EMP FIELD TEAM ANNUAL REPORT 2025

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Executive Summary

Highlights related to monitoring and management of the EMP from 2025 include:

- During 2025, there were approximately 68 Whooping Cranes in the Eastern Migratory Population. To the best of our knowledge, all birds spent the summer in Wisconsin (Fig. 1).

- We recorded a total of 22 nests by 16 different pairs of Whooping Cranes breeding in Wisconsin. We collected 15 eggs from 8 first nests for forced renesting, to encourage pairs to renest after black flies were gone. We collected 9 eggs from 4 first nests and 5 re-nests with 2 egg clutches and 1 egg from an abandoned nest. We collected an additional 3 non-viable eggs for veterinary research projects. In total, we collected 25 eggs to be raised in human care for SAFE holdback or release. Six chicks hatched in the wild from 4 first nests and 1 re-nest (Table 2). One wild-hatched chick fledged and survived to migration (Table 3).

- Six adults were captured for transmitter replacement, and 1 wild-hatched adult was captured for initial banding.

- There was 1 juvenile costume-reared crane that was slated for release at Horicon NWR that died of Highly Pathogenic Avian Influenza (HPAI) prior to release. It had symptoms while in the acclimation pen at Horicon and died en route to ICF for assessment and treatment. This is the first documented case of a Whooping Crane dying from HPAI.

- We released 8 captive-reared Whooping cranes into the wild. One was parent-reared (from ICF) and 7 were costume-reared (from ICF). One costume-reared juvenile died in November before migration. The other 7 juveniles survived migration and are on the wintering grounds. All of the juveniles have been seen associating with or are near other juveniles or adult Whooping Cranes throughout the flyway.

- There were 7 confirmed adult mortalities and 1 post-release juvenile mortality during 2025, due to various causes. Additionally, 3 cranes were classified as long-term missing during 2025.

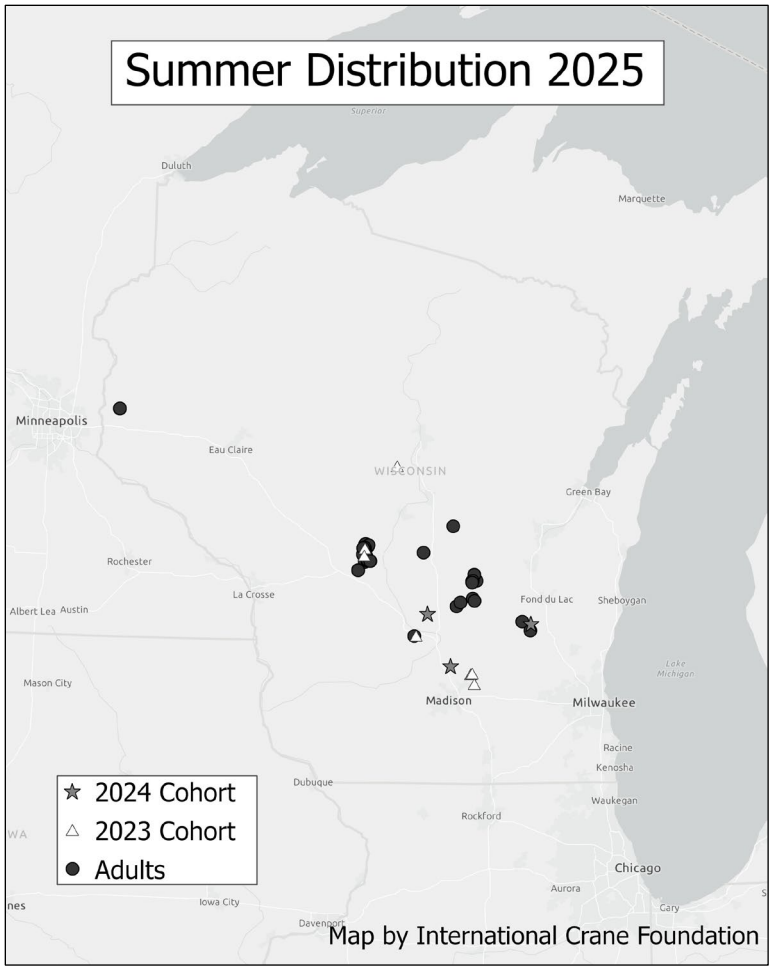

Figure 1. Summer distribution of the Eastern Migratory Population of Whooping Cranes during 2025. At least 61 cranes spent the summer in Wisconsin.

Winter 2024-25

The maximum population size as of 10 January 2025 was 70 (36 F, 31 M, 3 U). The final wintering locations of Whooping Cranes in the EMP during winter 2024-25 were as follows (Fig. 2): 17 birds in Alabama, 2 in Tennessee, 8 in Kentucky, 6 in Illinois, 25 in Indiana, 2 in Georgia, and 2 in Florida. There were 8 in unknown locations. Three of these birds were later classified as long-term missing, including 1 bird from the 2023 cohort.

Winter distribution as of 2 January 2026

The maximum population size as of 2 January 2026 was 66 (37 F, 26 M, 3 U). The distribution of these birds is as follows (Fig. 3): 20 birds in Alabama, 17 in Indiana, 2 in Illinois, 5 in Kentucky, 3 in Tennessee, 1 in Florida, and 3 in Georgia. There were 15 in unknown locations or that had not been confirmed in the last month.

