EASTERN CRANE BULLETIN

March 2019

The Eastern Crane E-bulletin is distributed to those interested in cranes in general, and specifically, the Eastern Populations of Sandhill and Whooping Cranes, as well as the continuing work for the protection of these birds and their habitats.

Editor: *The following, by Joe Duff, co-founder and CEO of Operation Migration, is how and why Operation Migration decided to leave the Whooping Crane Eastern Partnership (WCEP). Our thanks go to Operation Migration for allowing us to include this communication in the Eastern Crane Bulletin.*

Photograph courtesy of Operation Migration

Operation Migration: Final, Final Thoughts

December 31,2018

Operation Migration resigned from the Whooping Crane Eastern Partnership (WCEP) on August 17, 2018 and as of December 31, the organization will cease to exist. Since our resignation announcement, we have had no official response from our WCEP partners or even an acknowledgement that our letter was received. We are writing this open communication to our supporters, the Recovery Team members and the WCEP partners to provide a better understanding of the logic behind our resignation and to quell some of the rumors that have arisen.

Our resignation was motivated, in part, by the current Recovery Team plan for the Eastern Migratory Population. Although we are critical of that management strategy, we recognize it was made with good

intentions and with the best interest of the birds in mind. Because we do not agree with the plan does not mean we are critical of the planners. Each of you brings unique talents and experience to the cause and we respect the knowledge and integrity of all of the members.

The decision to release only parent-reared Whooping crane chicks within the EMP was based on low reproduction in and around the Necedah NWR. The U.S. Fish and Wildlife Service's 2015 Vision Document blamed that low prolificacy on the shortcomings of costume-rearing methods; specifically, those employed by Operation Migration. It was hypothesized that "artificiality" of the ultralight-led (UL) method produced inattentive parents and caused the high chick mortality at Necedah. Other than the low productivity numbers, that theory was not supported by research that was shared with the partnership. Ironically, similar costume-rearing strategies appear to be working well in Louisiana.

Rumor one:
Operation Migration wanted to bring back the aircraft-led release method, to keep doing the same thing while expecting different results.

Our position: *OM believes that the UL program was effective however, we eventually agreed that it was no longer required to achieve a self-sustaining EMP. After the cross-imprinting problems at Grays Lake, the Recovery Team originally opposed an eastern reintroduction if it depended solely on chance or wild Sandhill cranes to instill proper migration behavior. The UL method solved that problem making the EMP possible, both biologically and politically, and along the way it presented the conservation of Whooping cranes to a global audience. Now there is a core population migrating appropriately and the UL method has served its function. With sufficient allocations and less restrictive release strategies, we believe the EMP can become self-sustaining. We have petitioned for both of those initiatives, but our appeals were rejected.*

The current release strategy is limited by the number of chicks that can be parent-reared in the captive breeding centers and by the number of adult pairs within the EMP that could act as surrogates in the fall when the chicks are released. WCEP is also constrained by the disproportionate chick allocation between the EMP and the Louisiana Non-migratory Population.

Rumor two:
Operation Migration is not thinking of the big picture. It is concerned only with the EMP and not the overall recovery of the species and is therefore opposed to the Louisiana Non-Migratory Population.

Our position: *The Louisiana project has been a brilliant success so far with five fledged chicks in only year eight, and some to record-young parents. The project leaders have integrated Whooping cranes into the local farming culture and made them a source of pride throughout the state. And they did it without creating a complex infrastructure like WCEP. Their work is extremely promising, and we can understand why the Recovery Team would want to concentrate resources there. However, too much concentration will compromise all the effort it took to build the EMP to its current size. If egg allocations to the EMP remain imbalanced until 2021, when the current Recovery Team strategy expires, natural attrition will undoubtedly reduce the number of EMP breeders that have also fledged a record five chicks in 2018.*

Rumor three:
Operation Migration does not believe the EMP can be successful but the five chicks that fledged in 2018 demonstrate that they are mistaken.

Our position: *Seventy percent of the parents of those five fledged chicks were released using the Ultralight method. Those successes are an indication that the costume-reared cranes released many years ago are finally learning how to deal with the challenges at Necedah. Their success has little to do with the current parent-rearing strategy. The results of this latest experiment will only be revealed a few years from now, if ever. With continued low allocations, by that time natural attrition will have decreased the number of adult cranes in the EMP, even among the breeders that produced those five chicks and much of the work WCEP did will have been lost.*

It is also worth noting that parent-rearing has been tested before, even with a crane species, but it failed to significantly increase productivity. Additionally, survival rates are lower among parent-reared juveniles

that are released just before their first migration, with no wild experience, and months before they would normally be separated from their parents. Add this to the lower allocations planned until 2021 and the sample size will assuredly be too small for any confidence in the results. Finally, the EMP contains such a diverse mix of release strategies, from wild-hatched chicks to DAR and UL reared cranes, that properly evaluating the potential of a parent-reared strategy within that amalgam — will be inconclusive. If a parent-reared crane survives for five years and breeds with a DAR or a UL adult, how can their success or failure be attributed to the rearing technique of one or the other?

In summary, there is no indication that parent-rearing has worked in the past, too few birds are being released to make it work now and there is likely no way to evaluate it in the future. Even as a learning opportunity, it has little merit. And while this experiment is underway, attrition will take a severe toll on the population it took WCEP so much time and money to establish.

In-The-Field Parent Rearing:

In an attempt to more closely replicate the natural process, Operation Migration proposed raising parent-reared chicks in the field rather than at one of the captive centers. We requested that two to four parent-reared chicks be relocated to White River Marsh in the spring at 40 days of age or younger. They would have been housed in our isolated pens deep in the marsh. A non-breeding pair of captive cranes, not yet reallocated from the Patuxent flock, could have acted as alloparents. The chicks would have been slowly introduced to those adults in divided pens that provided upland foraging areas and wetland roosting sites all within an isolated, top-netted enclosure that was monitored by a live, 24-hour camera. They would have learned to forage for natural foods provided within that compound and been released daily for flight practice. Rather than learning to fly in small pens at the breeding centers, they would fledge naturally and become familiar with the wetlands that would eventually become their summer range. In addition, they would have opportunities to interact with the wild Whooping cranes that use the same habitat.

This proposal would have followed the directives of the Recovery Team and produced parent-reared chicks that were already acclimated to the introduction site. They would have been strong flyers by migration time and maybe even familiar with adult con-specifics that could guide them south. This rearing strategy would have augmented the number of parent-reared cranes released into the EMP and relieved some of the pressure on the captive breeding centers that would otherwise be responsible for raising PR chicks until the fall when they are normally shipped to Wisconsin. We offered to cover the cost of relocation and all the summer expenses including the fall tracking, however, that proposal was rejected. The only justification provided was that reassigning two captive, non-breeding cranes from the Patuxent flock put too much pressure on the team responsible for their distribution. We were also told that it seemed like “too much of a panic” to organize before the season began. That meeting took place in January 2018. Neither the alloparents nor the chicks were needed until that June.

Sandhill cranes as an analogue species:

Although Sandhill cranes generally use different habitat than Whooping cranes, within the EMP, they are regularly seen foraging in upland areas together and roosting in the same wetlands. Because of the cryptic coloration of one species but not the other, they employ different defense strategies, but they are both susceptible to the same predators. The similarities are close enough that Sandhill cranes provide a good analogue species to evaluate the potential of habitat for a Whooping crane reintroduction. Ten years after the first indications of low recruitment at Necedah, WCEP was finally allowed to evaluate the fecundity of Sandhill cranes. The 2017 results demonstrate that natural occurring Sandhills had a success rate similar to the reintroduced Whooping cranes. With late spring snow, followed by flooding, 2018 may have been an anomalous breeding season however, forty-seven Sandhill chicks were radio tagged at Necedah but only four survived to fledge. By comparison, at White River Marsh, twenty-two chicks were tagged and eighteen fledged.

Based on observations and tests with avian predators, the researchers also found that the Whooping cranes at Necedah appear to defend their offspring just as aggressively and persistently as the wild Sandhill cranes.

These study results suggest that the problem of high chick mortality has more to do with environmental issues at Necedah than it does with rearing strategy. However, when Operation Migration proposed

augmenting the number of chicks released into the EMP by raising a cohort of costume-reared Whooping cranes at White River Marsh during the 2018 season, that request was denied by the Recovery Team Coordinator without explanation other than a directive to follow the existing strategy.

Rumor four:
Operation Migration is upset with WCEP and left the partnership as a self-serving display of defiance.

Our position: *When WCEP was established, the partners collectively developed the release strategies and requested approval from the Fish and Wildlife Service and the Recovery Team, which was generally granted. Now the Service has pulled rank and dictates to WCEP, assigning release techniques and limiting allocations, often without providing research to support those directives or allowing team discussions. In Louisiana, costume-rearing is used successfully, and it is preferred over parent-rearing however those requests are approved by the Service and the Recovery Team.*

For almost ten years, little was done by the Fish and Wildlife Service to determine the cause of high chick mortality at Necedah while the population hovered around 100 individuals. Nor has there ever been discussions about possible black fly suppression as promised in the 2015 FWS Vision Document. Instead, our aircraft-led method was repeatedly criticized for being too expensive, despite self-funding, plus we were blamed for the low reproduction at Necedah and the failure of the project.

When the Partnership was limited to the parent-reared technique and lower allocations, Operation Migration opposed those decisions. However, our concerns were not addressed, our offers to raise additional chicks were rejected and no reasonable justification was provided. Throughout this process, our complaint was not with WCEP but with the way the Service was dictating to the Partnership, despite the superior Whooping crane experience of the latter. Our parting message was intended to support WCEP and to protect the EMP.

For many years, access was restricted to the Necedah Refuge so WCEP was not able to properly investigate the causes of chick mortality or the productivity of Sandhill cranes for comparative analysis. That isolationism began with the unworkable flight restrictions on chick training imposed by the Refuge during our last year at Necedah. Further evidence is the almost complete lack of Whooping crane displays or education materials in the new visitor's center — or on the Refuge webpage. Despite denials, the visitor's center was created, in part, as a result of the Whooping crane project yet there remains almost no recognition of one of the most high-profile, wildlife projects ever to occur in the U.S. This is not a campaign for credit of WCEP's actions on the refuge but an indication of the Service's regard for the EMP, the respect it has for its partners or the value of their investment. Thousands of people supported the efforts of WCEP to reintroduce Whooping cranes and millions followed the progress. The Necedah Refuge was the center of that project however, recognition for those accomplishments by the Service is conspicuously absent.

