

FALL SURVEY OF THE EASTERN POPULATION OF GREATER SANDHILL CRANES 2020 FINAL REPORT



Prepared by:

Rachael Pierce and Dave Fronczak

U.S. Fish and Wildlife Service

This report contains data tables and charts that may be large and complex. Readers that may need help reading and interpreting the data, or that may need data presented in an alternative format to facilitate reading and interpretation, should contact the U.S. Fish and Wildlife Service's Mississippi Flyway Representatives office (612/713-5411).

INTRODUCTION

The fall survey of Eastern Population (hereafter EP) of greater sandhill crane (*Grus canadensis tabida*) staging areas has been conducted throughout the Mississippi and Atlantic Flyways since 1979. The fall survey traditionally occurs during the last week of October under the assumption that the majority of EP sandhill cranes that breed in Canada have migrated to staging areas in the United States. The survey is a collaborative effort by state and federal agencies as well as citizen scientists.

We ask volunteers to visit recommended sites or sites in which cranes have been observed in previous years. Observation methods include roadside counts or point estimates (i.e., cranes departing from or arriving to a roost). Observers record date, start and stop times, location information, weather, and the number of cranes observed for each site.

This survey is not a complete census of EP sandhill cranes, but instead serves as an index of abundance. Over the past decade, EP Sandhill Cranes have expanded in both size and geographic range. The information collected allows the Service and Flyway Councils to quantify estimates and trends of EP sandhill cranes in an attempt to better manage this species.

In 2019, the Service launched the EP sandhill crane fall survey data portal (<https://www.fws.gov/epsandhill/>). This online platform was designed to improve survey coordination, enhance communication, reduce the burden of data entry, and provide precise information about where roosting and foraging locations occur each year. This platform provides both volunteers and the Service more refined information about habitat use and selection, as well as population distribution across the Midwest landscape and has significantly reduced the time required to coordinate the survey and analyze the data.

RESULTS OF SURVEY

- In 2020, volunteers in ten states and the Province of Ontario conducted the fall EP sandhill crane survey. This year, the Service was pleased to bring Iowa in to the survey (Table 1).
- The total number of EP sandhill cranes counted across the region for the 2020 survey was 94,879 (Figure 1). This was a +6% change from the previous years' count of 89,504. The largest percentage of birds were counted in Wisconsin (52%) followed by Michigan (17%), Minnesota (12%), and Indiana (11%). Despite the Covid pandemic, the effort among states was comparable to previous survey efforts.
- Weather for the first week of the survey (October 26 - 31) was reported as relatively mild with average high temperatures across the surveyed region at 45 °F (7 °C) and the average low temperatures at 34 °F degrees (1 °C). There was little to no precipitation and average winds were reported as mild. However, during the following week of the survey (November 1 - 4), the reported average high temperatures increased to 61°F degrees (16 °C) and the average lows

were 39 °F degrees (4 °C). Again, there was little precipitation, except for trace amounts reported in portions of Indiana and Ohio and the average wind speeds were fairly mild throughout the region. This may explain the increase in observations for northern regions.

Figure 1. Total number of Eastern Population sandhill cranes counted, 1979 – 2020.