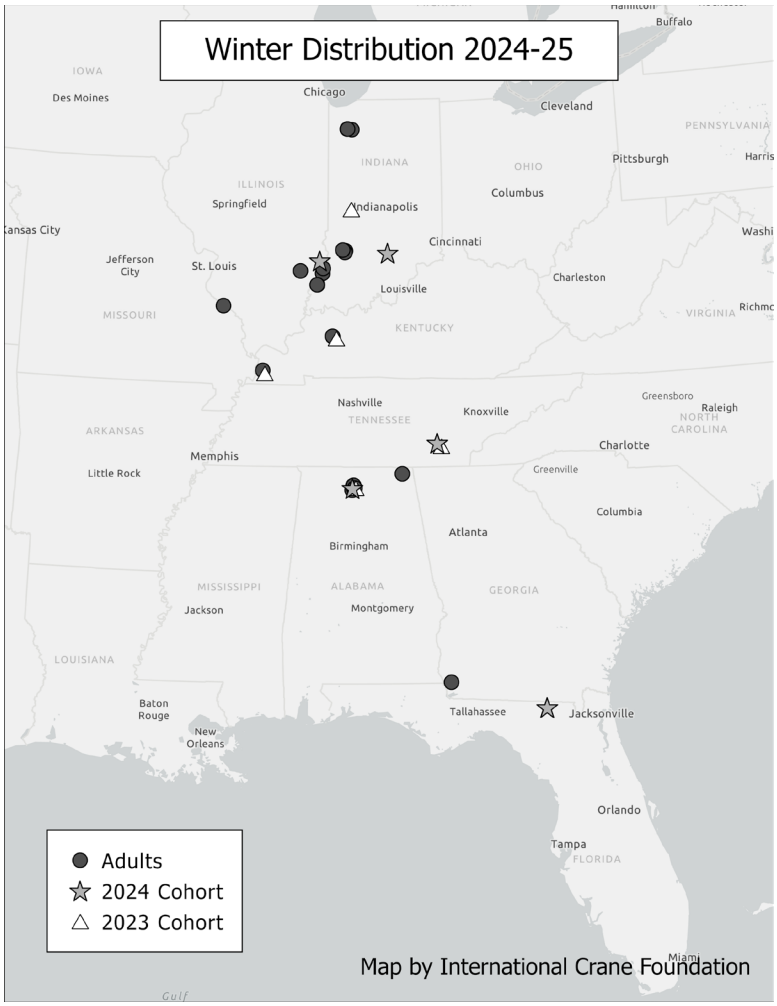

Figure 2. Distribution of wintering Whooping Cranes in the EMP 2024-25

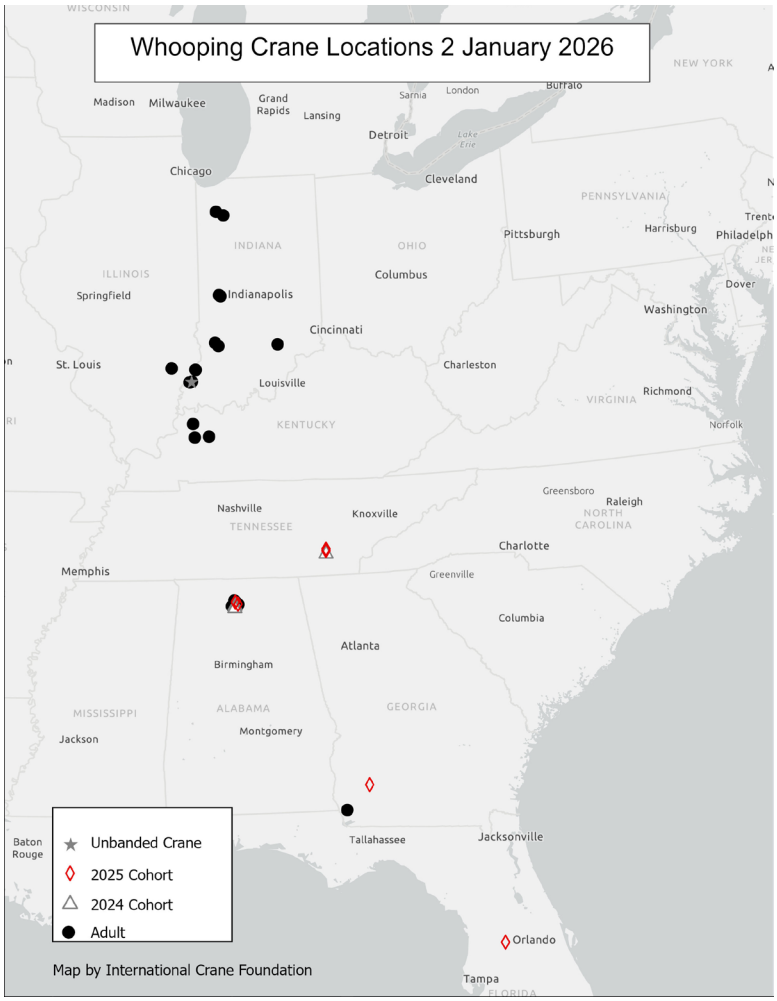

Figure 3. Distribution of wintering Whooping Cranes in the EMP as of 2 Jan 2026.

