

SEPTEMBER 2020 SURVEY OF THE ROCKY MOUNTAIN POPULATION OF GREATER SANDHILL CRANES

Philip Thorpe, USFWS, DMBM, 134 Union Blvd, Suite 540, Lakewood, CO 80228
Steven Olson, USFWS-DMBM, 1211 SE Cardinal Court, Suite 100, Vancouver, WA 98683
Joseph Sands, USFWS, Migratory Birds and Habitat Prog., 911 NE 11th Ave, Portland, OR 97232

Greater sandhill cranes of the Rocky Mountain Population (RMP) were counted at fall pre-migration staging areas in Colorado, Idaho, Montana, Utah, and Wyoming during September 2020. Migrants that had arrived at RMP migration stopover areas near Jensen, Utah and in the San Luis Valley, Colorado were also recorded. The cooperative survey was organized by the Pacific Flyway Subcommittee on RMP of Greater Sandhill Cranes and the U.S. Fish and Wildlife Service (FWS). The FWS, Division of Migratory Bird Management (DMBM), Denver, provided a Quest Kodiak for a portion of the survey. Aerial and ground surveys were conducted by personnel from respective state agencies, FWS and volunteers (participants listed in Table 1).

We counted **25,636** RMP cranes at 86 survey areas with 36.1% in Montana, 25.8% in Wyoming, 19.9% in Idaho, 12.6% in Utah, and 5.6% in Colorado (Figure 1; Table 1). The total estimate was a record high for the survey. The majority (95.3%) of the survey areas were counted during the designated survey week (21-25 September) with 73.3% of the areas surveyed during the three-day target period (22-24 September)(Table 1).

Seven pre-migration staging areas had concentrations exceeding 1,000 cranes: 1) Dillon-Twin Bridges, MT – 3,061; 2) Farson, WY – 2,285; 3) the contiguous tri-state Upper Bear River Valley in ID, UT, and WY – 1,799; 4) Jensen, UT – 1,177; 5) Musselshell River, MT – 1,117; 6) Teton Basin, ID – 1,079; and 7) Yampa River, CO – 1,073. Over 500 cranes were recorded at eight other pre-migration sites: 1) Hidden Valley, WY – 995; 2) Clark Fork of the Yellowstone, MT – 918; 3) Otter Creek, MT – 761; 4) Dayton, WY – 748; 5) Malad River, ID – 710; 6) Silver Creek - 571; 7) Ashton-St. Anthony – 525; and 8) Cascade-Ulm – 516 (Table 1). These 15 areas accounted for 67.6% of all cranes recorded.

The San Luis Valley, CO estimate was 305 (10-year average = 315) suggesting that large-scale crane movement out of the survey area was likely not a factor during the survey week. Wyoming had a record count this year and Montana had the second highest count on record (Table 2). The remaining states had counts that fit into their historic averages.

According to the flyway management plan for the RMP of sandhill cranes, new survey areas can be added to the official report table after they meet the consecutive three years of surveying and have the appropriate Flyway sandhill crane subcommittees proposal to add these areas. Montana has one new area, the Livingston-Shield area with 546 cranes surveyed in 2020. However, decisions regarding the harvest process have already been decided for the 2021-22 season. Therefore, the count for this area will be added to the official table in 2021 and used in calculations of allowable harvest and state allocations beginning with the 2022-23 season.

Generally, temperatures were average to above average across all RMP states from April through July 2020. Above average to record setting temperatures characterized August and September 2020. Both Utah and Colorado had average record high temperatures for the month of August (hottest and second hottest on record, respectively). All states received below to much-below average precipitation during April and May. June and July brought some relief to the region with average to much-above average precipitation. August and September had below to record dryness across the RMP survey states.

Weather conditions for the FWS aerial survey, although smoky, were good for crane detection. Cranes were in larger groups and we observed fewer scattered pairs and family groups, which are easier to miss during the survey. Other survey participants reported similar survey weather conditions for counting cranes. We believe that the ideal weather and slightly later than normal survey dates resulted in a reliable crane count for the 2020 survey.

We thank all who participated in the survey and we especially appreciate the effort made to complete counts during the designated period.

This report contains data tables and figures 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, Migratory Bird Survey Office (303/275-2358).

Table 1. Counts in September 2020 of the Rocky Mountain Population of greater sandhill cranes at premigration staging and migration stopover areas in Colorado, Idaho, Montana, Utah, and Wyoming (Figure 1). Surveys were conducted by air (a) and ground (g) between 15 - 27 September.