In the beginning, WCEP estimated that this reintroduction costs the partners $1.6 million dollars per year. Almost two-thirds of that was contributed by ICF and Operation Migration. Experimenting with the EMP by limiting allocations and mandating restrictive release strategies for the next three years while the population continues to languish, is not good stewardship of WCEP's investment.

Rumor five:
OM lost a significant portion of its funding and could no longer afford to participate. Now they blame the partnership for their demise.

Our position: *Just like any other partner, our funding depended on having a viable role to play within WCEP. At the annual face-to-face WCEP meeting in 2016 when the UL method was ended, the Guidance Team proposed that OM's new role would be tracking the EMP cranes. We had the expertise, the equipment and the manpower to provide that service, however that role was provided by ICF.*

Our proposal to augment releases into the EMP by raising a costume reared cohort was rejected with no rationale other than to follow the Recovery Team's Egg Allocation directive. Our idea of in-the-field parent-rearing was also vetoed without justification. The only viable Whooping crane role left for us would have been to assist in monitoring the four parent-reared chicks that were released in the fall of 2018.

For many years Operation Migration presented our social media audience with a supportive and positive version of the decisions made by WCEP. When the Fish and Wildlife Service exercised its authority over the Partnership and publicly blamed Operation Migration for the failure of the EMP, we were forced to defend our methods and our contribution, but we eventually agreed to accept that decision and presented it in a positive light to our supporters. As the success of the EMP became increasingly compromised by restrictive release strategies and limited allocations, we campaigned for more chicks and proposed alternative methods. Those offers were rejected and if history is any guide, we suspect the Sandhill research we funded at Necedah and White River will also be ignored.

In an attempt to be good partners, we did not share those conflicts with our audience but there are a hundred stories to tell like our unceremonious ejection from the Necedah Refuge and the purging of all things WCEP. We were told that there was no room on the 44,000-acre refuge for the WCEP donor-recognition board. At the opening of the Whooping crane inspired Necedah visitor's center, no one from OM was invited.

During the last WCEP face-to-face meeting we were told that the Recovery Team was not responsible for the welfare of one of the WCEP partners. We have heard the same mantra from the Fish and Wildlife Service many times and it is a valid assertion. But if Operation Migration had taken the same stance when we provided the lion's share of the funding, labor, and expertise to fulfill the mandate of the Recovery Team and the Fish and Wildlife Service, there wouldn't be an Eastern Migration Population today.

In the end, we had hoped that our departure would prompt the other partners to question the current management strategies and their implications to the original goal. The EMP has the potential to succeed and the work now being done at Necedah to determine the cause of low productivity and to manage for Whooping cranes is very encouraging. The five fledged chicks in 2018 are also promising and we hope that milestone prompts the Service to reconsider the viability of the EMP and concentrate more on its potential success.

Photograph courtesy of Operation Migration

Eastern Migratory Population of WHOOPERS

Eastern Migratory Population, Whooping Crane Update – March 1, 2019

Five of the six chicks that hatched in the wild and survived to fledge in Wisconsin last year are offspring of Whooping Cranes released by WCEP in previous years. The sixth was a chick with one parent that was wild-hatched in 2010. Until 2018, the highest number of surviving wild-hatched chicks in the eastern population was three, in both 2015 and 2016. WCEP members, who continue to work to refine techniques to enhance chick survival in the wild, celebrated the progress.

–Whooping Crane Eastern Partnership

In the last month Whooping Cranes have started to move north but haven't migrated all the way back to Wisconsin yet. A huge thank-you to the staff of the Fish and Wildlife Service, the Departments of Natural Resources of flyway states, the International Crane Foundation, and all of the volunteers who help us keep track of the cranes throughout the year. We appreciate your contribution to the recovery of the Whooping Crane Eastern Migratory Population. This report is produced by the International Crane Foundation for the Whooping Crane Eastern Partnership.

Population Estimate
The current estimated population size is 100 (45 F, 52 M, 3 U). To the best of our knowledge, as of 1 March approximately 13 Whooping Cranes are in Illinois, 36 are in Indiana, 9 are in Kentucky, 3 are in Tennessee, 14 are in Alabama, 3 are in Georgia, 5 are in Florida, and 1 is in Louisiana. There is also one female Whooping Crane from the Louisiana Non-Migratory Population (L4-17) at Wheeler NWR in Morgan Co, AL, who may still be associating with EMP cranes but was not seen with them during February. The remaining birds' locations have not been confirmed in the last month.

Mortality
Parent-reared #25-17(M) had been in Jackson Co., Alabama, but had to be euthanized in January 2019 after sustaining injuries that are believed to have come from a powerline collision. No known fatalities during February.

For distribution and population estimates of the 2017 and 2018 Wild-hatched cranes, 2017 and 2018 Parent-Reared Cohorts, 2017 Costume-Reared Cohort and mortality, and to see a map of current Whooper locations, go here:
https://www.savingcranes.org/whooping-crane-eastern-population-update-march-2019/

To learn more about the individual cranes in the eastern population, go here:
http://operationmigration.org/InTheField/emp-whooping-crane-biographies/

Data courtesy of the International Crane Foundation *for the* Whooping Crane Eastern Partnership (WCEP)

UL= ultralight *(Chicks were captive-hatched, then raised by costumed handlers and taught to follow an ultralight for their first migration to Florida);* ***DAR= Direct Autumn Release*** *(Chicks are captive-hatched then released in the fall in the company of adult cranes from whom they will learn the migration route);* ***PR=Parent Reared*** *(chicks are captive-hatched and raised by captive Whooping Cranes, then released near a wild crane pair in hopes the pair will "adopt" the juvenile and lead it on migration);* ***W=wild hatched*** *to a wild Whooping Crane pair that then teach the migration route to the juvenile.*

Editor: *The following information is from the Whooping Crane Eastern Partnership (WCEP). Any change in cranes' behavior due to contact with people may have a negative impact on its well-being and safety.*

What to do if you see a Whooping Crane

If you encounter a Whooping Crane in the wild, please give them the respect and distance they need. Do not approach birds on foot within 200 yards; remain in your vehicle; do not approach in a vehicle any

closer than 100 yards. Also, please remain concealed and do not speak loudly enough that the birds can hear you. Finally, do not trespass on private property in an attempt to view or photograph Whooping Cranes. When posting sightings to list-serves, or to eBird, the Whooping Crane Eastern Partnership asks that location descriptions are kept at county level only.

Please report all eastern Whooping Crane sightings

The Whooping Crane Eastern Partnership would appreciate any Whooping Crane sightings to be reported. This helps the WCEP trackers. *For an online form to report your sightings, go here:* https://www.savingcranes.org/report-whooping-crane/

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Aransas-Wood Buffalo WHOOPERS

Editor: *The Eastern Crane Bulletin mentioned this incredible sighting in its December 2018 issue, but think that it bears repeating. Through the combined efforts of partners in Canada and in the United States, there are now over 500 cranes in the wild Aransas-Wood Buffalo population alone.*

Record numbers give nod to conservation efforts

Each spring and fall Whooping Cranes migrate through Saskatchewan as they go between their breeding grounds in Wood Buffalo National Park, located on the border between Alberta and the Northwest Territories, Canada, and their wintering grounds on the Texas Gulf Coast. According to Brian Johns, a board member of the International Whooping Crane Conservation Association, in October 2018 an amazing 151 Whooping Cranes were observed in a flock north of Saskatoon near Marcelin. According to records from the area this was the largest staging of Whooping Cranes sighted during migration in over 100 years. Of the 24 fledglings from the 2018 nesting season, six immatures were spotted with the group.

Population estimates from the early 1800s show there may have only been thousands of Whooping Cranes in North America. The birds nested throughout the Canadian prairies, into Alberta, through south-central Saskatchewan and Manitoba down into the U.S in Minnesota, Iowa and Illinois. As the land was settled, in the U.S. in the early 1800s and in Canada in the early 1900s, several factors contributed to the decline of the Whooping Crane population. Cranes were shot for food, their feathers were used in the millinery trade, and widespread destruction of wetlands for agriculture eliminated crucial habitat needed for breeding and for use during migration. In the 1860s there was an estimated 1,200 cranes in North America but by the late 1930s, only two small flocks were left — one non-migratory flock in Louisiana and one migratory flock that wintered in Texas and summered in Canada. In 1940, a hurricane and resulting storm surge reduced the Louisiana flock of about 13 birds to six. Continued hunting of the surviving cranes reduced the population to one wild Whooping Crane. It was captured in 1950 and brought into captivity for protection of the species.

According to Johns, the Marcelin area has been used on and off by the cranes on a regular basis for the last 15 years, and lately where the largest numbers are reported. “Ten years ago, a big flock of Whooping Cranes would have been 25 or 30 birds but this flock of 150 birds, that was just something incredible.”

Texas biologists document Whooper winter behavior

A team from the International Crane Foundation’s Texas office – lead by Dr. Liz Smith, International Crane Foundation’s senior Whooping Crane scientist and Director of North America Programs, plans to spend the next three months documenting the Whoopers’ behavior on Blackjack Peninsula and St. Charles Bay near Lamar. Based on data collected in the 1990s by ecologist and conservationist Felipe Chavez-Ramirez, Blackjack Peninsula is where the wintering cranes spend about 65 percent of their

time foraging. The peninsula habitat provides plentiful food and a degree of isolation that makes it ideal for Whoopers.

Using the method established by Chavez-Ramirez in the 1990s, Dr. Smith's team records what each member of a Whooping Crane family unit is doing every 15 seconds for 20-minute intervals. While both the Mid-Coast chapter of Texas Master Naturalists and members of EarthWatch are trained and have been assisting in the monitoring of wintering Whoopers for years, this is the first year biologists are focusing specifically on family units. Through the observations they expect to gain insight into the following:

1. Why do juvenile cranes stay with their parents for a year? Biologists point to the fact that it is very unusual for an animal pair to invest so much time in their young, so why do cranes do this?

2. What is the quality of the habitat? The Blackjack study will be used as a baseline to assess other areas Whooping Cranes may now be utilizing along the coast as the population grows. Findings will be used to help determine food availability as well as possible levels of disturbance to the cranes by predators and/or humans.

Whooping Cranes are considered an umbrella species – what is learned from studying them will then be, in turn, applied to the protection of other species as well.