Captures and Banding in 2025

- Captures for transmitter replacement:
  - W13-23, Sauk County, Wisconsin, 27 March
  - 13-02, Juneau County, Wisconsin, 14 April
  - 20-23, Dane County, Wisconsin, 21 May
  - 5-11, Dane County, Wisconsin, 29 August
  - 3-14, Green Lake County, Wisconsin, 5 September
  - 7-11, Adams County, Wisconsin, 24 October
  - 21-23, Juneau County, Wisconsin, 30 October
- Banding prior to release for captive-reared birds:
  - 30-25, 31-25, 32-25, 33-25, 34-25, 35-25, 37-25, 38-25, ICF, 2 September
  - 36-25, ICF, 16 September

Releases of captive-reared cranes

Eight captive-reared juvenile cranes were released in Wisconsin into the Eastern Migratory Population during 2025. One of these was parent-reared (36-25), and 7 were costume-reared (30-25, 31-25, 32-25, 34-25, 35-25, 37-25, 38-25) at the International Crane Foundation. The costume-reared cranes were transferred to a pen on September 8th at Horicon National Wildlife Refuge (NWR), where they were then released on October 7th. One of the costume-reared birds moved to release site, 33-25, died before release, due to Highly Pathogenic Avian Influenza (HPAI), and 37-25, died in November at Horicon NWR from a non-HPAI respiratory disease. After release, the costume-reared birds typically remained in a large group with adults 79-19 (F) and 28-25 (M).

- 36-25 (M) was parent-reared at the International Crane Foundation then released on private property in Green Lake County, Wisconsin, on 8 October 2025 near an established pair (10-15 and 4-13). After release, he briefly associated with pair 67-15 and 3-17. In December, he moved to Sauk County, Wisconsin with Sandhill Cranes and then migrated to Hiawasee Wildlife Refuge in Meigs County, Tennessee, stopping in Illinois, Indiana, and Kentucky along the way.
- 30-25 (M) and 79-19 (F) migrated together on 27 November from Horicon NWR to Goose Pond Fish and Wildlife Area in Greene County, Indiana. In December, 30-25 and 79-19 traveled farther south to Wheeler NWR in Alabama.
- 31-25 (F), 34-25 (F), 38-25 (F), and likely 28-24 (M) migrated together from Horicon NWR on 27 November. 38-25 and 28-24 split from the group and continued to Wheeler NWR in Morgan County, Alabama, where 38-25 has been seen associating with multiple adult Whooping Cranes. Meanwhile, 31-25 and 34-25 migrated to Hiawasee Wildlife Refuge in Meigs County, Tennessee. From there, 31-25 continued south to Lake County, Florida with Sandhill Cranes.
- 32-25 (M) and 35-25 (F) migrated together on 27 November from Horicon NWR to Muscatatuck NWR in Jackson County, Indiana. In December, they continued south to Taylor County, Florida. Later in December, they moved to Baker County, Georgia.

Survival

- The total number of birds (both captive releases and wild-hatched chicks) coming into this population since 2001 is 363 cranes (Fig. 4), of which 66 (18%) may be alive as of 2 January 2026 (Fig. 5). There have been 324 captive raised Whooping Cranes released since the beginning of the reintroduction in 2001. This number does not include the 17 HY2006 ultralight-led juveniles that died during confinement in a storm and one HY2007 ultralight-led juvenile that was removed from the project prior to release. There have been 39 wild-hatched chicks that survived to fledging (see Reproduction section below).
- There were 7 confirmed adult mortalities and 1 post-release juvenile mortality in 2025 (mortalities of pre-fledge wild-hatched chicks born in 2025 are in the table listed below, Table 1, Fig. 6):
    - 4-12 (M) confirmed dead on 9 May 2025 in Green Lake County, Wisconsin, confirmed predation.
    - 15_11 (F) confirmed dead on 6 August 2025 in Juneau County, Wisconsin, in August, suspected predation.

    - 37_07 (M) confirmed dead on 8 August 2025 in Juneau County, Wisconsin, in August, unknown cause during molting season.
    - 16_04 (M) confirmed dead on 8 August 2025 in Juneau County, Wisconsin, in August, suspected predation.
    - 4-17 (M) confirmed dead on 11 August 2025 in Sauk County, Wisconsin, in August, likely due to a leg injury and molting.
    - 21-23 (F) confirmed dead on 7 November 2025 in Juneau County, Wisconsin, asphyxiation caused by a corn kernel.
    - 37-25 (F) confirmed dead on 12 November 2025 in Dodge County, Wisconsin, non-HPAI respiratory disease.
    - 7-17 (F) confirmed dead on 13 November 2025 in Lee County, Illinois, unknown cause.
- There were 3 cranes classified as long-term missing during 2025.
    - W6-18 (M) was last seen in May 2024 in Juneau County, Wisconsin.
    - 85-21 (M) was last seen in July 2024 in Juneau County, Wisconsin.
    - W9-23 (F) was last seen in November 2024 in De Witt County, Illinois.
- The average annual survival rate for adult cranes over 4yo was 87.9% (range = 66.7 - 100%, Fig. 7). For older age classes, sample sizes were quite small (5 or less for ages 20+).

Table 1. Causes of death for fledged, wild-hatched and captive-reared Whooping Cranes in the Eastern Migratory Population. We did not include confirmed mortalities for wild-hatched pre-fledged chicks. "Other" causes of mortality included euthanasia due to injuries, hemorrhages, capture myopathy, emaciation, egg binding, asphyxiation caused by a corn kernel, and leg injury.

