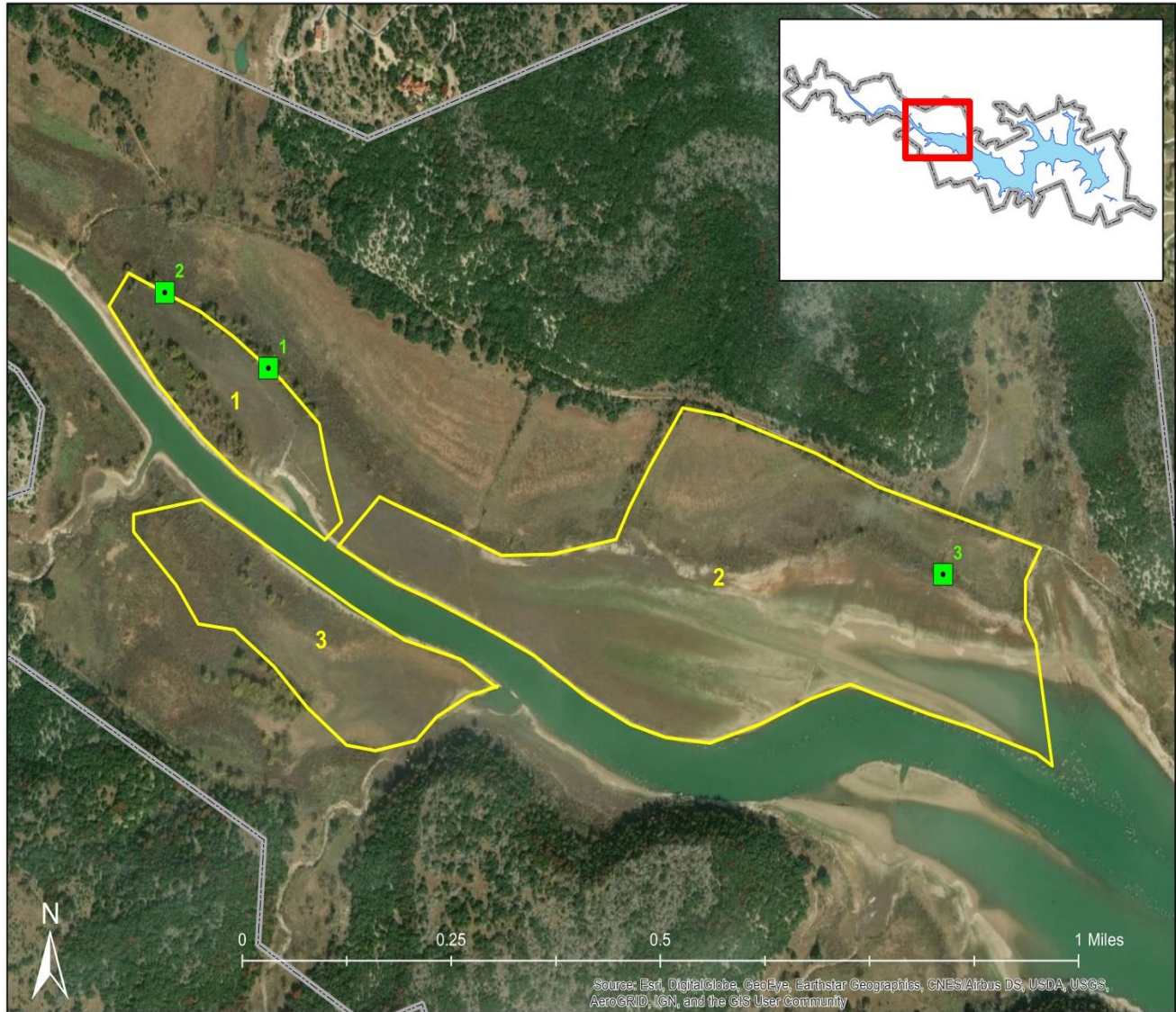


Figure 6. All the following photos in this report (Figures 7 through 11) were taken in areas of Figure 6 labeled “1” and “2”. The green boxes are locations where photos were taken.