Wintering Whooping Crane Update, February 6, 2019

The following is from an update by Dr. Wade Harrell, U.S. Whooping Crane Recovery Coordinator

Recruitment of juvenile cranes

"In addition to an overall estimate of the winter population size, the survey provides us an estimate of how many juveniles were "recruited" into the population this year. Simply put, the only way to effectively grow a population is for births to exceed deaths — i.e., recruiting juveniles into the adult population. The past few years' increases have been tied to high numbers of fledged chicks on the breeding grounds, but Canada only estimated 23 fledged chicks during their survey this past August. For comparison, that is 40 fewer chicks than reported in the August 2017 survey. Annual variation in fledged chicks is to be expected and we've seen this amount of fluctuation in the historic survey records dating back to the 1950's. Weather in the breeding grounds is often a major driver of chick fledging rate in Wood Buffalo National Park. This past June, when most eggs were hatching, was unseasonably cold and wet—not ideal conditions for early chick survival.

Technology allows for better tracking

"Efforts to trap and mark Whooping Cranes here at Aransas National Wildlife Refuge (NWR) for our telemetry study is ongoing, and thus far this winter we have marked 6 adult Whooping Cranes here on the Refuge with cellular telemetry devices. With these devices providing locations every 15 minutes, we are able to understand daily movements (night and day) and habitat use at a level that wasn't available even a few short years ago.

"One of the new developments that this technology is revealing is how and when Whooping Cranes move around here on the wintering range. In the past, we understood wintering Whooping Cranes, particularly mated pairs, to stay in a "territory" or one general area of a few hundred acres, all winter. With the telemetry data, we are starting to see a much more complex picture of movement, with some Whooping Crane pairs mostly following our traditional understanding of a single territory and others making multiple movements across the entire wintering range throughout the winter. It is difficult to say whether this is related to food availability or simply individual differences, but it does help us understand the need to focus our conservation efforts at a landscape scale—well beyond Refuge boundaries."

To read the entire post, go here:
https://friendsofthewildwhoopers.org/wintering-whooping-crane-update-7/

Oklahoma Corps of Engineer lakes evaluated for "stopover habitat"

Despite heavy rainfall, flooding and high-water levels at several of the lakes, Friends of the Wild Whoopers (FOTWW), wildlife biologist Chester McConnell, visited Corps of Engineer (USACE) lakes – Fort Supply, Canton and Kaw – in October as part of the group's ongoing effort to encourage protection and management of decreasing habitat along the migration route of the Aransas-Wood Buffalo Whooping Crane population.

The lakes were evaluated to determine if they have any existing or potential "stopover habitat" for the cranes. Key elements of an ideal habitat include: flight glide paths to the shore areas available from different directions for approaching cranes; shore areas essentially clear of brush and trees to allow ready detection of predators such as coyote or bobcats; a gradual slope of shore to water; depth of 2-10" of water for roosting; little emergent or submerged vegetation in the lake at the roost sites; site location 200 or more yards from human development or disturbance such as power lines; acres of foraging areas in nearby agriculture fields or wildlife food plots; and adjacent managed grasslands and wetlands that provide an abundance of insects, wild seeds and other wild food for the cranes.

Fort Supply Lake in northwest Oklahoma, was constructed primarily for area flood control in 1938 - 1942. There is a total of 9,899 acres of project land and water. The lake covers 1,786 surface acres of open water. A total of 8,079 acres are used for wildlife management, recreation and project operations. Both USACE and ODWC personnel have reported observations of Whooping Cranes on the lake in the past and use by the cranes is only expected to increase over time.

Canton Lake, located in the high plains area of western Oklahoma, contains 7,910 acres of surface water and 14,861 acres of public hunting land that is managed by the Oklahoma Department of Wildlife Conservation (ODWC). This area is open year-round, except for the migratory bird refuge which is closed annually from 15 October to 15 February. Canton Lake's purpose is to provide flood risk management, water supply, fish and wildlife conservation and recreation. Both USACE and ODWC personnel have observed Whooping Cranes on the lake in the past.

David Hoover, Conservation Biologist, Kansas City, MO, USACE made arrangements for McConnell's trip. George Mayfield, Assistant Lake Manager and Chase Kokojan, ODWC participated in the lake stopover habitat evaluation. Several areas on Cantonlake, including an island, have potential for Whooping Crane stopover habitat.

Kaw Lake in the Tulsa district in northern Oklahoma is made up of 17,000 acres of water and 168 miles of shoreline. After studying satellite photos of the area with the assistance of Hutch Todd, Kaw Lake Biologist, and Peat Robinson, Kaw Lake Manager, it was determined that there are three sites that if protected and managed properly could provide diverse stopover habitat for not only the endangered Whooping Cranes but for many waterfowl, wading birds, shorebirds and other wildlife species that need wetlands.

To find out more and view photos and maps of Fort Supply Lake, go here:
https://friendsofthewildwhoopers.org/corps-engineer-lakes-oklahoma-being-evaluated-whooping-crane-stopover-habitats/

Or, for more information and to view photos of the Canton Lake habitat, go here:
https://friendsofthewildwhoopers.org/future-whooping-crane-island-habitat-canton-lake-oklahoma/

And, to learn more and view photos of Kaw Lake, go here:
https://friendsofthewildwhoopers.org/kaw-lake-ok-whooping-crane-stopover-habitat/

To become a member of Friends of the Wild Whoopers, or, to just learn more about the group and its important research, go here: https://friendsofthewildwhoopers.org

General News

Alabama:

Festival of Cranes at Wheeler NWR takes flight despite all odds

In response to the increasing numbers of both Sandhill Cranes and the presence of endangered Whooping Cranes at the refuge, Wheeler National Wildlife Refuge Association, local refuge officials and the Friends of Wheeler National Wildlife Refuge organization organized the first annual Festival of the Cranes six years ago.

This year, the federal-government shutdown threatened to derail the festival. Having no festival was not an option for the Friends of Wheeler National Wildlife Refuge Association, who stepped up and covered electricity costs for the visitors' center and observation buildings. And, in a wonderful, much appreciated show of support from across the miles, the Friends of Goose Pond in Linton, Indiana, decided to help out with a donation to Wheeler Refuge Association. Volunteers, and members of the Friends group staffed the visitors' center, and a number of hard-working refuge workers were on site.

So, in celebration of the thousands of Sandhill Cranes and a reported 13 Whooping Cranes on the refuge at the time of the festival, and despite heavy downpours all day Saturday, and the continuing government shutdown – 5,700 "craniacs" attended the three days of festival events!

While Sandhill Crane numbers were down from other years, Whooping Crane PR (Parent-Reared) #14-15 was visible from the observation tower on Saturday. And, to the delight of those watching, provided a nice fly-by along with hundreds of Sandhills before settling down again to forage. Also at the refuge during the festival was a special visitor from the Louisiana "non-migratory" Whooper population – the wandering WHCR #L4-17 (see her story under Louisiana).

Bahamas:

Another new bird for Abaco, Bahamas

In mid-December 2018 a lone Sandhill Crane (*Antigone canadensis*) was reported for several days at Crown Haven on Little Abaco. It was a the 10th new species for Abaco since the publication of The Birds of Abaco in March 2014. Range maps show *Antigone canadensis* breeding in Canada and wintering as far south as Florida. While there are non-migratory populations in Florida and Cuba, sightings in the Bahamas are uncommon.

Colorado:

$5,000 in scholarships for Moffat, Routt county art, writing students

Area high school students will be awarded $5,000 in scholarships from the expanded, crane-inspired creative arts contest, offered by the presenters of the Yampa Valley Crane Festival, Colorado Crane Conservation Coalition (CCCC).

High school seniors in Routt and Moffat counties, Colorado are encouraged to submit an original piece of writing or artwork inspired by greater Sandhill Cranes. Art must qualify for one of following three categories, be original, and accurately reflect the physical characteristics, behavior, and habitat of Greater Sandhill Cranes. Categories are as follows:

• Category 1 — Writing: A non-fiction essay or fiction story between 750 and 1,500 words.
• Category 2 — Poetry: A group of three poems.
• Category 3 — Other artistic media: Painting, music, digital art, and photography…

To learn more, go here:
https://www.craigdailypress.com/news/5000-in-scholarships-on-offer-to-moffat-routt-county-art-writing-students/

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Florida:

Two Whooping Cranes join Louisiana population

Two adult female Whooping Cranes were moved 7 February to the White Lake Wetlands Conservation Area in Louisiana to join the non-migratory population there. A lone female crane had been frequenting the Alachua Tuscawilla Preserve in Micanopy in the company of Sandhills. The Whooper is almost 4 years old and approaching breeding age, but biologists say her chances of finding a mate was less likely if she stayed in Florida.

Beginning in 1993, Whooping Cranes were released in the Kissimmee Prairie area of Central Florida as an experimental reintroduction non-migratory population project. It was hoped that the population would eventually grow to become a self-sustaining, non-migrating population. Unfortunately, when it became clear that with high mortality rates – in large part from predation by bobcats and alligators, deaths from powerline strikes and low reproduction rates – the project was discontinued in 2006. At its peak there were about 100 cranes in the population, but over the years that number dwindled to fewer than 14 individuals, the majority being females. An environmental assessment determined that if no action was taken the Florida Whooping Cranes would eventually die out. The Alachua wild-hatched Whooper is a survivor of that reintroduction project.

The hope is that the Alachua crane joins this group, finds a mate and in the not too distant future adds to the population. Louisiana's reintroduction project begun in 2011 has been positive. Since its first year, 100 Whooping Cranes have been released in southwestern Louisiana and approximately 59 of those cranes survive today. The Louisiana population can claim the honor of having the first wild-hatched Whooping Crane in the state since 1939 (the colt successfully fledged in 2016, but unfortunately died just before it was a year old in 2017), as well as an amazing 5 wild-hatched chicks that fledged in 2018!

Go to the story below, "Floridian Whoopers join Louisiana population;" or go here:
https://www.facebook.com/lawhoopingcranes/

Florida Sandhill Cranes denied protection under Endangered Species Act

The Florida Sandhill Crane was among 13 animals denied federal protection under the Endangered Species Act in December 2018. While the non-migratory population of Sandhills is still protected as "threatened," the decision prevents them from receiving greater protections as an endangered species.

