Whooping Crane Chicks Hatch in Louisiana — First in the Wild Since 1939

A major milestone was reached last month in the reintroduction of the Whooping Crane to Louisiana — on 11 April in Jefferson Davis Parish, a Whooping Crane chick hatched in the wild, the first in the state in more than 75 years. Two days later, a second chick from the same nest hatched.

“This is something we’ve been looking forward to since the reintroduction began in 2011,” said Louisiana Department of Wildlife and Fisheries biologist Sara Zimorski, who leads the Louisiana Whooping Crane project. “One of the major steps in restoring the species is successful reproduction. We’ve had several pairs nesting the last couple of years but until now no favorable outcomes. It’s an exciting time for us and all of our partners who have worked so hard alongside us.”

Added Zimorski, “The support and cooperation of the many landowners and farmers on whose property the birds spend time is critical to the success of the project.” The new parents paired earlier this winter and nested and produced eggs for the first time in mid-March. The female is 4 years old and the male is just 3 years old.

Edited excerpts from LDWF news releases, April 12 & 14. See details on page 5.

USFWS Puts End to Ultralight Aircraft-Led Migrations

In January the US Fish & Wildlife Service announced there would be no more ultralight aircraft-led migrations of Whooping Cranes from Wisconsin to Florida after 2015, a decision which disappointed many craniacs. Recruitment of wild-hatched chicks into the Eastern Migratory Population remains below expectations (and far from self-sustaining), and the USFWS is casting the blame on too much contact between the ultralight-led birds and their costumed human handlers. A headline in The Washington Post (29 Feb) put it this way: Whooping cranes are pretty terrible parents. Are humans to blame? The truth is, no one knows if contact with humans is a factor. But there is already evidence that suboptimal breeding habitat may be the culprit. Why not share your thoughts on this USFWS decision? — Ed.
The Whooping Crane Conservation Association is a non-profit organization incorporated in 1966 with the following stated objectives:

1. Advance conservation, protection, and propagation of the Whooping Crane population through its communications, publications, meetings, and committees, and through the activities of its members; to provide its members an opportunity for meeting to discuss related topics.

2. To prevent the extinction of the Whooping Crane.

3. To establish and maintain a captive management program for the perpetuation of the species.

4. To promote greater harmony and unity of purpose among all organizations, institutions, and agencies working toward the protection, conservation, and production of this species.

5. To collect and disseminate knowledge of this species; to advocate and encourage public appreciation and understanding of the Whooping Crane’s educational, scientific, and economic values.

The Whooping Crane Conservation Association is a volunteer organization managed by a Board of Trustees. Any member is eligible to become a Trustee. At the current time the WCCA is seeking to fill a vacancy on our Board of Trustees. Interested WCCA members are encouraged to submit their name to the ‘Contact WCCA’ link on our webpage at http://whoopingcrane.com/contact-wcca/

Paper submissions can be sent to:
Whooping Crane Conservation Association
2139 Kennedy Ave
Loveland, CO 80538-3420
Submissions should be made before July 31, 2016.

The current Trustees are:
Brian Johns, Acting President 2016
Lorne Scott — 2018
Walt Sturgeon — 2018
Tom Stehn — 2021

Tom Stehn comes to us after retiring (2011) from a 32-year-long career with the United States Fish and Wildlife Service. Tom had been the Whooping Crane biologist at the Aransas National Wildlife Refuge since 1982. Tom worked tirelessly for the cranes, conducting aerial surveys to determine the annual population of the cranes, managed prescribed burns, and oversaw research into habitat use and food resources at Aransas. At the time of his retirement he was Whooping Crane Coordinator and Co-chair of the Recovery Team. In 2014, Tom was honored with the Jerome J. Pratt Whooping Crane Conservation Award, the WCCA’s highest honor, for his dedicated service to Whooping Crane conservation.
Greetings from the new Editor!