Cause of Death	**Number of cases cumulatively 2001-2024**	**Number of cases 2025**	**Percent of total mortalities 2001-2025**	**Percent of known causes 2001-2025**
Predation – confirmed or suspected	42	3	23.4%	40.5%
Impact Trauma – confirmed or suspected power line collision	13	0	6.3%	11.7%
Impact Trauma – other (vehicle or aircraft collision, unknown source of trauma)	12	0	7.3%	10.8%
Gunshot	14	0	7.3%	12.6%
Disease (including lead poisoning)	8	1	4.7%	8.1%
Other	16	2	9.4%	16.22%
Unknown	79	2	42.2%	
Total confirmed mortalities	184	8		

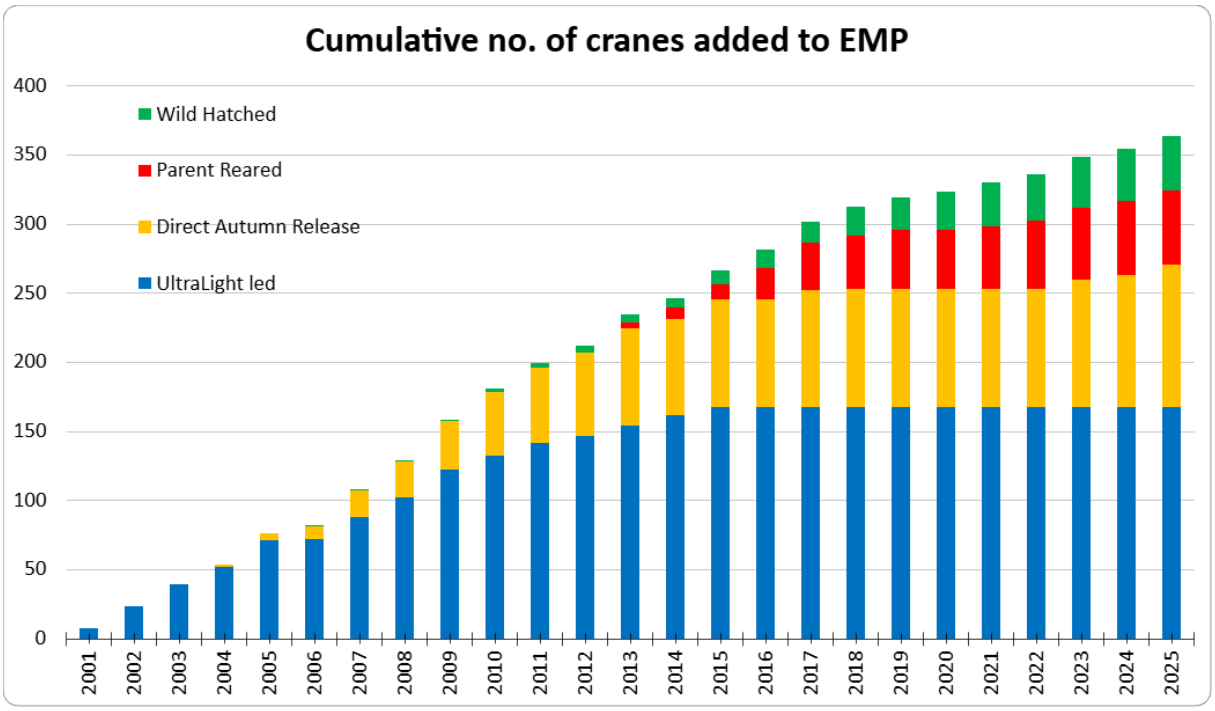

Figure 4. Cumulative number of cranes added to the Eastern Migratory Population by rearing method since 2001. As of 2025, there have been 167 UltraLight led, 103 Direct Autumn Release, 54 Parent Reared, and 39 Wild Hatched Whooping Cranes added to the EMP.