Sandhills are such a common sight in Osceola County, that St. Cloud officials voted in 2018 to make the species the city's official bird. The denial of federal protection raises concerns that the cranes will not have the much-needed protection as development escalates statewide. Wildlife rehabbers have reported an increase in the number of injured Sandhills they have taken in for treatment. The majority of sustained injuries – broken legs, wings and pelvic bones – was almost entirely from cars.

Help monitor Florida Sandhills

As wetland and upland habitat statewide continue to shrink, Florida Fish and Wildlife Commission (FWC) biologists are monitoring how the Florida Sandhill Cranes use urbanized areas. Adult cranes in urban, suburban and rural areas are tagged with GPS transmitters that collect multiple GPS locations daily. Preliminary data show that some urban cranes solely inhabit urbanized areas – suburban yards, grassy

roadsides and golf courses as upland habitat and use retention ponds or lake edges for wetlands. However, most tagged urban cranes regularly moved between both rural and suburban areas as they forage. Data from Sandhills tagged on conservation lands show that all the cranes used some man-made habitat daily, either a mowed area near a road, a yard with a bird feeder, or improved pastureland.

To aid biologists the FWC asks the public to report sightings of any color-banded Sandhills – including in the report band color information, location, time and, if possible, any photos. Some cranes have only one-color band, while others may have up to four bands. Please designate which leg (right or left), the number of bands, color of the bands, and the order in which they appear (top to bottom) for each leg. The color and the placement of each band is important in identifying individuals. Even incomplete reports of color combinations may be valuable as they could allow biologists to narrow down which crane was sighted.

Send all observations to: _cranes@myfwc.com.

The public is also reminded that it is illegal to intentionally feed the federally threatened species.

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Kentucky:

2018-2019 Sandhill Crane season

The final count of the Kentucky Sandhill season, December 3, 2018 - January 27, 2019, was 60 Sandhills. This is the second lowest number since 2011, the first year of the then-experimental Kentucky Sandhill season. 50 Sandhills were killed that year.

John Brunjes, Migratory Bird Program Coordinator for the Kentucky Department of Fish and Wildlife Resources (KDFWR), referenced weekly Kentucky Department of Fish and Wildlife Resources surveys at several main staging areas that showed very few cranes present during the Kentucky season. The level of Barren River Lake remained high, so sandbars traditionally used by the cranes as roosting sites were under water. Cranes were also scarce in Hardin County, despite roost ponds with good water levels and the availability of food in the surrounding, harvested fields. According to reports from both the Wheeler National Wildlife Refuge in Alabama, and the Hiwassee Wildlife Management Area in Tennessee, winter Sandhill numbers were less than half those numbers reported in years past.

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Louisiana:

Nesting activity has begun!

On January 31, 2019 the Louisiana Department of Wildlife and Fisheries (LDWF) reported that two pairs of Whooping Cranes had been observed building nest platforms. Both pairs are a 3-year-old male and a 2-year-old female. Due to the young age of the females, it's unlikely that either pair will have eggs this year.

According to LDWF, for the past three years, February 11-12 marked the date nest building activity began. There are currently in the population 7 pairs that have previously nested, 4 of which successfully reared chicks in 2018. In addition, biologists know of 5 more young, newly paired cranes that may or may not nest due to their age. After last year's record fledging of 5 wild-hatched Whoopers, LDWF looks forward to what will hopefully be an exciting breeding season.

As of mid-January 2019, wild-hatched LW5-18, siblings LW1-18 and LW2-18, and female LW3-18 had separated from their parents and were on their own. Female LW4-18 is expected to join the other immatures as soon as her parents prepare for breeding season.

To keep up with the Louisiana population, go here: https://www.facebook.com/lawhoopingcranes/

Floridian Whoopers join Louisiana population

The Louisiana Department of Wildlife and Fisheries (LDWF) announced that the Louisiana Whooper population grew a tiny bit on 7 February 2019 when two adult female Whooping Cranes from the remaining Florida non-migratory population were transferred to them and released at the White Lake Wetlands Conservation Area. Click through the photos to learn more about this unique project and for additional information also check out the links below. Thanks to their partners and colleagues from the International Crane Foundation, White Oak Conservation, the USFWS Southeast Region, and the Louisiana Ecological Services Office for working hard to make this happen.

https://www.fws.gov/southeast/news/2018/03/us-fish-and-wildlife-service-considers-changes-to-protect-endangered-whooping-cranes/

Seven-year old female killed by powerline strike

During a tracking flight by biologists on 13 February, yielded both terrible and exciting news.
The terrible news: LDWF sadly must report that seven-year-old female L6-12, mother to wild-hatched juveniles LW1-18 and LW2-18, was found dead under a powerline on her territory in Jefferson Davis Parish. Her mate was heard calling continuously to the south when staff collected her carcass.

The exciting news is that the nesting season has begun, and one pair was observed with their first egg!

$7,500 Reward offered for information on shooting of endangered Whooping Crane – L21-16 in Acadia Parish

From a 02/21/2019 LDWF Press Release

The Louisiana Department of Wildlife and Fisheries (LDWF) Enforcement Division agents are looking for leads regarding an endangered Whooping Crane that was shot in Acadia Parish. The crane was found with a wounded wing on November 2, 2018 between Crowley and Rayne off of Monceaux Rd. and taken to a vet where it had to be put down due to its injuries. A necropsy determined it had been shot in the wing.

Up to $7,500 is being offered by various groups for information that leads to the arrest and conviction of the person or persons responsible for the illegal shooting of this Whooping Crane. LDWF's Operation Game Thief program, the Louisiana Wildlife and Fisheries Foundation and Whooping Crane Conservation Association are each offering a reward of up to $1,000. LDWF also received a total of $4,500 from private donations.

Anyone with information regarding the illegal shooting should call the Louisiana Operation Game Thief hotline at 1-800-442-2511 or use LDWF's tip411 program. To use the tip411 program, residents can text LADWF and their tip to 847411 or download the "LADWF Tips" app. The hotline and the tip411 are monitored 24 hours a day. Upon request, informants can remain anonymous.

LDWF with support from partners has released 147 whooping cranes since 2011 to reintroduce the birds to the state. The population is currently estimated to be 76 Whooping Cranes. This reintroduced population marked the first presence of Whooping Cranes in the wild in Louisiana since 1950. The crane in this case was released in December of 2016 (male L21-16).

Whooping Cranes are the most endangered of the world's crane species. The Louisiana flock is designated as a non-essential, experimental population but is protected under state law, the Endangered Species Act, and the Migratory Bird Treaty Act.

Have wings will travel…

Whooping Crane "L4-17" is part of a reintroduction effort between the Louisiana Department of Wildlife and Fisheries, the U.S. Fish and Wildlife Service, the U.S. Geological Survey, the International Crane

Foundation and the Louisiana Cooperative Fish and Wildlife Research Unit. Whooping Cranes were transported to the coastal marsh of Vermillion Parish from a captive flock at the USGS Patuxent Wildlife Research Center in Laurel, Maryland beginning in 2011.

In the winter of 2017, just two days after release at the White Lake Wetlands Conservation Area, L4-17 traveled northeast, spending some time in Bullock County Alabama. Then in August 2018 she decided to head west, eventually flying into northern Mexico before traveling west then northeast through Texas, to settle in Oklahoma where she spent most of the summer. From there she headed to Arkansas moving around the state from late October to mid-December 2018. In late December she headed east to Wheeler National Wildlife Refuge in Decatur Alabama where refuge staff reported the visitor hanging out with thousands of Sandhill Cranes and about a dozen Whooping Cranes from the eastern migratory population. At the time of the Wheeler Festival of Cranes in mid-January, she was still being reported in the area.

The fact that L4-17 is banded and fit with a transmitter makes tracking her possible. Dubbed "our wandering female" by the Louisiana Department of Wildlife and Fisheries their maps show L4-17's long solitary rambles (see links below). In November 2018 LDWF estimated that from the time of her release, L4-17 has spent 70% of her time outside of Louisiana. May L4-17 continue to be safe wherever her wandering takes her!

For a LDWF map of her trip from Arkansas to Alabama, go here:
https://www.facebook.com/lawhoopingcranes/photos/a.734069523365830/1769241069848665/?type=3&theater

To see her westward travels, go here:
https://www.facebook.com/lawhoopingcranes/photos/pcb.1716965925076180/1716962471743192/?type=3&theater

For an account of L4-17's time in Arkansas, go here:
https://www.agfc.com/en/news/2019/01/09/louisiana-released-whooping-crane-enjoys-layover-in-the-natural-state/

Area-use by Louisiana Whooping Cranes

For a map that shows what areas have received the most (or least) amount of crane use since the Louisiana reintroduction project began in 2011, go here:
https://www.facebook.com/lawhoopingcranes/photos/a.734069523365830/1585265718246202/?type=3&theater

Help LDWF by reporting all Whooping Crane sightings

Anyone encountering a Whooping Crane is advised to observe the bird from a distance and to please report your sighting to the Louisiana Department of Wildlife and Fisheries by using the following link:
http://www.wlf.louisiana.gov/webform/whooping-crane-reporting-form

Anyone witnessing suspicious activity involving Whooping Cranes is advised to call the LDWF's Enforcement Division at 1-800-442-2511 or use the tip411 program, which may offer a cash reward for information leading to arrests or convictions. To use the tip411 program, citizens can text LADWF and their tip to 847411 or download the "LADWF Tips" iPhone app from the Apple iTunes store free of charge. Citizen Observer, the tip411 provider, uses technology that removes all identifying information before LDWF receives the text so that LDWF cannot identify the sender.

And, for LDWF updates on the Louisiana non-migratory population of Whooping Cranes, go here:
https://www.facebook.com/lawhoopingcranes/

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Mississippi:

Endangered population grows by three

White Oak Conservation Center in Yulee, Florida officials reported that three Sandhills hatched during spring 2018 at the conservation center were successfully released in December 2018 at the Mississippi Sandhill Crane National Wildlife Refuge near Gautier, Mississippi. Only about 130 Mississippi Sandhill Cranes and 34 breeding pairs remain in this wild, non-migratory population. White Oaks' breeding and reintroduction program is designed to support the survival of this species. "This population of cranes is dependent on the reintroduction of healthy offspring produced each year at the breeding centers," said Steve Shurter, CEO of White Oak Conservation. The Sandhills released were offspring of a pair of cranes that came to the center in 2016 from the Freeport-McMoRan Audubon Species Survival Center. The program began in 1994 and since then 109 cranes have been reintroduced into the wild.