Hello, my name is Daryl Henderson, and I’m the new Editor of Grus Americana, taking over from Marty Folk. Unlike Marty, I have no hands-on experience with cranes, but I do have a professional background in biology and I’m a craniac and an avid birder. I have a Bachelor’s degree in biology and a Master’s degree in zoology, both from the University of British Columbia in Vancouver, and a PhD in genetics from the University of California, Davis. I’ve done postdoctoral research in the United Kingdom, and research and teaching at Stony Brook University in New York. In 2014, I moved back to BC and now live on Vancouver Island. There are no Whooping Cranes this far west, but Sandhill Cranes can be seen and heard during spring and fall migrations. (Gray Jays – also known as Whiskey-jacks – can be found at higher elevations on the Island.)

I am also Editor of another crane newsletter, The Unison Call, published by the North American Crane Working Group. I will try to keep the contents of both newsletters different enough, and I invite you to help me in that effort by submitting opinions, WCCA news, photos etc. Finally, I would like to thank Marty for his many years of excellent service as Editor and his helpful advice in getting me started.

Book Review

One Chosen: The Spirit of Living Creatures by James C. Lewis

2015, paperback, 213 pages (available from Amazon.com)

Reviewed by Robin Doughty

James Lewis has written an intriguing, innovative young readers’ book about efforts in the 1970s and ‘80s to establish a flock of whooping cranes in the Rocky Mountains centered between Idaho and New Mexico. Adopting the personal voice of a crane named One Chosen, the author tells the story of a pioneer journey, in the manner of current ultra-light flights between Wisconsin and Florida, which guides One Chosen and his fellow cranes to New Mexico.

Adopting a similar narrative style used in The Last of the Curlews that records the migration of what is probably the extinct Eskimo Curlew, Lewis introduces his readers to the dangers, natural and man made, faced by the Whooping Crane flock. We learn how golden eagles ambush cranes, how coyotes and bobcats pounce on unsuspecting birds, how some hit power lines, and how humans shoot others. The One Chosen chronicles the journey, talks to his own species and to Sandhill Crane cousins about weather, food, roost sites, and other necessities along the route to Bosque del Apache, the journey’s end biologists selected for wintering birds. We are introduced to the flight northward where human supporters await and greet One Chosen and his survivors.

It is an interesting, unusual way of teaching 4-6 grade students about crane biology, behavior and conservation. It also assumes a strong religious background among its youthful readers. The Biblical names given to the birds, Old Testament references, and prayer-making resulting in Divine guidance linked to Christian beliefs make this children’s book best suited for religious schools.

Editor’s note: Jim is working on a more secular version of his book for public schools.
Below is a report on the status of the Louisiana Whooping Crane non-migratory flock from mid-September 2015 through the end of February 2016, prepared by Eva Szyszkoski of the Louisiana Department of Wildlife and Fisheries. 2016 began badly, with the vandalistic shooting of two Louisiana Whooping Cranes in southeastern Texas (see page 11). But sadness and anger gave way to jubilation in the breeding season, with the momentous arrival of the first wild-hatched chick in Louisiana in 75+ years (highlighted on page 1). On the following page, Sara Zimorski provides an update on Louisiana flock nesting activity through mid-May.

**Autumn 2015** - As of 15 September 2015, the Louisiana non-migratory population consisted of a maximum of 37 cranes (16 males, 21 females) including 26 whooping cranes in Louisiana, 6 in Texas, and 5 not recently reported.

**2015 Cohort** – On 3 December, 11 juveniles (3 male, 8 female) arrived from the Patuxent Wildlife Research Center in Laurel, Maryland. They were placed in the top-netted portion of the release pen upon arrival and received their permanent bands and transmitters on 7 December. They were released from the top-netted pen on 29 December. Food was provided in the open pen until 10 February and then allowed to run out. Once food was discontinued, the juveniles began exploring the surrounding area but mainly remained on White Lake property. At least 19 different adults or sub-adults were documented visiting the pen site during December through February.

On 22 February, female L1-15 was found weakened, unable to fly, and having difficulty breathing. She had arrived in Louisiana with a pre-existing respiratory condition which had seemed to improve prior to shipment. After her arrival, her condition deteriorated and she lost her voice in mid-January. The decision was made to euthanize her and necropsy results indicated the presence of aspergillosis in her respiratory system. As of 29 February, the remaining 10 juveniles had split into three separate groups. Female L4-15 broke off from the rest and was observed alone on the far western edge of the White Lake property. Male L7-15 and females L8-15, L10-15 and L11-15 formed one group, while males L2-15, L3-15 and females L5-15, L6-15 and L9-15 formed another. These two groups have been spending most of their time in the east marsh, across from the White Lake refuge and ENE of the pen.