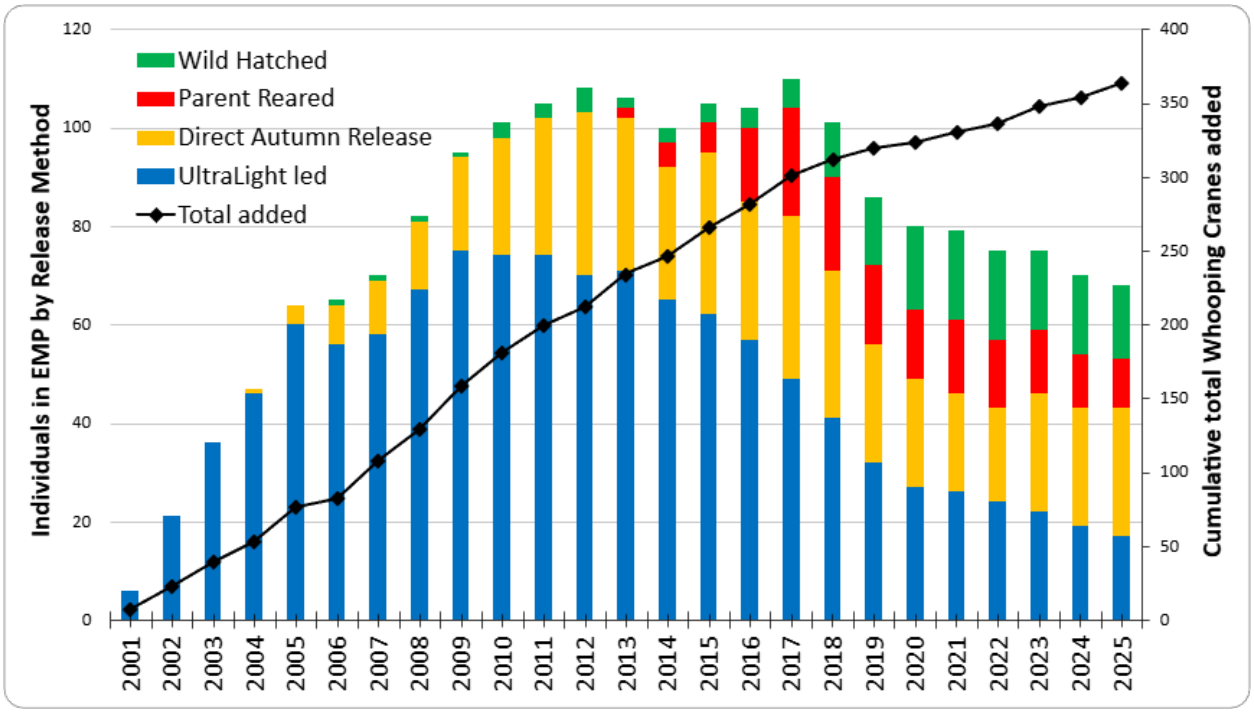

Figure 5. Population size of EMP by rearing method. As of 2 January 2026, there were 66 birds recorded in the EMP (left axis; 26 M, 37 F, 3 U). Black line indicates the total birds released (or wild-fledged) into the population cumulatively (right axis).

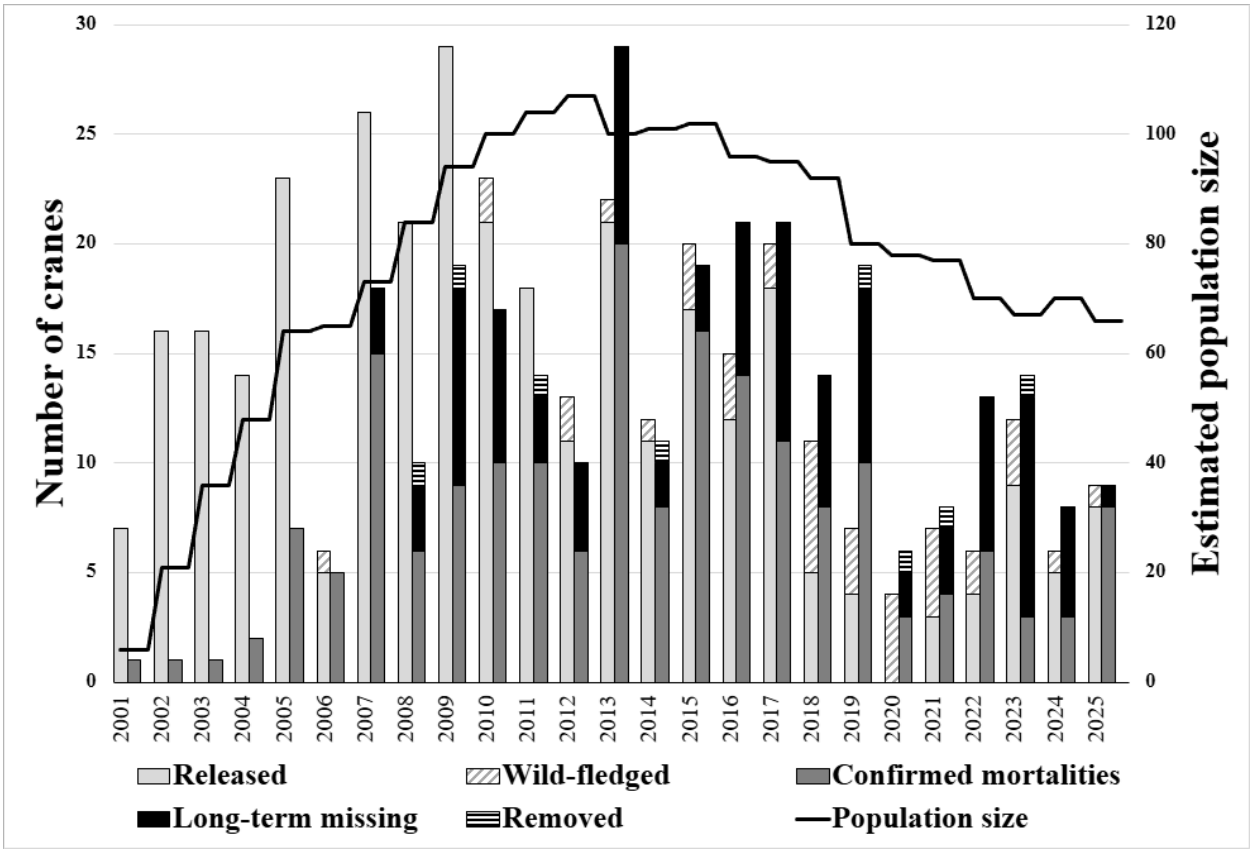

Figure 6. Estimated population size of the Eastern Migratory Population of Whooping Cranes from 2001-25 (right axis). The number of cranes added into the population each year is shown in a stacked bar on the left, those subtracted on the right bar (left axis).