Map No. & Location	No. Cranes	Date	Source
<u>COLORADO</u>			
1 Yampa River	1,073		
<i>Axial Basin</i>	0	9/23	(g) B. Holmes, A. Spiker, CPW
<i>County Line grain fields</i>	353	9/23	(g) A. Reishus, CPW
<i>Craig vicinity fields</i>	217	9/23	(g) E. Jones, A. Reishus, CPW
<i>Hayden airport/racetrack</i>	176	9/23	(g) L. Miller, K. Bond, CPW
<i>Morgan Bottoms</i>	54	9/23	(g) L. Rossi, CPW
<i>Yampa River SWA</i>	273	9/23	(g) M. Emanuel, CPW
2 Elk River	0		
<i>Selby's grain fields</i>	0	9/23	(g) K. Stepanek, CPW
3 White River	51		
<i>East of Meeker - Agency Park</i>	0	9/23	(g) C. Bullen, CPW
<i>Little Beaver-Irish Mesa</i>	51	9/23	(g) B. Holmes, R. McGee, CPW
4 Williams Fork River			
<i>East of Hamilton</i>	<i>no survey</i>		
5 Little Snake River	2		
<i>Slater</i>	0	9/23	(g) J. Lambert, CPW
<i>Two Bar Ranch</i>	0	9/23	(g) A. Spiker, CPW
6 Delta Co.	15		
<i>Harts Basin/Fruitgrowers Vicinity</i>	15	9/23	(g) M. Hodges, E. Phillips, M. Richman, A. Kircher, C. Purcell, CPW
7 San Luis Valley	305	9/22-23	(g) S. Miller, D. Lee, FWS
Subtotal	1,446	5.6% of total estimate	

IDAHO

1 American Falls Res.	162	9/21	(a) FWS survey ^a
2 Ashton-St. Anthony	525	9/24	(a) " "
3 Bear River Valley	548		
<i>Bear Lake Valley</i>	285	9/22	(g) D. Lachman, R. Thomson, FWS
<i>Border-Pegram</i>	166	9/23	(a) FWS survey
<i>Bennington-Soda Spr.</i>	24	9/21	(a) " "
<i>Grace-Thatcher</i>	73	9/21	(a) " "
<i>Thomas Fork</i>	0	9/23	(a) " "
4 Blackfoot Res.	234	9/22	(a) " "
5 Camas NWR	182	9/23	(g) A. Kristof, F. Downs, K. Hall, FWS

Table 1 (continued)

Map No. & Location	No. Cranes	Date	Source
6 Camas Prairie	0	9/26	(g) T. Meadows, IDFG
7 Carey Lake area	no survey		
8 Chesterfield Res.	38	9/21	(a) FWS survey
9 Grays Lake NWR	466	9/24	(a) " "
10 Henrys Lake Flats	57	9/22	(a) " "
11 Island Park Res.	2	9/21	(a) " "
12 Kilgore	no survey		
13 Market Lake WMA	0	9/22	(g) B. Gullett, IDFG
14 Marsh Valley	211	9/21	(a) FWS survey
15 Mud Lake WMA	0	9/23	(g) B. Panting, IDFG
16 Oxford Slough-Swan Lake	311	9/21	(a) FWS survey
17 Silver Creek	571	9/23	(g) S. Robotcek, B. Hurd, IDFG
18 Teton Basin	1,079	9/24	(a) FWS survey
19 Malad River	710	9/24	(g) B. Stringham, UDWR
Subtotal	5,096	19.9% of total estimate	

MONTANA

1 Blackfoot/OvandoValley	7	9/15	(a) S. Eggeman, MFWP
2 Cascade-Ulm	516	9/22	(a) K. Smucker, MFWP
3 Centennial Valley	0	9/21	(g) A. Temple, A. Carroll, FWS
4 Clark Fork of the Yellowstone	918	9/21-22	(g) S. Stewart, MFWP
5 Deadman's Basin	449	9/21	(a) J. Paugh, FWP
6 Dillon-Twin Bridges	3,061	9/22	(a) FWS survey
7 Gallatin Valley	188	9/22	(a) J. Cunningham, C. Gower, MFWP
8 Helena Valley	204	9/25	(a) J. Sika, MFWP
9 Melville	0	9/22	(a) J. Paugh, FWP
10 Musselshell River	1,117	9/21	(a) " "
11 Otter Creek	761	9/22	(a) " "
12 Teton River-Eureka Res.	457	9/22	(a) K. Smucker, MFWP
13 Toston-Townsend	451	9/23	(a) A. Grove, MFWP
14 Upper Madison Valley	216	9/22	(a) FWS survey
15 Warm Springs	462	9/24	(g) B. Shortman, MFWP
16 White Sulphur Spr.	377	9/23	(a) J. Kolbe, MFWP
17 Whitehall	80	9/22	(a) FWS survey
Subtotal	9,264	36.1% of total estimate	