**Return from Texas** – Females L5-12 and L6-12 returned to Louisiana from Denton and Ellis Counties, Texas on 19 September and 16 October, respectively.

HY2014 cranes L1, 12, 13 and 14 remained in Jefferson County, Texas until L12-14 split from the group and returned to Louisiana on 29 December. Female L1-14 and male L14-14 were shot and killed in Jefferson County on 11 January. Male L13-14 left the area shortly after, returning to Louisiana by 17 January.

**Captures** – Twelve free-flying cranes were captured for banding and transmitter replacement on 18 days of attempts between 2 October 2015 and 17 February 2016. Six of those were captured at the White Lake pen site.

**Reproduction** – Similar to last year, nesting began early in 2016. Pair L3-11 and L1-13 were observed on a nest in a private crawfish field in Allen Parish on 12 February. Pair L7-11 and L8-11 also began nesting in February with initiation on the 28th. At least two other pairs have built nesting platforms but have not yet laid eggs. Based on current associations, there is a potential for up to 10 breeding pairs this spring.

**Mortalities** – Mortalities from mid-September-February included two females and one male in Louisiana and one male and one female in Texas. One long-term missing female was also removed from the population totals in early February. The deaths in Texas were due to gunshot.

**Current Population Size** – As of 29 February 2016, the Louisiana non-migratory population consisted of a maximum of 42 cranes (17 males, 25 females).
As of 25 April 2016, both wild-hatched chicks were well and their parents (L6-12 & L8-13) were very attentive to them, noted Sara Zimorski. As can be seen in the lower photo, the nest was surrounded by water, so I asked Sara about the water level and how the chicks coped. — Ed.

“Nothing has changed in the nest pond – the water level has and will likely remain the same since the landowner is still actively crawfishing it. There is a fallow, recently plowed field south of the crawfish nest pond that the cranes have been going to recently – the chicks swim across the nest pond to the levee and then walk into the plowed field with their parents. The birds stayed on the nest pond until the first chick was 5 days old and the second was 3, and that day we saw them at the back edge of the nest pond where the chicks could stand. I imagine in a couple of weeks the chicks may be big enough to walk in the nest pond and then maybe the family will spend time foraging in there. We think they go back to the nest at night but we don’t know. We haven’t seen any other platforms built in the field that they might use for roosting.”

In addition to pair L6-12 and L8-13...
L3-11 & L1-13 — sat past full term on an early nest, eggs were fertile but the embryos died. Currently sitting on a re-nest, due to hatch the second week of May.
L7-11 & L8-11 — sat past full term, eggs were once again infertile. Currently sitting on a re-nest.
L2-11 & L13-11 — nest failed, single fertile but dead egg collected.
L10-11 & L11-11 — sitting on first nest, due to hatch this weekend/ next week.

One final note from Sara: As of 16 May 2016, no other chicks have hatched, although 3 pairs are sitting on re-nests (so there is a small chance of another chick hatching). Sadly, one of the two wild-hatched chicks (identified as LW2-16) appears to have perished.

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
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<tbody>
<tr>
<td>No. of nests detected at WBNP (May)</td>
<td>74</td>
<td>82†</td>
<td>68</td>
</tr>
<tr>
<td>No. of fledged chicks detected (Aug)</td>
<td>28</td>
<td>32</td>
<td>23</td>
</tr>
<tr>
<td>Average no. of chicks per nest (20-year average = 0.49)</td>
<td>0.38*</td>
<td>0.39**</td>
<td>0.34*</td>
</tr>
<tr>
<td>Additional territorial pairs (non-nesters)</td>
<td>21-25</td>
<td>43</td>
<td>20-24</td>
</tr>
<tr>
<td>Estimated total no. of birds at Aransas NWR (within the primary survey area)‡</td>
<td>304 (95% CI 260-354)</td>
<td>308 (95% CI 267-350)</td>
<td>329 (95% CI 293-371)</td>
</tr>
<tr>
<td>Estimated no. of juveniles at Aransas NWR</td>
<td>39 (95% CI 32-42)</td>
<td>39 (95% CI 33-46)</td>
<td>38 (95% CI 33-43)</td>
</tr>
</tbody>
</table>