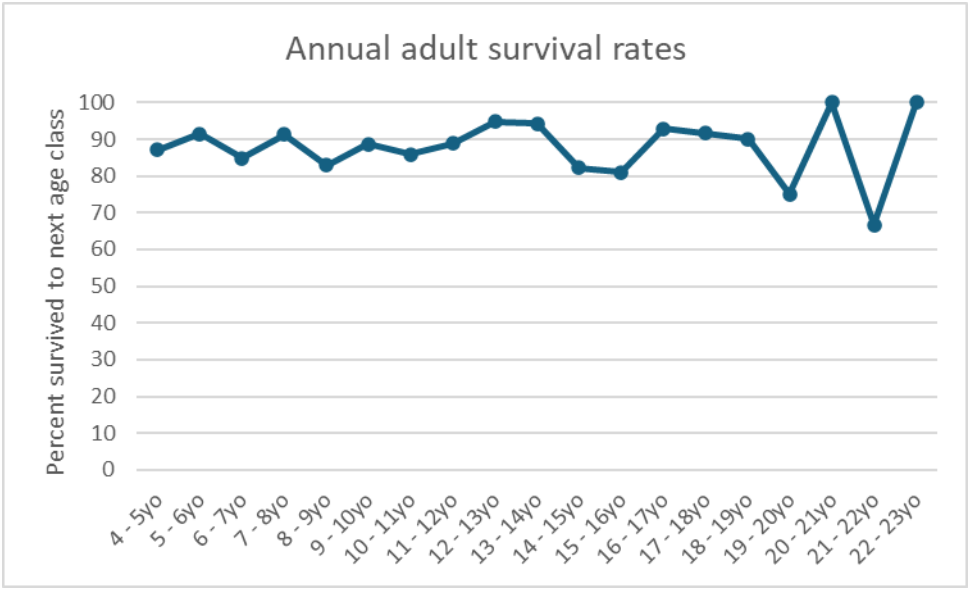

Figure 7. Annual adult survival rates calculated as the percentage of birds in each age class that survived to the next age class. On average, the annual adult survival rate for cranes at least 4yo is 87.9%.

Reproduction

- This year we recorded a total of 22 nests by 16 different Whooping Crane pairs breeding in Wisconsin. The numbers reported here are the total we observed but there may have been a few missed nests or young chicks.
- We collected 15 eggs from 8 first nests for forced renesting, to encourage pairs to renest after black flies were gone. We collected 9 eggs from 4 first nests and 5 re-nests with 2 egg clutches and 1 egg from an abandoned nest. We collected an additional 3 non-viable eggs for veterinary research projects. In total, we collected 25 eggs to be raised in human care for SAFE holdback or release.
- Nine nests failed, 1 was predated by a coyote, 2 were abandoned for unknown reasons, 1 likely flooded, and 5 were incubated full term but did not hatch (Table 2).
- Six chicks hatched from 4 first nests and 1 re-nest (Table 2). One wild-hatched chick fledged and survived to migration (Table 3).
- At the end of 2025, there have been a total of 476 nests (372 first nests, and 104 re-nests). 208 chicks hatched in the wild, of which 39 have fledged. As of 2 January 2026, 15 of the 39 wild-fledged cranes survive in the wild (Tables 3 and 4, Fig. 8).

Table 2. Nesting summary for 2025. Asterisks indicate a re-nest. Active nest management was implemented to reduce the impact of black fly disturbance. Some nests with two-egg clutches had one egg removed as a part of Partial Clutch Collection (PCC) to increase the number of eggs and chicks raised in captivity for release into reintroduced populations.

Female	Male	Nest Outcome	Date Completed	County	Chicks	Notes
6_15	19_09	Active nest management	13 Apr	Juneau		2 eggs collected
73_18	3_04	Active nest management	13 Apr	Juneau		2 eggs collected
6_17	16_04	Active nest management	13 Apr	Juneau		2 eggs collected
W14_19	2_04	Active nest management	13 Apr	Juneau		1 egg collected, 1 egg found in water
12_03	12_05	Active nest management	14 Apr	Juneau		2 eggs collected
24_08	13_02	Active nest management	14 Apr	Juneau		2 eggs collected
W3_10	7_07	Active nest management	14 Apr	Juneau		2 eggs collected
W3_17	W2_21	Failed – unknown, full term	14 May	Green Lake		
36_09	W5_18	Active nest management	14 Apr	Juneau		2 eggs collected
W1_19	1_17	Hatched	28 Apr	Portage	W1, W2	W1 fledged

10_15	4_13	Hatched	29 Apr	Green Lake	W4	PCC
15_11	37_07	Failed – unknown, full term	4 May	Juneau		1 non-viable egg collected
12_11	5_11	Hatched	4 May	Juneau	W3	
W13_23	4_17	Failed – predation	4 May	Sauk		PCC
3_14	4_12	Hatched	8 May	Green Lake	W5	PCC, male predated 9 May
W14_19	2_04	Failed* - flooded	16 May	Juneau		
67_15	3_17	Failed – unknown, full term	19 May	Green Lake		PCC
12_03	12_05	Hatched*	25 May	Juneau	W6	PCC
36_09	W5_18	Failed* - abandoned	31 May	Juneau		PCC
W3_10	7_07	Failed* – unknown, full term	5 Jun	Juneau		PCC
W13_23	4_17	Failed* - abandoned	13 Jun	Sauk		1 PCC, 1 abandoned egg collected
24_08	13_02	Failed* – full term	25 Jun	Juneau		1 PCC, 1 non-viable egg collected

Table 3. Nest initiation dates, number of nests (including number of first nests, renests, and those with eggs collected as a part of Forced Renesting (FRN)), number of chicks hatched, and number of chicks fledged, and number of chicks that survived to 6 months of age, during 2005-2025. This does not include hybrid nests or chicks, nor does it include same-sex pairs. There was one same-sex female pair that nested in 2020, was given fertile eggs, and hatched a chick that did not fledge. This chick is included in the number of chicks hatched, but the nest is not included in nest totals.