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North Dakota:

Job opportunity: Wildlife Field Technician – Whooper monitor needed

Tetra Tech has an opening for a wildlife field technician near Minot, North Dakota. The primary responsibility of this position is to conduct a 2-year Whooping Crane monitoring effort at an operational wind facility during periods of spring and fall migration. Primary duties include monitoring for migrating Whooping and Sandhill Cranes within a specified distance from operational wind turbines, documenting crane use of the area, working with operations staff towards turbine curtailment if Whooping Cranes are seen within a specified distance, and documenting any Whooping or Sandhill Crane mortality.

Monitoring dates run April 15 – May 15, 2019 in spring, and September 10 – October 31, 2019 in fall. Fatality-monitoring applicants must be willing to commit to continuous field effort during those dates, 7 days a week, with field days approximately 6-7 hours long (monitoring occurs in the mornings and evenings).
For more information:
Contact: Jennifer Taylor; Phone 503-887-9581; eMail: jennifer.taylor@tetratech.com

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Oregon:

Sandhill Crane: One of the oldest known bird species

By Dr. Gary Ivey, International Crane Foundation Research Associate, West Coast Crane Working Group

> "There are three subspecies of Sandhill Cranes which use the Klamath Basin and the broader Pacific Flyway. The largest, the Greater Sandhill Crane breed in the West, mostly south of the Canadian border. The smallest, the Lesser Sandhill Crane breeds in western Alaska, and the least-known subspecies, the Canadian Sandhill Crane, breeds along the Pacific coast from Vancouver, B.C., Canada north to the Juneau, Alaska area.
>
> A crane fossil from the Pliocene (5.3-2.6 million years ago) found in Nebraska that appears identical to the modern Sandhill Crane, making it one of the oldest known bird species!
>
> Here in the West, Sandhill Cranes were historically persecuted during settlement as western areas became states and before cranes were protected under the Migratory Bird Treaty Act of 1918, which ended commercial crane hunting (but not poaching). Biologists who helped with surveys in the 1850s to determine the best railroad routes to the West documented cranes as

common nesting birds in our intermountain regions; sometimes even raised as tame birds in native villages.

As the gold rush and settlement proceeded, many local breeding cranes were killed for food. The rapid migration of settlers in the West created a huge demand for meat and cranes were targeted by the market hunting industry, particularly on their wintering grounds in California, causing crane population to plummet. Additionally, loss of over 90 percent of our Western wetlands also contributed to declining crane numbers.

Cranes went extinct as a breeding species in Washington State in 1941, and only about five pairs remained in California in the mid-1940s. Fortunately, more survived in Oregon, where about 100 pairs were still alive at that time. Most of the surviving cranes in Oregon nested in the Blitzen Valley in Harney County (now part of Malheur Refuge). Peter French, the infamous cattle baron, inadvertently saved Oregon cranes as he kept other settlers from homesteading that vast valley.

Fortunately, with protection from unregulated hunting and habitat provided on refuges and wildlife areas, the Western populations of Sandhill Cranes have recovered and several thousand now breed in the western states. More than half of the breeding population depends on private lands, primarily in areas where flood-irrigation provides seasonal wetlands they need for successful production.

Klamath County is third in importance to breeding Greater Sandhill Cranes in Oregon, following Harney and Lake counties.

The best local place to see them during the breeding season (April - August) is Klamath Marsh National Wildlife Refuge which hosts over 60 pairs. During spring (mid-February - April) and fall (September - October) migration, the best place to see cranes is Lower Klamath National Wildlife Refuge as they use the extensive grain fields there for feeding. The birds using Lower Klamath include Greater Sandhill Cranes (primarily birds breeding along the east slope of the Cascades in Oregon and Washington), Canadian Sandhills which stage at Sauvie Island Wildlife Area and Ridgefield National Wildlife Refuge near Portland and migrate through the Willamette Valley, and just a few of the Pacific Flyway Lessers."

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Tennessee:

Sandhill Crane Festival

Beginning in the early 1990s, the recovering population of eastern Sandhill Cranes began stopping at the Hiwassee Wildlife Refuge on their way to and from their wintering grounds in Georgia and Florida. Tennessee Wildlife Resources Agency (TWRA) has been managing the refuge for more than 60 years for waterfowl, and the area provides Sandhills with a combination of feeding and shallow water roosting habitat. During the winter, thousands of cranes and ducks can be found at the confluence of the Hiwassee and Tennessee rivers in southeastern Tennessee.

Celebrating its 28th year, the Sandhill Crane festival, January 19-20, 2019, brought 700 people to Birchwood, Meigs County to enjoy the two-day long festival.

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Virginia:

New Whooping Crane breeding facility opens at the Smithsonian Conservation Biology Institute

Twelve Whooping Cranes were moved to the Smithsonian Conservation Biology Institute (SCBI) in Front Royal, Virginia, on December 16, 2018, marking the first time the 3,200-acre research facility dedicated to breeding and studying endangered species has been home to Whooping Cranes. With less than 900 birds on the planet, the six mated pairs will be the founding members of SCBI's Whooping Crane research and breeding program. The chicks that the pairs hatch will be candidates for reintroduction to the wild.

Ten of the birds arrived from the Patuxent Wildlife Research Center in Laurel, Maryland. The other two birds moved from the Smithsonian's National Zoo in Washington, D.C. All of the birds were driven the approximately two hours to their new home in individual travel crates placed beside their mate's crate during the trip. At SCBI, each pair will live in outdoor enclosures 50 yards long by 16.5 yards wide, with two ponds, three water troughs and a small shelter for the cranes.

To read more and see photos of the Whoopers and facility, go here:
https://nationalzoo.si.edu/news/new-whooping-crane-breeding-facility-opens-smithsonian-conservation-biology-institute

To read about research by SCBI scientists to identify the components of a habitat that are necessary for Whooping Cranes in human care to successfully breed and raise chicks, go here:
Investigating poor reproduction in captive Whooping Cranes
https://nationalzoo.si.edu/center-for-species-survival/investigating-poor-reproduction-captive-whooping-cranes

Habitat Matters!

How outdated wetlands maps threaten wildlife

A United States Department of Agriculture (USDA) interim rule announced in the December 2018 Federal Register undermines the existence of crucial habitat needed by the endangered Whooping Crane during its spring migration to its breeding grounds in Canada. The USDA's interim final rule removes protections for, by the exclusion of, seasonal wetlands from the Farm Bill's wetland conservation safeguards, encouraging drainage of additional wetlands not only in the Prairie Pothole Region but beyond.

With well over half of the Northern Great Plains' "prairie pothole" wetlands already drained, the wetlands rule could have devastating effects to the remaining areas in America's "duck basket," where the majority of waterfowl nesting occurs and millions of waterbirds stop to feed during migration.

During the public comment period for the interim rule (that ended on 5 February 2019), a letter signed by over 109 groups representing conservation, water, and agriculture organizations urged the USDA to withdraw the interim final rule and instead propose a rule that "promotes accurate wetland determinations that include all seasonal wetlands and one that is subject to robust environmental review and public comment." Following is a list of their concerns to the rule:

- *The rule systematically excludes seasonal wetlands from wetland maps that form the basis for producer compliance. Of particular concern is the rule's certification of old (pre-1996) wetland determinations that have consistently excluded seasonal wetlands, have been shown to under-identify wetlands by as much as 75%, and that were for years considered too inaccurate to be used.*[1]
- *The rule relies on aerial imagery from the hottest time of the year (July/August), when many seasonal wetlands have dried out. Seasonal wetlands fill early in the spring, which is when they provide their most important flood storage and wildlife benefits, particularly for migrating and nesting waterfowl. For example, an analysis of three decades worth of U.S. Fish and Wildlife Service waterfowl and pond surveys in eastern South Dakota, the heart of the Prairie Pothole region, found that the number of wetland basins containing water that show up in July surveys was 73% lower*

than in May surveys. Any NRCS wetland determination rule should account for the use of summer imagery and promote the use of and investments in accurate spring imagery.

- *The rule relies on precipitation data from a historically dry period (1971-2000), further limiting the number and size of seasonal wetlands subject to the wetland conservation compliance requirements. Coupled with the mid-summer imagery, this focus on drier rather than wetter conditions significantly skews wetland maps towards excluding seasonal wetlands. Even more concerning is that there has been no scientific analysis of the impacts of using this outdated information.*
- *There has been inadequate analysis of the environmental impacts of the rule, including the potential for impacts on endangered species.*

To read a February 5, 2019 letter from over 100 environmental and conservation organizations in response to the USDA's interim wetlands protection rule, go here:
Re: Docket Number NRCS-2018-0010; Comments on the NRCS Interim Rule on Highly Erodible Land and Wetland Conservation (7 CFR Part 12)
https://protectcleanwater.org/group-comment-letter-about-usdas-interim-wetlands-protection-rule/

To read the USDA interim final rule, Docket Number NRCS-2018-0010, in the Federal Register, go here:
https://www.federalregister.gov/documents/2018/12/07/2018-26521/highly-erodible-land-and-wetland-conservation

What wetlands loss means for the Whooping Crane

"Wetlands provide us with water, they protect us from floods, droughts and other disasters, they provide food and livelihoods to millions of people, they support rich biodiversity, and they store more carbon than any other ecosystem. Yet, the value of wetlands remains largely unrecognized by policy and decision makers." – The Global Wetland Outlook, Ramsar Convention on Wetlands

When the glaciers receded after the last Ice Age, an array of shallow depressions were left in three Canadian provinces (Saskatchewan, Manitoba, and Alberta), providing the Prairie Pothole Region with a wealth of small wetlands storing water and providing habitat for a wide variety of plants and animals. In the past, farmers worked around the wetlands, but large farms, massive equipment, and a drive for greater efficiency and productivity has led to farmers draining the potholes. Draining wetlands leads to flooding downstream, increases erosion, lowers the water table, and reduces the supply of water in times of drought.

Historically, Saskatchewan's wetlands hosted Whooping Cranes as they staged during their annual migration south from Wood-Buffalo National Park to the wintering grounds along the Aransas area of coastal Texas. As these wetlands disappear, saving crucial stopover habitat in the six states along the migration corridor in the United States – North Dakota, South Dakota, Nebraska, Kansas, Oklahoma and Texas – is critical.