†Most nests ever recorded. *All family groups had a single offspring, i.e., no twins; **two families with twins. ‡Estimated no. of birds outside the primary survey area in 2013, 2014, and 2015 were 6, 6, and 9, respectively. Wood Buffalo National Park (WBNP) 2013 data are from Harrell and Bidwell (Oct. 2014), Report on Whooping Crane Recovery Activities; WBNP 2014 data are from Northern Journal (norj.ca), Sept. 1, 2014, quoting Mark Bidwell; WBNP 2015 data are from Bidwell and Conkin (see below), with thanks to Lea Craig-Moore. Aransas NWR counts are from ‘Whooping Crane Updates’ on the Aransas NWR website, with thanks to Wade Harrell. (95% CI means 95% confidence interval) — Ed.

**Summary:** Annual monitoring of the Aransas-Wood Buffalo Population (AWBP) of whooping cranes (Grus americana, hereafter cranes), which numbers approximately 300 individuals, is a key element of Canada’s efforts to recover the species under the Species at Risk Act (SARA). In 2015, the Canadian Wildlife Service (CWS) and Parks Canada conducted surveys for whooping cranes in breeding areas in southern Northwest Territories (NT) and northern Alberta, in and adjacent to Wood Buffalo National Park (WBNP). Breeding pair surveys in May detected 68 nests, 13 of which were outside the area designated as critical habitat and six of which were outside WBNP; 20-24 pairs without nests were also observed. Surveys in August detected 23 juveniles; 23 pairs had one juvenile each and no pairs had two juveniles. Annual productivity was 0.34 juveniles per nest, lower than the 20-year average of 0.49 but within the long-term natural range of variation. Of 16 cranes banded with satellite transmitters that were confirmed to nest, nine were re-sighted with juveniles and five without juveniles. Of 18 banded cranes that did not appear to nest, 11 spent the summer in or adjacent to WBNP. Results from monitoring of the AWBP in 2015
highlight the continued increase in the breeding population, although it is still well below Canadian and International Recovery goals, and the ongoing expansion of the breeding range into areas not currently designated as critical habitat.

**Habitat Conditions in Breeding Areas:** During the 2015 breeding season, habitat conditions in the whooping crane nesting area were exceptionally dry. Annual precipitation (May 2014 to April 2015) at Fort Smith, NT preceding the breeding season was 104% of the 60-year average, however precipitation in the seven-month period from October 2014 to April 2015 was 79% of the 60-year average (Environment Canada 2015). In May 2015, observers noted that water levels in the nesting area were low relative to recent years. Dry conditions persisted throughout the breeding season; precipitation in the five-month period from May to September was 62% of the 60-year average (Environment Canada 2015). During juvenile surveys in August 2015, observers noted that many breeding-area ponds were dry. Warm and dry conditions contributed to an active wildfire season in breeding areas and the surrounding region. Fires burned 15,839 ha or 3.88% of the area designated as critical habitat, greatly exceeding the 25-year average of 0.90%. Outside the area designated as critical habitat, 13 nests were detected and two of these occurred within 5 km of fires. Additionally, wildfire affected 372,450 ha or 8.16% of WBNP (vs. the 25-year average of 1.26%) and 280,880 ha of the South Slave Region of the NT (Government of the Northwest Territories 2015).