Year	First Nest Initiation	# First Nests	# Re-nests	Total Nests	# Nests FRN	# Successful Nests	# Chicks Hatched	# Fledged	# Survived to 6 mo.
2005	16 Apr	2	0	2	0	0	0	0	0
2006	5-6 Apr	5	1	6	0	1	2	1	1
2007	3 Apr	4	1	5	0	0	0	0	0
2008	7 Apr	11	0	11	0	0	0	0	0
2009	2 Apr	12	5	17	0	2	2	0	0
2010	<1 Apr	12	5	17	0	5	7	2	2
2011	3-4 Apr	20	2	22	2	4	4	0	0
2012	<26 Mar	22	7	29	0	8	9	2	2
2013	15 Apr	21	2	23	0	2	3	1	0
2014	7 Apr	25	3	28	4	8	13	1	1
2015	1-3 Apr	27	9	36	8	16	24	3	2
2016	29-31 Mar	25	16	41	7	16	23**	3*	0
2017	30 Mar	25	10	35	13	14	19**	2	2

2018	8 Apr	17	6	23	1	7	10	6*	5
2019	30 Mar	25	11	36	12	14	19	3	3
2020	25 Mar	20	3	23	1	15	18	4	4
2021	<31 Mar	21	2	23	1	10	14	4	3
2022	30 Mar - 2 Apr	24	7	31	9	12	14	2	2
2023	30 Mar	22	3	25	1	13	14	3	3
2024	31 Mar	17	5	22	4	5	7	1	1
2025	28 Mar	16	6	22	8	5	6	1	1
Total		372	104	477	71	157	208	39	32

*One chick was old enough to have fledged when it died, but flights were never observed.

**There was an error in previous annual reports that we have fixed here. There should be 23 chicks hatched in 2016, not 24 as previously reported. Additionally, when reviewing nest camera photos, there was an additional chick that hatched in 2017 that was not previously detected, so the number of chicks hatched in 2017 is 19 instead of the previously reported 18. The additional 2017 chick was only seen for one day on the nest camera. The total chicks hatched is still correct (208 chicks). We apologize for the error.

Table 4. Pairs that have successfully fledged chicks with years of fledging

Sire	Dam	Year(s)				
11-02	17-02	2006				
3-04	9-03	2010	2013	2015		
12-02	19-04	2010	2012	2014		
9-05	13-03	2012	2019			
10-09	17-07	2015				
2-04	25-09	2015	2021			
29-09	12-03	2016				
12-05	12-03	2019	2020	2021		
1-04	8-05	2016				
12-02	4-11	2016*				
14-08	24-08	2017	2018**			
13-02	24-08	2020	2023			
24-09	42-09	2017	2018			
11-15	42-09	2020				
5-11	12-11	2018	2019	2022	2023	2024
4-08	23-10	2018				
8-04	W3-10	2018				
1-04	16-07	2018				
63-15	38-17	2020				
18-03	36-09	2021				
4-12	3-14	2021				
1-17	W1-19	2022	2025			
29-08	15-11	2023				

*12-02 died before chick fledged. Chick was old enough to have fledged when it died, but flights were never observed. 4-11 was found shot at her wintering area at the beginning of 2017.

** 14-08 disappeared before chick fledged and 14-08 is believed to be dead. The chick (W9-18) was old enough to have fledged when it died, but flights were never observed.