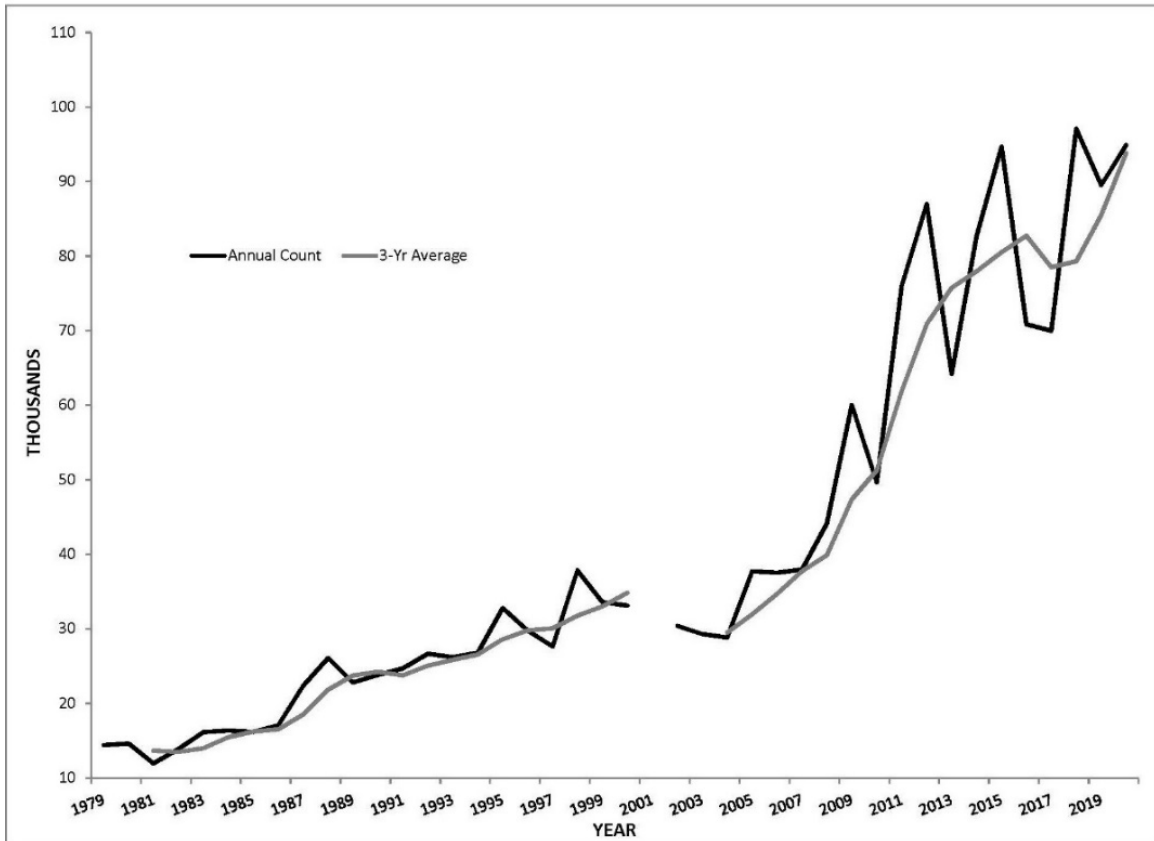


Figure 2. Total number of Eastern Population sandhill cranes counted by State, 2017 - 2020.