During the 200-year period from 1780 to 1980, wetland acreage in the six states declined by over 14,826,000 acres (6 million ha), and the remaining habitat faces intensified agricultural land management, rampant construction of wind energy facilities and power lines, wetland drainage and reduction in river flows. None of it bodes well for the cranes or other wildlife dependent on it.

Data shows that Whooping Cranes are not site-specific during migration, rarely using the same wetland basins year to year. The International Whooping Crane Recovery Plan (Canadian Wildlife Service and U.S. Fish and Wildlife Service) spells out the need to: "Ensure long-term protection of migration stopover sites; Work with landowners and managers to ensure migration habitat remains suitable for cranes: Pursue stewardship agreements and conservation easements when needed, focusing on providing wetland mosaics."

To augment important stopover sites such as Wildlife Management Areas and National Wildlife Refuges along the route, Friends of the Wild Whoopers (FOTWW) initiated a survey of entities with large land holdings that could potentially provide diverse opportunities for stopover habitat. FOTWW's project consisted of three phases: U.S. military bases, Indian Reservations, and U.S. Army Corps of Engineer

(USACE) lake properties within the wild Whooping Crane migration corridor. As of December 2018, FOTWW had evaluated, and prepared management practice reports for potential "stopover habitats," on 32 military facilities, 8 Indian Reservations and 21 USACE lakes within the migration corridor. Some of these properties currently have suitable stopover wetland habitats while other areas could be enhanced with minor work. Currently FOTWW is continuing to evaluate Corps of Engineer lakes and associate lands.

To read more about the Friends of the Wild Whooper work, go here:
https://friendsofthewildwhoopers.org/were-losing-our-wetlands/

To download a pdf of the 2007 International Recovery Plan Whooping Crane (Grus americana) Third Revision, go here:
https://www.fws.gov/uploadedFiles/WHCR%20RP%20Final%207-21-2006.pdf

To read about, and for photos of Saskatchewan's wetland loss, click here:
http://www.ecofriendlysask.ca/2018/12/were-losing-our-wetlands-and-thats-big.html

To read about Canada's "Agricultural Water Management strategy," go here:
https://www.wsask.ca/Water-Programs/Agricultural-Drainage-/Agricultural-Water-Management-Strategy/
Or for a pdf, go here: Saskatchewan's What is the new Agricultural Water Management Strategy?

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Canada:

Bird migration seen from space

The Roberta Bondar Foundation's Avian Migration Aerial Surface Space initiative (AMASS), is providing a new view of the migration of bird species by documenting each with surface, aerial and space photography. In partnership with the Canada Space Agency, Roberta Bondar's foundation is conducting bird migration research from space. AMASS will tell the story of bird migration addressing the challenges of protecting threatened habitats in the face of climate change and other human-caused habitat changes.

The project will document the migratory paths of six species listed as threatened or endangered by the International Union for the Conservation of Nature – the Aransas-Wood Buffalo population of Whooping Crane, Lesser Flamingo, Red Knot, Sprague's Pipet, Bar-tailed Godwit, and Curlew Sandpiper – and the challenges the birds face during their annual migrations. AMASS will follow birds from their breeding to wintering grounds along the migratory flyways.

AMASS is also related to Bondar's Protecting Space for Birds project, an interdisciplinary global initiative that involves private and public organizations.

To learn more about the work of Dr. Bondar and the foundation, go here: therobertabondarfoundation.org. *You can also check out* @AMASSresearch, @RobertaBondar, *and* @RBondarFdn *on Twitter or use the #SpaceForBirds hashtag.*

To read about Dr. Roberta Bondar, who in 1983 became Canada's first female astronaut, and her interest in space-based research, go here:
https://lfpress.com/travel/the-world-outdoors-roberta-bondar-connects-view-from-space-to-bird-migration

Get a preview of the Protecting Space for Birds project by listening to Dr. Bondar's conversation with Dr. Saint-Jacques from the ISS that took place January 22 by clicking on this link to CSA/NASA YouTube.
Follow the conversation on social media at #SpaceForBirds.
And, to learn more about the Protecting Space for Birds project, go here:
https://www.therobertabondarfoundation.org/other-activities/research-and-publications/psfb/

New Mexico:

Year-round management key to annual Festival of Cranes success

In November 2018, the Friends of Bosque del Apache celebrated their 31st Festival of the Cranes and once again welcomed birders, photographers and outdoor enthusiasts to the refuge to learn about Sandhills and other migratory birds and to support their important winter home in the Middle Rio Grande Valley.

"Friends of Bosque del Apache has reached out to partner with the International Crane Foundation (Baraboo, Wisconsin) and with Friends of the San Luis Valley National Wildlife Refuge (in particular, Monte Vista, CO) to join forces in educating the public about the importance of cranes and their protection. We'd like to expand our reach to partnering with Friends organizations across the whole flyway for the Rocky Mountain population," said Deb Caldwell, Executive Director of the Friends Group.

According to Bernard Lujan, Deputy Refuge Manager, the Bosque del Apache National Wildlife Refuge is a heavily managed public land that requires effort year-round in order to provide enough food and habitat for migratory species. The Rocky Mountain Population of Sandhill Cranes, Snow Geese, Ross's Geese and other migratory birds stay at the Bosque del Apache National Wildlife Refuge from November to February to feed on pigweed, protein-rich triticale and corn, planted for them by refuge staff. There, the birds will rest until spring when they migrate north again to breed.

It is expected that each summer the Rio Grande through the Socorro refuge will dry up. In response, refuge staff preserve groundwater and flood management units at critical times to guarantee the survival of the crops for wildlife and to ensure the birds have proper habitat for the winter. While some may see these management efforts as creating an artificial space, Lujan explained that the efforts are crucial in mimicking what had been the Rio Grande's hydrologic cycle before it was dammed for water use by people in Colorado, New Mexico, Texas and Mexico.

"The cranes have used the Middle Rio Grande Valley (MRGV) as a flyway for thousands of years. These are historically wetland areas. Since the Rio Grande is also a needed resource for people, however, there is no longer enough water for this refuge to provide water and crops without assistance," he said.

To read more, go here:
http://www.publiclandsalliance.org/blogs/amanda-keith/2018/11/27/festival-of-the-cranes-bosque-del-apache

San Antonio Oxbow wetland habitat threatened by development

Where the Rio Grande makes a bow-shaped bend in the middle of Albuquerque, New Mexico, lies a rare piece of wetland known as the San Antonio Oxbow. This 40-acre tract is maintained as a wildlife refuge by the city's Open Space Division and is considered to contain some of the last vestiges of marsh habitat in the Middle Rio Grande. The wetland is a significant landmark along the Rio Grande serving as a wildlife preserve for many riparian and aquatic animals. The endangered Southwestern Willow Flycatcher nests there, and the whole area has been designated "critical habitat" for the endangered Rio Grande Silvery Minnow.

Sandhill Cranes roost along the Rio Grande and feed in adjoining agricultural fields. The cranes use private cropland, Los Pablanos Open Space, Open Space Visitor Center, cropland adjacent to the Rio Grande Nature Center State Park, and other cropland that Albuquerque Open Space manages as forage sites. One of the goals of the Resource Management Plan for Candelaria Farm Preserve (near the Nature Center) will be to attract Sandhill Cranes during the winter. For this to work it is crucial that nearby roosting habitat be available for cranes. Disturbance of roost sites may cause the Sandhills to leave the area.

The Oxbow was initially stabilized and preserved in the 1970s through the efforts of attorney Rufus G. Poole, who owned the land bordering on and extending into this wetland. His wife Suzanne Poole, in partnership with The Nature Conservancy and WildEarth Guardians, helped preserve several stretches of the Rio Grande. The Poole Property sits on the west bluff overlooking the Rio Grande/San Antonio Oxbow. It is located across the Rio Grande directly west of the Nature Center and offers views of the Sandia mountains. There has been much public outcry to a planned housing development beside the wetlands. The Central New Mexico Audubon Society has proposed that the Poole property be used for conservation.

To read more and see photos of the wetlands area in the article "Wetland Habitat Threatened by New Albuquerque Housing Development" by Ellen Barber, go here:
https://www.forbes.com/sites/ellenbarber/2019/01/31/wetland-habitat-threatened-by-new-albuquerque-housing-development/#67b75d583e6a

For a video by Central New Mexico Audubon Society of the wetland area, go here:
https://www.youtube.com/watch?v=XAnVXndgs_Y&feature=youtu.be

To read documents submitted to the Environmental Planning Commission, go here:
http://www.abqwestside.com/wp-content/uploads/2018/11/NeighborhoodComments2-reduced.pdf

To learn more about the Albuquerque Open Space Division, go here: http://openspacealliance.org/what-is-open-space/

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Washington:

Cranes and croplands meet up

In the Vancouver Lake Lowlands, Columbia Land Trust manages one of the only Sandhill Crane habitats within city limits in the United States. Many populations of Sandhills were extirpated by the 1940s in both Oregon and Washington, and today, Sandhill Cranes are listed as endangered in the state of Washington. The lower Columbia River region is the sole fall staging area for one of North America's smallest population of Sandhill Cranes, which migrate between breeding sites in Haida Gwaii, along coastal British Columbia, and wintering sites in California's Central Valley. The cranes have adapted to the disappearance of seasonal wetland habitat – staging now in surrounding cornfields and flat farmland. As crane habitat in California disappears, larger numbers of the population are overwintering in the Columbia River lowlands.

In late 2015, Columbia Land Trust was presented with an opportunity to take ownership of more than 500 acres of wildlife habitat in the Vancouver Lake lowlands, a subset of the lower Columbia River region. The Port of Vancouver USA donated 541 acres to Columbia Land Trust along with $2 million in funding for initial restoration efforts and $5 million for the long-term stewardship of the land. The port and nonprofit Columbia River Alliance for Nurturing the Environment (CRANE) began discussions in 1992 concerning the development of more than 1,000 acres of the port's Columbia Gateway property. These discussions culminated in an agreement to transfer 541 acres of the land to Columbia Land Trust for conservation. Under the Land Trust's management, the land will continue to be farmed for grains, affording cranes both food and flat, open staging areas.

The property builds on regional conservation lands, including Ridgefield National Wildlife Refuge, Shillapoo Wildlife Area, and Oregon's Sauvie Island Wildlife Area. Plans for the newly conserved land do not include direct public access, as a human presence on the property would disrupt birds' landing, feeding, and resting patterns. In the coming months, the Land Trust will explore the potential for establishing viewing blinds that look out on the property from adjacent lands.