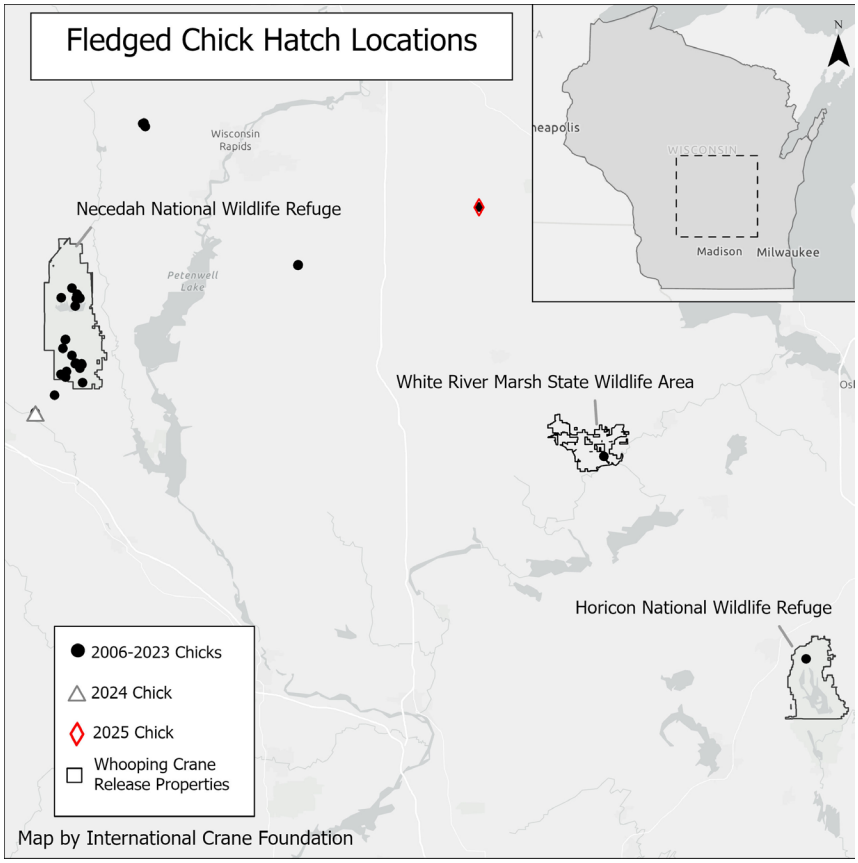

Figure 1. Map of hatch locations of wild fledged Whooping Crane chicks from 2006-2025 in the Eastern Migratory Population with an inset map of Wisconsin highlighting the focal area. From 2006 to 2023, 37 chicks fledged, with 1 additional chick in 2024 and 1 in 2025.

Research

During 2025, members of the Field Team had 12 papers published, one completed MS thesis, and one completed PhD. Below are research products (done by Field Team members or partners) that were published during 2025, or were previously unreported in an annual report, that focus on the Eastern Migratory Population.

Anderson, M., G. H. Olsen. S. Dunham. H. L. Thompson, and M. M. Wellington. 2025. Comparisons of migration patterns between parent-reared and costume-reared whooping cranes in the Eastern Migratory Population, 2012-2023. Proceedings of the North American Crane Workshop 16:182-194.

Anderson, M., G. H. Olsen, and H. L. Thompson. 2025. Comparisons of habitat use between parent-reared and costume-reared whooping cranes in the Eastern Migratory Population, 2012-2023. Proceedings of the North American Crane Workshop 16:157-166.

Caven, A. J. 2025. Whooping Crane ecology and conservation in remnant and reintroduced populations. Dissertation, Charles Darwin University, Casuarina, Australia.

Fontsere, C., S. A. Speak, A. J. Caven. J. A. Rodriguez, X. Wang, C. Pacheco, M. Cassatt-Johnstone, G. Femerling, B. Maloney, J. Balacco, J. Collins, Y. Sims, L. Abueg, O. Fedrigo, E. D. Jarvis, B. K. Hartup, B. Shapiro, M. T. P. Gilbert, C. van Oosterhout, H. E. Morales. 2025. Persistent genomic erosion in Whooping Cranes despite demographic recovery. Molecular Ecology: e70088.

Gordon, N. M., E. A. Laack, H. R. MacInnes, A. M. Ward, and H. L. Thompson. 2025. Movement of eastern migratory whooping cranes outside the Nonessential Experimental Population range, 2002-2024. Proceedings of the North American Crane Workshop 16:231-236.

Hartup, B. K., A. E. Lacy, and H. L. Thompson. 2025. Lead and mercury exposure in eastern whooping cranes: cause for concern? Proceedings of the North American Crane Workshop 16:210-217.

Inghram, W. R. 2025. Effects of captivity on roosting behavior in the endangered Whooping Crane (Grus Americana). Thesis, University of Wisconsin – Oshkosh, Oshkosh, WI, USA.

Macko, P. C., S. M. Schmidt, C. G. Crouch, A. N. Barajas, A. M. Ward, H. L. Thompson, M. R. Bradshaw, and E. H. Smith. 2025. Over-summering of migratory whooping cranes on their wintering grounds. Proceedings of the North American Crane Workshop 16:81-94.

Schmidt, S. M., and H. L. Thompson. 2025. Releases of after hatch year and adult whooping cranes in the reintroduced Eastern Migratory Population. Proceedings of the North American Crane Workshop 16:146-156.

Thompson, H. L., A. J. Caven, and N. M. Gordon. 2025. Renesting propensity of eastern migratory whooping cranes. Wild 2(2):19.

Thompson, H. L., A. J. Caven, S. M. Schmidt, B. R. F. Sicich, A. J. Sarrol, E. K. Szyszkoski, and N. M. Gordon. 2025. Whooping Crane chick survival in the reintroduced Eastern Migratory Population. Ecology and Evolution. 15: e71284.

Thompson, H. L., and N. M. Gordon. 2025. Predators and scavengers of eastern migratory whooping crane eggs. Proceedings of the North American Crane Workshop 16:237-242.

Thompson, H. L., A. E. Lacy, R. F. Baldwin, and P. G. R. Jodice. 2025. Differential habitat use of wintering whooping cranes throughout the range of the Eastern Migratory Population. Proceedings of the North American Crane Workshop 16:167-181.

Ward, A. M., H. L. Thompson, A.-M. T. Y. Gillet, A. J. Kearns, and A. J. Caven. 2025. Maximum daily dispersal distance of wintering whooping cranes at Goose Pond Fish and Wildlife Area, Indiana. Proceedings of the North American Crane Workshop 16:195-202.