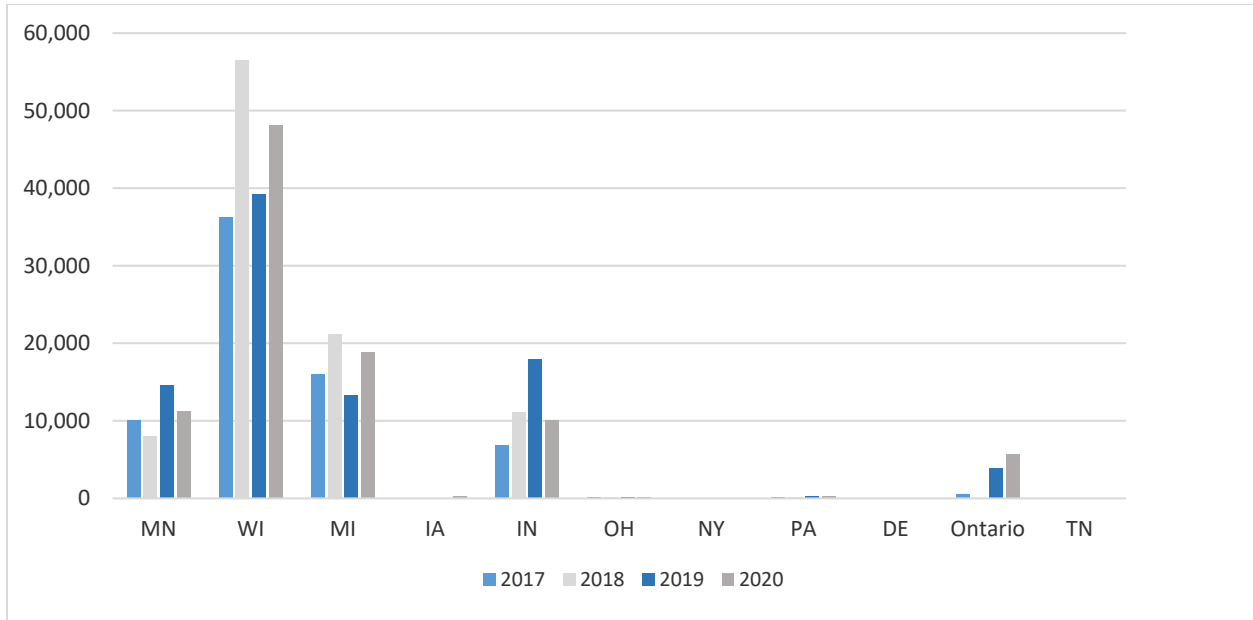
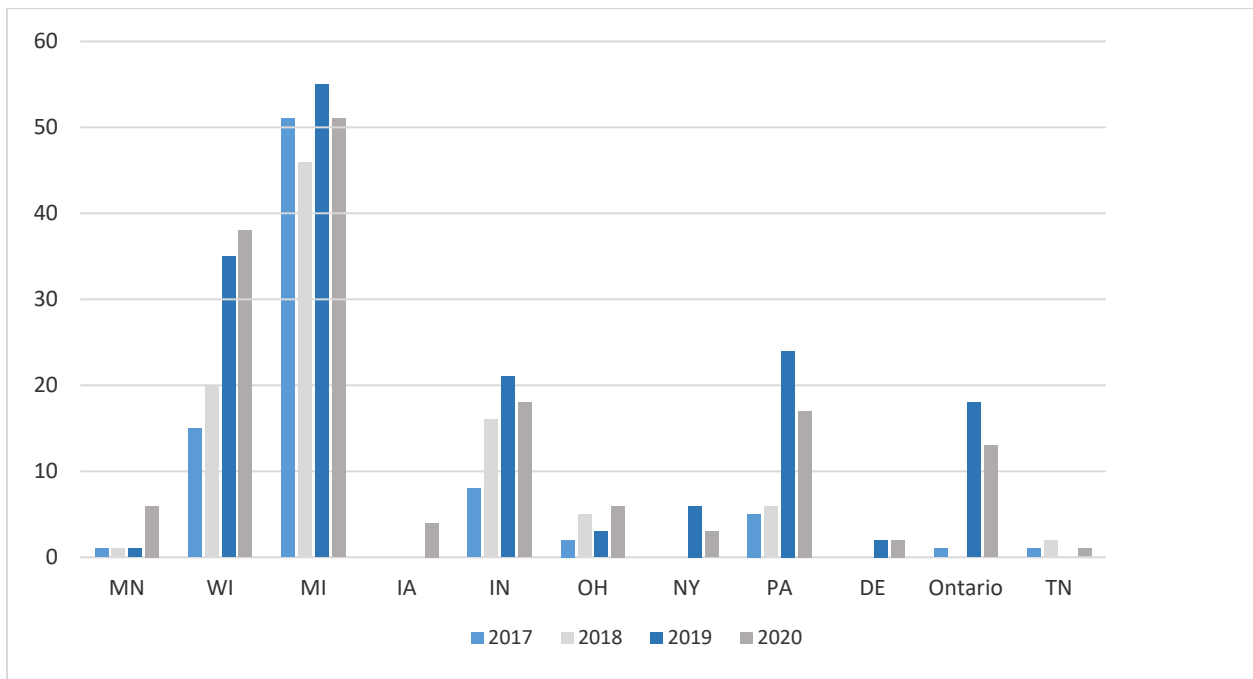


Figure 3. Total number of sites surveyed in each State, 2017 - 2020.



In 2020, please note that multiple observers may have been recorded for a single flock, which will inflate the estimate slightly.

Figure 4. Mean temperature departures from average for September – November 2020 (<https://www.ncei.noaa.gov/access/monitoring/us-maps/3/202210>).