ENVIRONMENTAL impact issues:

Legal petition urges feds to severely restrict pesticides in endangered species critical habitat

In early January 2019 the Center for Biological Diversity, petitioned the National Marine Fisheries Service and the U.S. Fish and Wildlife Service to prohibit nearly all uses of pesticides in areas designated as critical habitat for endangered species, including Whooping Cranes and Puget Sound orcas.

The petition calls for the federal agencies to use their authority under the Endangered Species Act to put in place measures to protect endangered wildlife from harmful pesticides. It comes after decades of intransigence by the Environmental Protection Agency, which has refused to comply with the legal mandates of the Endangered Species Act to protect the nation's most imperiled species from highly toxic pesticides like chlorpyrifos and atrazine that are known to harm wildlife.

To read the *Center for Biological Diversity's* "Petition for Rulemaking to Protect Endangered Species from Pesticides by Restricting Pesticide Use in Critical Habitat," *go here:* https://www.biologicaldiversity.org/campaigns/pesticides_reduction/pdfs/Petition-to-FWS-and-NMFS-To%20Prohibit-Use-of-Pesticides-in-Critical-Habitat.pdf

Canada:

Staffing, artificial flooding enough to save Wood Buffalo National Park?

On February 1, 2019, Ottawa submitted a 96-page action plan requested by the United Nations Education, Scientific and Cultural Organization (UNESCO) in hopes of keeping Wood Buffalo National Park's international heritage site status. In response to allegations of poor management practices at Canada's largest national park, the federal government plans to increase park staffing, better monitor oil-sands tailings and artificially recreate spring flooding to rejuvenate the park's waterways. The action plan also includes conservation strategies for the Wood Buffalo bison herds and Whooping Cranes, and a requirement that environmental assessments of any future developments include possible impacts on the park.

Wood Buffalo covers almost 17,375 square miles (45,000 square kilometers) of grasslands, wetlands and waterways. Millions of migratory birds from four continental flyways converge there to breed. It's the only breeding ground for the wild population of Whooping Cranes in the world and is home to the largest herd of free-ranging wood buffalo left anywhere. First Nations have depended on the area for generations for cultural and physical sustenance.

UNESCO warned Canada in 2017 that the park was in a bad state after receiving a complaint from the Mikisew Cree First Nation two years earlier. A 561-page report released last summer by UNESCO concluded that 15 out of 17 measures of ecological health at the park were declining. Canada had until February 1, 2019, to submit its response plan, which UNESCO will consider at its July 2019 meeting before deciding whether the park continues marked as "in danger" which could lead to it being delisted as a world heritage site altogether.

The Mikisew Cree say climate change, hydro dams and the oil sands are having catastrophic effects on the ecosystem in Wood Buffalo National Park, which received its world-heritage status in 1983. Mikisew spokeswoman Melody Lepine says the action plan as written is well-designed and if it is actually implemented it could help restore the ecosystem to its previous health.

Canada's environment and climate change minister, Catherine McKenna, said that the government takes the national park "very seriously," and that addressing UNESCO's concerns is "a complex issue" that

entails working with Indigenous groups and “bringing on board the provinces of Alberta, British Columbia, and also industry. Last year’s federal budget earmarked $27.5 million for Wood Buffalo National Park. It is not known if this will be enough to turn the park around.

Officials with Parks Canada and Environment and Climate Change Canada have said that there are other sources of money that can go towards the park’s restoration, including a $50-million oil sands monitoring fund. The impact of the oil sands located upstream of the park — and particularly the tailings left over once the bitumen is mined — has been one of the significant causes of damage to the park, research has shown.

One of UNESCO’s recommendations in protecting Wood Buffalo’s world heritage status is to assess the environmental and social impacts of B.C. Hydro’s Site C dam. Once built, Site C will be the third large hydro dam on the Peace River, one of the main waterways feeding the Wood Buffalo delta. The dam’s impacts on Wood Buffalo National Park are just a few of the concerns associated with the project.

Parks Canada has committed to a progress report in 2021, but officials say several items are already in motion and there is a commitment to implementation in Ottawa and among the provincial and territorial governments involved. Alberta, for example, is working on establishing additional provincially protected areas around the national park’s borders. Work to collect relevant data on water flows through the park is also well underway, the officials said.

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Nebraska:

American Burying Beetle center of environmental impact statement

On February 7, 2019 the U.S. Fish and Wildlife Service (USFWS) released its final environmental impact statement (FEIS) for the Nebraska Public Power District's (NPPD) R-Project transmission line, related to the endangered American burying beetle habitat that lies within the project's path. The FEIS analyzes potential effects to the federally endangered American Burying Beetle and other factors to the human environment that would result from issuance of a take permit associated with the proposed R-Project transmission line.

From the beginning, the Nebraska Public Power District's (NPPD) R-Project 225-mile long, 345-kilovolt transmission line has been hotly contested in the Sandhills area of Nebraska, due in part to the fear by ranchers and residents that their land and livelihoods would be placed at risk, and coupled with concerns about the short-term and long-term environmental impacts wind turbines and power lines would have on the fragile ecosystem of grass prairie and sand dunes covering about a quarter of the state. The line is slated to cross high-quality migratory bird habitats, including rivers, wetlands, and meadows in the Sandhills region of north-central Nebraska. There are 18 “special status” species of birds, mammals, insects, plants, fish and reptiles that will be directly, or indirectly, affected by the R-Project – including the Aransas-Wood Buffalo population of Whooping Cranes.

Under the Endangered Species Act, USFWS can issue permits for the “incidental take” of endangered and threatened species — “take” that is the unintended result of otherwise lawful activities — as long as the applicant designs and implements a comprehensive habitat conservation plan that both minimizes and mitigates harm to the impacted species during the proposed project. Therefore, as a result of NPPD’s application for a permit for the endangered American Burying Beetle, it prepared a habitat conservation plan for the beetle, as well as a migratory bird conservation plan to minimize the potential impacts to birds such as the Whooping Crane.

There was public concern about the potential for Whooping Crane deaths and/or injuries from powerline strikes during spring and fall migrations through the project area, to and from breeding grounds in Wood Buffalo National Park in Canada to their wintering sites at Aransas National Wildlife Refuge in Texas. In response the USFWS conducted an analysis of the likelihood of Whooping Cranes hitting powerlines and included data obtained by the U.S. Geological Survey from satellite transmitters on 58 Whooping Cranes. The service found that while there is potential for collisions, the risk is low. As part of NPPD’s Final

Migratory Bird Conservation Plan, diverters will be attached to powerlines increasing visibility of the lines for the cranes.

To read the USFWS Final Environmental Impact Statement, go here:
https://www.fws.gov/mountain-prairie/es/nebraska/library/R-Project-Final-EIS.pdf
Information pertaining to Whooping Cranes can be found on P3-180 to 3-188 of the document.

And go to P3-235 of the document for the FEIS summary table, **Table 3.7-6. Potential Effects on Special Status Species under the Action Alternatives**; *Whooper information, P3-237*

To read the NPPD Final Migratory Bird Conservation Plan/November 14, 2018, go here:
https://www.fws.gov/mountain-prairie/es/nebraska/library/R-Project-Final-Mig-Bird-Conservation-Plan.pdf
Under the section, ***Potential Effects On Federally Protected Avian Species,*** *is the Whooping Crane assessment, pages 45-53.*

To read NPPD's Restoration Management Plan/September 12, 2018, go here:
https://www.fws.gov/mountain-prairie/es/nebraska/library/R-Project-HCP-Final-Restoration-Mgmt-Plan.pdf

DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
[Docket No. FWS–R6–ES–2014–0048; FF06E220000–178–FXES11140600000]
Endangered and Threatened Wildlife and Plants; Incidental Take Permit and Habitat Conservation Plan for the R-Project Transmission Line; Final Environmental Impact Statement
https://www.federalregister.gov/documents/2019/02/08/2019-01600/endangered-and-threatened-wildlife-and-plants-incidental-take-permit-and-habitat-conservation-plan

For a PDF of the FEIS go here: https://www.govinfo.gov/content/pkg/FR-2019-02-08/pdf/2019-01600.pdf

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Science News:

Effects of Territorial Status and Life History on Sandhill Crane Population Dynamics in South Central Wisconsin

Michael E. **Wheeler**, Jeb A. **Barzen**, Shawn M. **Crimmins**, and Timothy R. **Van Deelen**

Abstract: Population growth rate in long-lived bird species is often most sensitive to changes in adult survival. Sandhill cranes (Antigone canadensis Linnaeus, 1758) are one such species, with long lifespans, small broods, and delayed first reproduction. Only territorial, adult cranes participate in breeding, and territory acquisition reflects the interplay between the availability of suitable territories on the landscape and variation in mortality of adult birds occupying those territories. We estimated vital rates of a population at equilibrium using long-term resightings data (2000-2014; n = 451) in a multi-state mark-resight model, and used a stage-structured projection matrix framework to assess how strongly territorial adult affects population growth rate. Territorial birds surviving and retaining territory had 2.58 times the impact on population growth rate than the next most important transition rate (survival of non-territorial adults remaining non-territorial). This pattern is likely present in many crane species and other long-lived territorial species. Knowing how changes in vital rates of various stage classes will differentially impact population growth rate allows for targeted management actions.