**Management Considerations:** We confirmed nesting by 68 pairs in late spring, producing an average of 0.34 juveniles per nest by mid-summer. While the number of confirmed nests has increased steadily since surveys began in 1966, it also varies annually, possibly in response to environmental conditions during the breeding season. The ratio of juveniles to nests, which is an estimate of breeding success for the population, also varies annually but in a periodic manner that tracks the 10-year boreal hare-lynx cycle (Boyce et al. 2005, *Biological Conservation* 126:395-401), likely because of periodicity in abundance of potential predators (e.g., wolves, lynx, red fox). In 2015 there were fewer nests than in the previous two years, possibly because weather was unusually hot and dry, and juvenile success was relatively low. In 2014, however, more nests were confirmed than in any previous year, highlighting the gradual but steady increase in the breeding population over the last 60 years. Even so, the AWBP is many years away from achieving the Canadian down-listing goal of 125 pairs (i.e., 250 mature individuals; COSEWIC 2010) or the international goal of 250 productive pairs (CWS and USFWS 2007). Recovery of the species depends mainly on growth of the AWBP, so monitoring should continue until recovery goals are reached (CWS and USFWS 2007). Thirteen breeding pairs with nests were detected outside the area designated as critical habitat (CH; Environment Canada 2007) under SARA, and six of these were also outside WBNP, highlighting...
the ongoing expansion of the AWBP’s breeding range. The first nest outside WBNP was detected in 1982 on reserve lands of the Salt River First Nation, east of WBNP, and in 1998 cranes were detected nesting north of WBNP, in the Northwest Territories. Currently, up to 20% of nests occur outside CH annually and, although cranes and their nests are protected under SARA and the Migratory Birds Convention Act wherever they occur, breeding habitat is not protected unless it is identified as CH (i.e., habitat required for the survival or recovery of the species). In particular, SARA prohibits destruction of CH in federal protected areas (e.g., WBNP) and includes measures that could protect CH in other areas. Moreover, up to 11% of nests occur outside WBNP annually, and these nests and associated habitat are not protected under the Canada National Parks Act or related regulations. Because the breeding range of whooping cranes has expanded outside the CH, including into areas which could be impacted by human development, Environment Canada is undertaking work to update the CH to ensure it more closely corresponds to current and probable future breeding ranges of the species.

The above are excerpts (with minor editing) from Bidwell and Conkin, not the entire report. Thanks to Lea Craig-Moore (Species at Risk Recovery Unit, CWS Prairie and Northern Region, Environment Canada) for providing the document. — Ed.

Whooping Crane Survey Results: Winter 2015–2016
Matthew J. Butler and Wade Harrell, US Fish & Wildlife Service

The U.S. Fish and Wildlife Service has completed aerial surveys of the primary survey area centered on Aransas National Wildlife Refuge to estimate the abundance of whooping cranes in the Aransas–Wood Buffalo population. Preliminary analyses of the survey data indicated 329 whooping cranes (95% CI = 293–371) inhabited the primary survey area (see map). This estimate included 38 juveniles (95% CI = 33–43) and 122 adult pairs (95% CI = 108–137). Recruitment of juveniles into the winter flock was 13 chicks (95% CI = 12–14) per 100 adults, which is comparable to long-term average recruitment (14.5 per 100 adults).

![Map of the sampling frame used to monitor whooping crane abundance](image)

The sampling frame used to monitor whooping crane abundance on their wintering grounds along the Texas coast of the Gulf of Mexico. (The above paragraph is the report’s summary (edited), not the entire report. — Ed.)
**Eastern Migratory Population Update**

Karis Ritenour, Whooping Crane Field Technician, International Crane Foundation

**Parent-reared release and migration** – Three whooping crane colts reared by adult whooping cranes at Patuxent National Wildlife Research Center were banded at Necedah National Wildlife Refuge on 17 September 2015, moved to temporary pens near established pairs of adult whooping cranes, and released between 20-22 September.

14_15 (F) integrated with a large group of sandhill cranes, leaving Necedah on 3 October and staying with them on the Wisconsin River in Sauk Co, WI. Eventually she migrated with sandhills to Wheeler NWR in Alabama.

16_15 (M) was found dead on 6 October, the official cause of death was predation.

20_15 (M) left Necedah NWR in early October and was reported in Dubuque, IA habitually using an area near several businesses, busy parking lots, and close to a highway. International Crane Foundation staff captured him on 13 October and re-released him near 14_15 in Sauk Co, WI. Almost immediately he flew south alone again and has been in Louisiana (currently St. Martin Parish) since then.