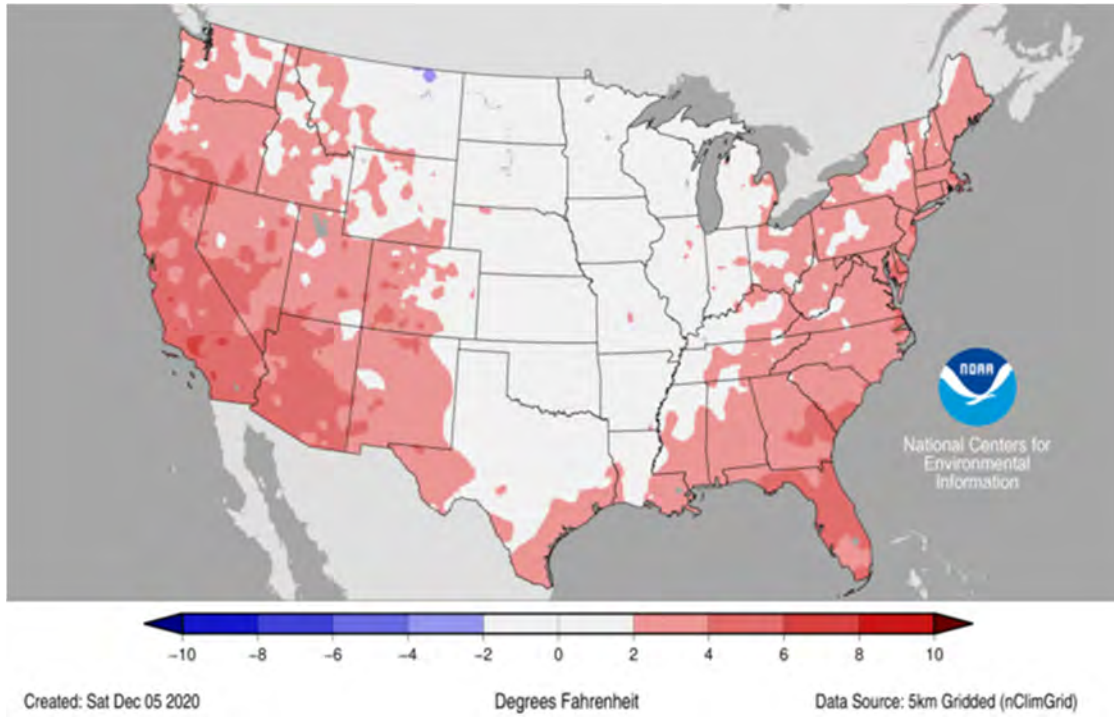


Figure 5. Percent of average precipitation for September – November 2020 (<https://www.ncei.noaa.gov/access/monitoring/us-maps/3/202210>).

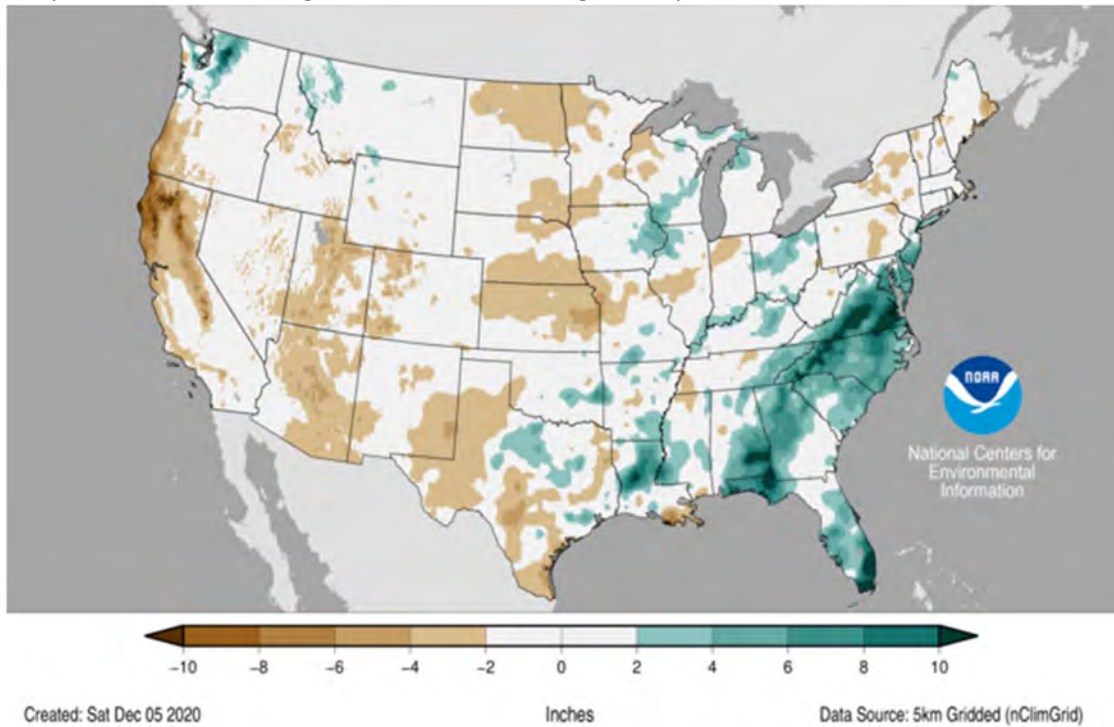


Table 1. Ten-year estimates of Eastern Population of greater sandhill cranes.