Canadian Journal of Zoology, 2019, 97(2): 112-120, https://doi.org/10.1139/cjz-2018-0135
DOI: 10.1139/cjz-2018-0135

A full-text PDF download is available from Jeb Barzen at:
https://www.researchgate.net/publication/327587113_Effects_of_territorial_status_and_life_history_on_sandhill_crane_population_dynamics_in_south_central_Wisconsin

Sandhill Crane Foraging Behavior and Damage Estimates in Cornfields During Spring

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Abstract: Damage to corn in the spring caused by greater sandhill cranes (Grus canadensis tabida) has increased concurrent with growth of the Eastern Population of cranes. Our study was designed to: 1) describe foraging rates and food acquisition behavior where damage was likely and 2) estimate damage in cornfields treated and untreated with a taste deterrent: 9,10-anthraquinone (AQ; Avipel®). Our 6,251.6-ha study area was located near Briggsville, Wisconsin, and we sampled 415 ± 13.2 individuals/ survey (x ± SE), of which 36 ± 1.7% used cornfields. During 10-30 May 2009, 121 observation bouts of 33 marked cranes that foraged in 20 cornfields were collected. Observation bouts averaged 21 ± 1.32 minutes of which 10.2 ± 0.75 minutes consisted of active foraging by cranes. Individuals swallowed an average of 6.08 ± 0.68 items/active minute. Only 10.4% of 6,445 items consumed were identified and 9.7% of items were corn kernels (93% of identified items). Ingestion rates for all foods in fields treated with AQ (6.44 items/min) and non-treated fields (6.21 items/min) did not differ ($t = -0.15$, $P = 0.88$), but corn kernels consumed in non-treated fields were ingested at more than 3 times the rate measured from treated fields ($F = 3.84$, $P = 0.05$). Jab/probe ratios did not differ between treated and untreated fields ($F = 0.12$, $P = 0.72$), so foraging behaviors were similar even though different foods were consumed. We estimated that all sandhill cranes in this study area consumed 71,245 kernels/ day (478 kernels/crane/day) and, over the period that planted corn was potentially vulnerable, consumed a maximum of >2.9 million kernels or 41.0 ha of planted corn (3.8% of all corn planted in the study area). Crane damage could be widely scattered, and thus insignificant, or it could be locally severe as non-territorial individuals congregate in 1 field and concentrate damage, making the distribution of severe damage unpredictable. Though effective at alleviating crane damage, treating planted corn must either be applied uniformly or applied based on previous experience with crane foraging patterns and planting phenology in relationship to other fields.

PROCEEDINGS OF THE NORTH AMERICAN CRANE WORKSHOP 14:67-80

A full-text PDF download is available from Jeb Barzen at:
https://www.researchgate.net/publication/329686548_SANDHILL_CRANE_FORAGING_BEHAVIOR_AND_DAMAGE_ESTIMATES_IN_CORNFIELDS_DURING_SPRING

Effective and Sustainable Prevention of Avian Damage to Planted Seeds Through Seed Treatment

Jeb Anthony Barzen, Private Lands Conservation LLC; Kenneth Ballinger, Independent Researcher

Abstract: Several species of cranes and other wildlife have recovered from low populations because, in part, they have adapted to resources found in agricultural environments. If future conservation strategies are to succeed in areas dominated by agricultural use, we must develop sustainable models that solve crop damage problems that are caused by expanding wildlife populations. Using crane damage to planted seed as an example, we propose 1 such model of sustainable crop damage prevention. The deterrent, 9,10-anthraquinone (AQ), is a natural product produced by plants, in part to control bird frugivory, and induces gastro-intestinal distress (temporarily sickens an individual) in sandhill cranes (Grus canadensis) as well as other bird species. AQ is an effective deterrent because it induces a physiological response at first and is then accompanied by a conditioned avoidance. Yet, AQ is not toxic to birds nor are birds likely to habituate to the deterrent. Seed repellents cause birds to avoid treated foods among several possible items found within the same field. Other, more traditional, crop damage repellents (e.g., propane cannons) operate by moving birds among fields within home ranges. Excluding preferred habitats such as cornfields increases the risk that birds will habituate to deployed damage solutions. AQ products have adapted to a diverse farm environment and cost less than 3% of total planting costs. They were applied to prevent crane damage on planted corn for more than 67,000 ha in the Midwest during 2018 and can be deployed at whatever spatial scale that damage severity warrants. Our model using AQ as a seed treatment to prevent crane damage to germinating corn has been applied to pheasants (Phasianus

colchicus) and blackbirds (Icteridae) as well as in rice and sunflower crops. As such, this model presents a sustainable approach that arises from solutions that allow agriculture and wildlife to co-exist.

A full-text PDF download is available from Jeb Barzen at:
https://www.researchgate.net/publication/329686474_EFFECTIVE_AND_SUSTAINABLE_PREVENTION_OF_AVIAN_DAMAGE_TO_PLANTED_SEEDS_THROUGH_SEED_TREATMENT

Working with Land Managers to Identify and Manage Potential Stopover Locations for Whooping Cranes

Chester A. **McConnell**, *Friends of the Wild Whoopers, 8803 Pine Run, Spanish Fort, AL 36527, USA*

Abstract: Whooping cranes (*Grus americana*) of the Aransas-Wood Buffalo Population migrate 4,000 km twice each year between their nesting grounds in northern Canada and their wintering grounds on the Texas Gulf Coast. During migration, whooping cranes must land at suitable ponds or wetlands to feed or rest. The Whooping Crane Recovery Plan calls for the protection and management of whooping crane stopover locations within the migration corridor. While major stopover areas have been protected, many other smaller sites remain to be identified. Moreover, the Recovery Plan offers no specific entity to protect and manage the latter. To address these gaps in information and activity, Friends of the Wild Whoopers engaged with large land-holding entities (military bases and Indian Reservations) within the migration corridor to share information about whooping cranes and their habitat needs and identify suitable stopover sites that could be protected and managed for cranes. This cooperative effort identified up to 177 wetlands/ponds as potential stopover sites on 14 military bases in Kansas, Oklahoma, and Texas, and as many as 1,275 on 6 Indian Reservations in North and South Dakota, with commitments to manage the habitats as resources allow.

PROCEEDINGS OF THE NORTH AMERICAN CRANE WORKSHOP 14:126-131

For a full-text pdf of the paper, go here:
http://www.nacwg.org/Proceedings%2014%20promo.pdf

Exploring Changes in The Eastern Sandhill Crane Population

In 2015, Dorn Moore worked with fellow researchers at the International Crane Foundation to publish a paper in the *Journal of Field Ornithology* titled “Changes in the number and distribution of Greater Sandhill Cranes in the Eastern Population” (download the original article). They used data from annual bird surveys to explore the substantial changes in the Sandhill Crane population size and distribution from 1966 to 2013.

For the winter analysis, the researchers used data from the National Audubon Society’s Christmas Bird Count. Volunteers count birds as part of the Christmas Bird Count between December 14 and January 5 each year. These data are used by researchers to help understand changes in bird populations. Our data analysis revealed major increases in the number of Sandhill Cranes in the eastern population and significant changes in the timing and distribution of cranes during their winter migration.

To read more about the changes, and to see data visualization charts and interactive “Population Trend for Sandhill Cranes in the Eastern Population (1966-2013)” by Dorn Moore, Geospatial & Information Services Manager, International Crane Foundation, go here:
https://www.savingcranes.org/exploring-changes-in-the-eastern-sandhill-crane-population

“Changes in the number and distribution of Greater Sandhill Cranes in the Eastern Population” *appeared in the* March 2016 issue of the Eastern Crane Bulletin; Science News, page 13.

The Art of Cranes

"Ajijaak on Turtle Island" – a Whooper's first migration

"Over the last 20 years of producing environmental spectacles, I have seen how puppets can be powerful connectors to nature and how much cranes can teach us," said Heather Henson, daughter of legendary puppeteer Jim Henson.

As a trustee for the International Crane Foundation (ICF) based in Baraboo, WI, much of Henson's work with cranes is inspired by ICF's mission to conserve cranes and their landscapes. Director Ty Defoe's work in communities across North America explores the parallels between environment and identity using art to inspire others for cultural and social change.

Co-directed by Grammy Award winner Ty Defoe and Henson, "Ajijaak on Turtle Island" brings together a cast of Native American performers from many nations, including the Ojibwe, Ho-Chunk, Lakota, and Cherokee Nations to tell the tale of Ajijaak, a young Whooping Crane who must face her first migration cycle on Turtle Island (North America) after being separated from her family. Puppets from Jim Henson's Creature Shop, indigenous songs and dances, and video projections create a transformative experience that honors contemporary Native American cultures and illustrates the harmonious relationships between humans, animals, and the environment. "Ajijaak on Turtle Island" celebrates the richness of the indigenous cultures that honor and protect majestic birds like Whooping Cranes.

Winding down from a four-city national tour that began in January, IBEX Puppetry's production "Ajijaak on Turtle Island," can still be experienced in New York, NY at The New Victory Theater, March 1-10, 2019.

Upcoming Events:

2019 Marsh Madness Sandhill Crane Festival
Dates: March 1-2, 2019
Location: Goose Pond Fish and Wildlife Area
Greene Co. Indiana, near Linton

Join Friends of Goose Pond for its annual 2019 Sandhill Crane Festival. A kickoff banquet is Friday, March 1 at 7:30PM and will feature keynote speaker Dr. Henry Loope, Research Glacial Geologist, Indiana University. The festival also includes an exhibit by Indiana Wildlife artists March 4-23; a one-time showing of "*Goose Pond: The Story of a Wetland and its Neighbors*," (free admission with arm band); special presentations about Indiana raptors, snakes and bats; bus tours of the amazing wildlife management area and arts, crafts and kid activities. There will be something for everyone interested in our natural world. *Festival admission tickets are required for some of the cabin presentations and activities.*

For the festival agenda, go here:
https://friendsofgoosepond.org/marsh-madness-schedule/

For a map of Goose Pond FWA, go here:
https://www.in.gov/dnr/fishwild/files/fw-gpfwa_waterfowl_draw_map.pdf

Learn more about the conservation, restoration and education work by Friends of Goose Pond group here: http://www.friendsofgoosepond.org/

For ticket information, go here: https://friendsofgoosepond.org/product/2019-marsh-madness-ticket/

Audubon's Nebraska Crane Festival
Date: March 21-24, 2019
Location: Kearney, Nebraska

Audubon's Nebraska Crane Festival brings together hundreds of crane lovers from around the country to Kearney, Nebraska, to interact with a wide range of environmental speakers, take part in incredible birding trips, and, best of all, experience the world's largest gathering of Sandhill Cranes!

Several highlights of this year's festival include:

- "The Trumpet in the Orchestra of Evolution: The Story of the Sandhill Crane In North America" – Anne Lacy, the International Crane Foundation's Crane Research Coordinator
- "Whooping Cranes Facts and Habitat Needs" – Chester McConnell, President, Friends of the Wild Whoopers
- "Follow the Water" – Author and Photographer Michael Forsberg

To register online, go here:
http://ne.audubon.org/birds/crane-festival-registration

For the Crane Festival Schedule of Events, go here:
http://ne.audubon.org/birds/crane-festival-schedule-events

If you can't make the festival but still want to see the Sandhill Cranes, check out Rowe Sanctuary's website, or call (308) 468-5282 to learn about more crane viewing options.

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The Eastern Crane Bulletin is issued quarterly (March, June, September and December).
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http://kyc4sandhillcranes.com/eastern-crane-bulletin/

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