**Direct Autumn Release and migration** – Eight birds reared by costume at ICF (6 F, 2 M) were banded as of 22 October and officially released on 3 November 2015 at Horicon NWR. Most remained near Horicon until mid-December. By January, 4 birds (61, 62, 63, and 67_15) had migrated to the border of Randolph Co, IL and Sainte Genevieve Co, MO with no other cranes in the area. 65_15 wintered at Goose Pond, IN with sandhills and several adult whooping cranes, 68_15 near Jasper-Pulaski Wildlife Area in IN along with sandhills and at least one adult whooping crane, and 66_15 migrated with sandhills to Lake Co, FL. One DAR juvenile (64_15) was last seen leaving Horicon NWR in November with a large group of sandhill cranes, current whereabouts are unknown.

**Ultralight release** – This year’s ultralight cohort reached St. Marks NWR on 6 February 2016 and the group of six juveniles (5 F, 1 M) was banded on 9 February.

**Mortalities** – W3_15 died on 21 September 2015 due to pneumonia caused by *Aspergillus fumigatus*. 16_15 (M) was found dead on 6 October due to predation.

**Wintering locations** – The maximum population size as of 31 December 2015 is 100 birds (52 males, 46 females, 2 unknown). As of late January the distribution of the population was as follows (not including the 6 ultralight-lead birds): Alabama 14, Indiana 38, Illinois 16, Florida 12, Georgia 2, Kentucky 5, Tennessee 2, Louisiana 1, Unknown 10.

**EMP Update March & April 2016**

**Parent-reared birds** — 14_15 was associating with a pair of adult whooping cranes in LaPorte Co, IN, and appeared to be injured. On 28 March she was sighted with a bad limp. She was still able to fly at least a short distance. Monitoring of this bird is continuing. 20_15 (also known as ‘Kevin’ is some news reports) was still alone in Louisiana (as of the end of March), but was starting to move north.

**Ultralight 2015 cohort** — 1_15 (F), 6_15 (F), 8_15 (F), 10_15 (F) and 11_15 (M) left St. Marks NWR together 30 March. They crossed into Wisconsin the weekend of 16/17 April. 2_15 (F) began spring migration with a group of older birds but split off and veered into eastern Indiana for several days. She, too, entered Wisconsin the weekend of 16/17 April, migrating alone.

**Wild chicks** — W10_15’s parents (2_04 & 25_09) returned to Necedah NWR mid-March. W10_15 was observed alone in Vernon Co, WI on 26 March. W18_15 is still with its parents (9_03 & 3_04) in Wayne Co, IL as of 21 March.

*Data from the Whooping Crane Eastern Partnership website and the Journey North website.*
Agreement Gives Hope to Whoopers and Their Fans

Corpus Christi, TEXAS (24 February 2016) — The endangered whooping crane now has a seat at the negotiating table alongside authorities who manage the flow of freshwater into their winter home.

After years of legal battles over water allocation for cranes and other wildlife in the San Antonio Bay estuary, the Guadalupe-Blanco River Authority and The Aransas Project announced Wednesday an agreement that could change how Texas balances the needs of man and nature, said Jim Blackburn, lead attorney for The Aransas Project, a Rockport-based nonprofit group of environmentalists, business owners, anglers and conservationists.

"We've agreed to talk about virtually all the issues in a good-faith effort to come up with solutions after all these years of fighting," Blackburn said. "This is about changing the way we've been doing things historically with respect to water rights and how water is allocated."

The two groups became adversaries in 2010 when the Aransas coalition filed a lawsuit accusing the Texas Commission on Environmental Quality and the river authority of withholding freshwater meant to nourish the San Antonio Bay estuary that, in turn, nourishes the only wild flock of endangered whooping cranes during their winter stay in Texas.

An estimated 23 birds died during the winter of 2008-09 when drought conditions and lagging freshwater inflows brought high salinity to the marshes, which dramatically reduced the numbers of blue crabs and wolf berries. These are mainstays of the cranes' diet.

Initially, in 2013, Senior U.S. District Judge Janis Graham Jack upheld the group's claim, suggesting the state was, at least, partially to blame for the deaths in violation of the Endangered Species Act. That decision was overturned by the 5th U.S. Circuit Court of Appeals based in New Orleans. An attempt to have the case heard by the U.S. Supreme Court failed in June.