STATE / PROVINCE	COUNTY / MUNICIPALITY	2011		2012		2013		2014		2015		2016		2017		2018		2019		2020			
		Count	# of Sites	Count	# of Sites	Count	# of Sites	Count	# of Sites	Count	# of Sites	Count	# of Sites	Count	# of Sites	Count	# of Sites	Count	# of Sites	Count	# of Sites		
Ohio	Lucas															0	1	4	1	12	1		
	Ottawa															41	1			10	1		
	Trumbull															137	1	212	1	45	1		
	Wayne	89	1	47	1	47	1	105	1	78	1	110	1	165	1					140	2		
	Williams															0	1			0	1		
	Wyandot															0	1			0	1		
Ohio Total		89	1	47	1	47	1	105	1	78	1	110	1	165	1	178	5	216	2	207	6		
Ontario	Algoma District												563	1									
	Dufferin																	543	1				
	Haldimand-Norfolk											224	1					64	1	262	1		
	Renfrew																			1027	6		
	Simcoe																		1517	1	1348	2	
	Victoria												298	1					1732	1	2500	3	
Ontario Total												522	2	563	1			3856	4	5664	13		
Pennsylvania	Berks					7	1	17	1	29	1					4	1	0	1	6	1		
	Bradford																	0	1	7	2		
	Crawford					71	1	67	1	84	1	96	1	76	1	71	1	195	1	77	5		
	Erie																	5	1				
	Lackawanna												6	1	3	1	3	1	4	1	3	1	
	Lancaster																	1	1				
	Lawrence					17	1	4	1	26	1	37	1	58	1	20	1	56	1	139	3		
	Mercer																	9	1	20	2		
	Pike																	0	1				
	Somerset																	0	1				
	Sullivan					3	1	3	1	2	1	7	1	30	1	5	1	4	1	4	1	11	2
	Susquehanna							2	1														
	Tioga																		0	1			
	Wayne																		0	1			
Wyoming															3	1	4	1	2	1			
Pennsylvania Total					98	4	93	5	141	4	140	3	170	4	106	6	278	13	265	17			
Tennessee	Meigs	87	1	551	1	48	1	175	1			22	1	0	1	0	1						
	Obion															0	1			67	1		
Tennessee Total		87	1	551	1	48	1	175	1			22	1	0	2					67	1		
Wisconsin	Adams	706	1							455	1			405	1					347	1		
	Burnett	12957	1	12016	1	13327	1	21222	1	11352	1	11279	1	10929	1	9022	1	14543	1	10935	9		
	Columbia	2368	1	4438	1	2263	1	3928	1	5068	1			2962	1	7222	1	2498	1	6731	6		
	Dodge	5267	1	5465	1	593	1	120	1	0	1			2814	1	2152	1	7324	1	7490	1		
	Fond du Lac			0	1	0	1																
	Iowa			2539	1	1733	1			2131	1										172	1	
	Juneau			2518	1	1940	1	1111	1	1227	1					2085	1	1881	1	90	1		
	Kenosha			451	1	4	1	296	1	112	1	0	1	467	1	0	1	4	1	498	1		
	Marathon			2101	1	1949	1	3105	1	1210	1	2152	1	3569	1	2321	1	2697	1	1663	1		
	Marquette	1832	1	1436	1	1501	1	1421	1	1081	1							685	1				
	Oconto															765	1	807	1	1360	5		
	Outagamie	558	1			19	1	622	1			107	1	2987	1	6275	1	1015	1	4572	1		
	Sauk	1479	1					2452	1					1922	1	1900	1	2424	1	1830	6		
	Shawano	6088	1	9333	1	1909	1	7301	1	20626	1	12525	1	8812	1	15870	1	4124	1	3680	1		
	Walworth	641	1	1484	1	2323	1			156	1	20	1	280	1					472	1		
	Waupaca	2017	1	532	1	421	1	2761	1	786	1	385	1	1067	1	905	1	653	1	659	1		
	Waushara	7225	1	1969	1					555	1					2366	1			257	1		
Wood	1988	1	1550	1	2057	1	3193	1	5159	1	5214	1			5674	1	523	1	7413	1			
Wisconsin Total	43126	12	45832	14	30039	14	47532	12	49918	14	31682	8	36214	11	56557	13	39178	13	48169	38			
Grand Total		76028	47	86989	47	64213	53	82694	50	94676	51	70858	42	69989	47	97073	57	89504	67	94879	154		