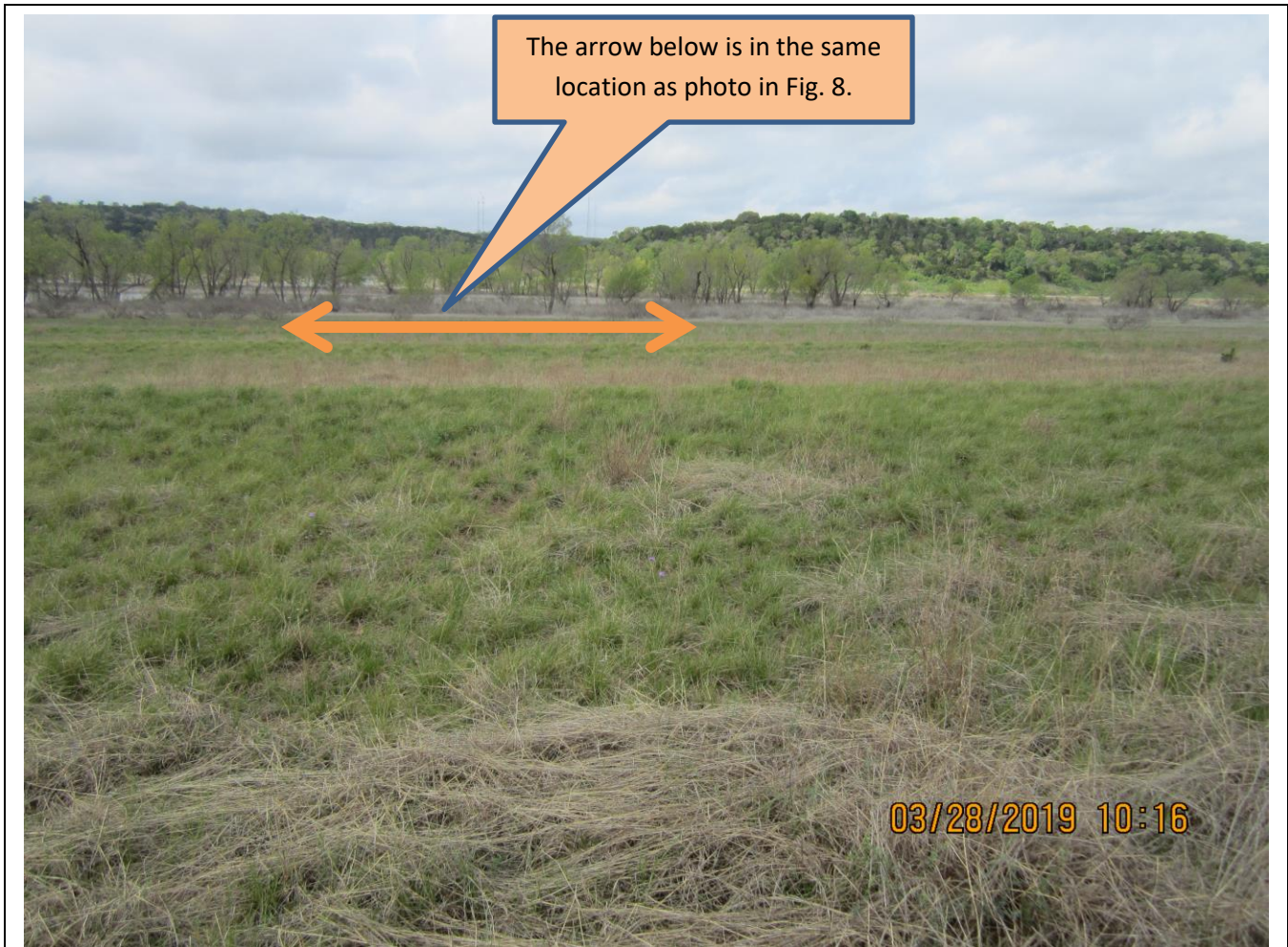


Figure 7. This photo shows a potentially exceptional “stopover habitat” for Whooping Cranes. The glide path for Whooping Cranes landing is clear of obstructions and provides a gradual slope into the shallow water. Gradual or gentle slopes provide good entrance into the lake where water is shallow from 2 to 10 inches deep in roost area. (The arrow shows location of area that needs clearing of all bushes and trees so Whooping Cranes can move from the field to water without obstructions.) No thick bushes or trees are in or near landing site. Horizontal visibility around the roost site is good so any predators could be observed. Whoopers can forage on insects and grains in the field and aquatic animal in the lake. There is extensive horizontal visibility from roost site so predators can be detected. The site is 200 or more yards from human development or disturbance such as power lines. Agricultural grain fields or pasture land within one mile of stopover site could be used for foraging.





Figure 8. This photo location identified in Fig. 7. It is a shallow area that Whooping Cranes require for roosting. The sprouting plants () indicate that the area is shallow. Because of their height (5 ft. tall) Whooping Cranes can defend themselves from predators while standing in water. During periods of low water, the dead tree limbs () should be removed from the water.