This week's nonbinding agreement focuses generally on identifying creative ways to tap into or create nontraditional water sources to meet the growing needs of businesses and communities, while allowing for healthy bays and estuaries. The title of the six-page agreement indicates the span of its intended reach: "Water, Habitat, Economy — A Shared Vision of the Future for the Guadalupe River System and San Antonio Bay."

The agreement represents hope for whooping cranes and the people who protect them, said Chester McConnell, president of Friends of the Wild Whoopers, a nonprofit based in Alabama.

"Nobody knows the issues surrounding whooping cranes and water better than Jim Blackburn," McConnell said. "So if he's behind this agreement, then we put our full faith behind it and hope for a good outcome."

The document suggests the two parties share a belief and vision that solutions will come from the agreement. Blackburn said reaching common goals could become challenging at times, but suggested the gap separating the two parties is much narrower now.

"We're very serious about this," said Todd H. Votteler, executive manager of science, intergovernmental relations and policy for the river authority. "The litigation is done, so now we're going to focus on the things that we agree on."
Votteler said he expects some unhappiness from people on both sides regarding parts of the agreement. And some might be leery of the process or the outcome. But he suggested that's to be expected with such a controversial and emotional issue.

Much of the agreement is written in broad language, with many references to research and analysis to be conducted to find innovative solutions. These might include returning prairies within the watershed to native conditions to provide greater retention of groundwater.

In turn, Blackburn said this natural storage system could replenish seeps and springs, which could translate to improved freshwater flows for the estuary. This would require engaging private landowners and offering incentives to restore native prairies.

The agreement touches on climate change and ways to offset the consequences of drought and sea-level rise. There is a section on moving or channeling water within the Guadalupe River Delta, possibly to expand or create new habitat for the growing flock of whooping cranes.

This effort might include looking at alternative habitats for cranes in other river basins and estuaries along the coast to offset habitat loss from a rising sea. This might include identifying willing buyers and sellers of land for this use.

To achieve this shared vision of stewardship, the agreement mentions a need to seek funding through federal, state and private sources.

Either party can withdraw from the agreement at any time. And the document may be altered or revised to reflect changing views or circumstances.

"This is an opportunity that may never come around again for us to really change things in Texas," Blackburn said. "We're all guilty sometimes of not being creative enough in our search for solutions. This is an opening to change that. It's the beginning of a dialogue rather than an endpoint, and a huge step forward from where we were. It's remarkable in that way."

From an article (edited) in the *Corpus Christi Caller-Times*, by David Sikes. Contributed by Tom Stehn

**Alleged Shooter of Endangered Whooping Cranes to be Prosecuted Under Endangered Species Act: International Crane Foundation Commends Federal Prosecutors**

**Texas (22 January 2016) —** The case against the alleged shooter of two endangered Whooping Cranes in Texas this month (11 January) has been re-filed under the Endangered Species Act, which increases the likelihood of larger penalties for the crime. It was previously thought that the case against Mr. Trey Frederick would be tried solely as a Class B Misdemeanor under the Migratory Bird Treaty Act, which was widely considered an insufficient course of action.

“If we hope to deter future shootings, perpetrators must be prosecuted vigorously. In all cases of Whooping Crane shootings, we demand justice for the birds that were killed, restitution for the enormous effort needed to bring them back, and personal penalties that match the seriousness of the crime,” said Rich Beilfuss, President & CEO of the International Crane Foundation.

The two cranes deliberately shot in Texas were members of the recently reintroduced Louisiana flock which numbers just about 30. Over the past five years, more than 20 Whooping Cranes have been shot and killed in the United States.

“Whooping Cranes are an iconic species, central to our shared natural heritage. We are grateful to the thousands of citizens who have demanded justice in this case and thank federal authorities for continuing to pursue a just outcome. It’s our hope that by working together, we can prevent future tragedies like these shootings,” Beilfuss added.

ICF news release (edited), from Anne Sayers
Whooping Crane adult pair and juvenile at Aransas National Wildlife Refuge. Thank you to Mary and Richard Cooke for allowing us to reproduce this image. The shot was made with a Tamron 150-600mm lens on a Canon 70D. With Kevin Sims and Aransas Bay Birding Charters. © 2016 Cooke Photographics

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