Figure 9. Photo taken a short distance upstream from Figure 8. Water levels fluctuate frequently in Lake Georgetown and most work clearing the debris needs to be accomplished during low water levels.



Figure 10 and 11 are the same location but photographed in opposite directions. The area wide photo location is in Fig. 6 item(3). The photos show the thick bush “barrier” that Whooping Cranes will not walk through. The bushes grow to the water edge and the cranes will not land in water. The brown “shape outlines” in both figures mark the area to be cleared of all bushes. Once cleared, any Whooping Cranes in the open fields will have a wide open path to walk into the nearby shallow water to roost. Total area to be cleared at this location is 60 feet wide by 225 feet long. The bushes can be clipped with a rotary cutter (Bush Hog) but a better long-term solution is to spray them with a “bush killer herbicide”. The herbicide will kill the bush tops and roots and will prevent regrowth for several years.



Figure 11. Both figures 10 and 11 have the same potential to be good “stopover habitat” for wild Whooping Cranes. Their features are identical and the management practices that need to be applied are the same.

DESCRIPTION OF EXISTING “STOPOVER SITES”

The photos in figures.7, 8, 9, 10 and 11 illustrate existing sites on Lake Georgetown that are ready for development into Whooping Cranes “stopping over” sites. With a minimum amount of work and expense, the USACE could prepare these sites where endangered Whooping Cranes can rest, forage and roost during their two annual migrations. FOTWW recommends beginning with the sites needing the least amount of management.

When the photos in this report were taken, water levels were “normal”. Flight glide paths to the shore areas are available from different directions for approaching cranes. The shore areas at the sites have some bushes, trees but they should be easy to clear. Horizontal visibility from the shore and water roost sites allows Whooping Cranes to detect any predators that may be in the area. The slope of the shore and lake edge at the two sites is gradual and some water depths of 2 inches to 10 inches are available during “normal” lake water levels. There is little emergent or submerged vegetation in the lake at these roost sites. The water is clear and supports abundant aquatic life. Foraging is available on USACE property and in nearby fields. In addition there are wild foods in adjacent managed grasslands, crop fields and wetlands that provide an abundance of insects, wild seeds and other wild food.

MANAGEMENT PRACTICES FOR LAKE GEORGETOWN WHOOPING CRANE STOPOVER AREAS:

The Button Bush shrubs need to be killed with a chemical brush killer to get rid of the above ground structure and the roots below ground. If clipped a few inches above the ground, the bushes will grow back rapidly. However to get management underway, clipping the Button Bushes with a “Bush Hog” would be acceptable for the first year of management.

During early application of management practices the USACE should be planning future management of the sites with a prescribed burning program. It is an excellent management practice that will enhance the land based habitat by killing woody vegetation and encouraging a variety of annual and perennial seed producing plants.

MANAGEMENT PRESCRIPTIONS:

1. Monitor the Whooping Crane stopover habitats identified in this report to suppress any tall vegetation (over 2 feet tall), noxious weeds, grass and shrubs through prescribed fire, mechanical means (rotary cutter/Bush Hog) and appropriate chemical application if necessary.
2. Review and update the Natural Resources Management Plan and other policy documents to include protection, improvement and development of Whooping Crane stopover habitat. ***Friends of the Wild Whoopers strongly recommend that endangered Whooping Crane “stopover habitats” be added to the Operation Management Plan at Lake Georgetown***

CONCLUSION

FOTWW was pleased to have the opportunity to visit Lake Georgetown. We were pleased to learn about the several favorable locations that could make excellent “stopover habitat” for Whooping Cranes. Only a relatively small amount of habitat development and management is needed to make some areas into excellent habitat. USACE managers should focus on the sites with suitable roosting characteristics and safe landscapes.

Habitat development and management recommendations for the sites we visited are written in each individual figure. The few potential “stopover sites” can be developed and managed rather simply, straightforwardly and inexpensively.

We urge the USACE to seek appropriation funds for additional development of Whooping Crane “stopover habitat” projects.

We sincerely appreciate the interest and cooperation of the outstanding USACE officials. We are grateful to David Hoover, Conservation Biologist, Kansas City, MO, USACE in coordination with Lake Manager Scott Blank who made arrangements for our visit to possible “stopover habitats” sites. Importantly, I also appreciate the assistance of FOTWW Vice-President Pamela Bates in preparing this report. The assistance of Dorothy McConnell on several needs made our work more enjoyable.



Friends of the Wild Whoopers

Chester A. McConnell

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