UTAH

1 Cache Co.	480	9/22	(a) B. Stringham, UDWR
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Table 1 (continued)

Map No. & Location	No. Cranes	Date	Source
<u>Great Salt Lake Basin</u>			
2 Box Elder Co.	355	9/22	(a) B. Stringham, UDWR
3 Davis Co.	20	9/22	(a) " "
4 Weber Co.	55	9/22	(g) " "
5 Morgan Co.	112	9/21	(g) " "
<u>Rich Co.</u>			
6 Bear River Valley	510	9/25	(a) B. Stringham, UDWR
7 Round Valley	32	9/25	(a) " "
8 Summit Co.	18	9/21	(g) " "
<u>Uintah Co.</u>			
9 Jensen	1,177	9/24	(a) A. Vande Voort, UDWR
10 Pelican Lake area	368	9/24	(a) " "
11 Leland Bench	14	9/24	(a) " "
12 Wasatch Co.	81	9/21	(g) B. Stringham, UDWR
Subtotal	3,222	12.6% of total estimate	
WYOMING			
1 Baggs	9	9/24	(g) P. Damm, WGFD
2 Bear River Valley	741	9/23	(a) FWS survey
<u>Big Horn Basin</u>			
3 Greybull River/Otto	36	9/25	(a) M. Packila, Wildlife Air, LLC
4 Shoshone River/Ralston	482	9/25	(a) " "
5 Worland	124	9/25	(a) " "
<u>Green River Basin</u>			
6 Big Piney-Daniel	28	9/23	(a) FWS survey
7 Bridger Valley	152	9/22	(g) A. Deru, WGFD
8 Lonetree	0	9/22	(g) " "
9 Farson	2,285	9/23	(a) FWS survey
10 Hams Fork	39	9/23	(a) " "
11 Pinedale-Cora-Boulder	2	9/23	(a) " "
<u>North Platte River Basin</u>			
12 Saratoga	2	9/23	(g) T. Cufaude, WGFD
13 33 Mile	207	9/23	(a) N. Smith, WGFD
<u>Powder-Tongue River Basin</u>			
14 Barnum - Middle Fork Powder	0	9/23	(a) N. Smith, WGFD
15 Mayoworth - N. Fork Powder	0	9/23	(a) " "
16 Kaycee-Sussex	16	9/23	(a) " "
17 Buffalo	56	9/23	(a) " "
18 Dayton	748	9/23	(a) " "

Table 1 (continued)

Map No. & Location	No. Cranes	Date	Source
<u>Snake River Basin</u>			
19 Jackson Hole			
Natl Elk Refuge	48	9/24	(g) E. Cole, T. Pratt, FWS
20 Star Valley	212	9/23	(a) FWS Survey, J. Bohne, WGFD
<u>Wind River Basin</u>			
21 Hidden Valley	995	9/27	(a) M. Packila, Wildlife Air, LLC
22 Ocean Lake	29	9/27	(a) " "
23 Riverview Valley	397	9/27	(a) " "
Subtotal	6,608	25.8% of total estimate	
TOTAL	25,636		

^a Fish & Wildlife Service aerial survey flown by P. Thorpe, S. Olson, and J. Sands.

Table 2. September pre-migration staging area counts by state of the Rocky Mountain Population of greater sandhill cranes during 1987, 1992, 1995-2005, 2007-2020.

Year	Colorado ^a	Idaho	Montana	Utah	Wyoming	Total
1987	1,443	10,686	1,447	1,578	2,327	17,481
1992	3,181	5,801	5,264	2,810	2,248	19,304
1995	2,284	6,864	3,681	1,528	1,671	16,028
1996	1,255	8,334	2,974	1,849	2,526	16,938
1997	1,604	8,132	3,595	2,450	2,255	18,036
1998	1,273	8,067	3,415	2,185	3,162	18,102
1999	1,102	8,761	3,141	2,292	4,205	19,501
2000	749	9,337	3,598	2,416	3,890	19,990
2001	666	7,160	4,585	1,522	2,626	16,559
2002	1,355	7,698	4,843	1,869	3,038	18,803
2003	745	7,822	4,964	2,546	3,446	19,523
2004	1,410	7,152	4,637	2,239	3,072	18,510
2005	1,052	7,668	5,588	2,646	3,911	20,865
2007	1,743	8,262	6,509	2,401	3,907	22,822
2008	1,080	6,123	6,419	3,708	3,826	21,156
2009	1,162	6,934	6,329	2,283	3,613	20,321
2010	985	5,776	7,335	3,242	3,726	21,064
2011	1,347	5,029	6,642	1,498	2,978	17,494
2012	413	3,432	5,876	2,109	3,587	15,417
2013	1,594	5,228	7,218	2,732	3,588	20,360
2014	1,258	6,064	6,555	2,783	3,008	19,668
2015	1,089	6,454	9,493	3,698	3,596	24,330
2016 ^b	1,135	5,445	7,507	3,298	4,879	22,264
2017	1,658	4,066	7,149	2,994	3,725	19,592
2018	1,908	4,469	7,553	2,770	5,101	21,801
2019	1,879	4,428	7,511	3,106	4,366	21,290
2020	1,446	5,096	9,264	3,222	6,608	25,636
3-yr Mean	1,744	4,664	8,109	3,033	5,358	22,909
All yr Mean	1,364	6,677	5,670	2,510	3,514	19,735

^a Colorado counts include migrants that had arrived at the staging area in the San Luis Valley.

^b Wyoming added six new survey areas per management plan guidelines.

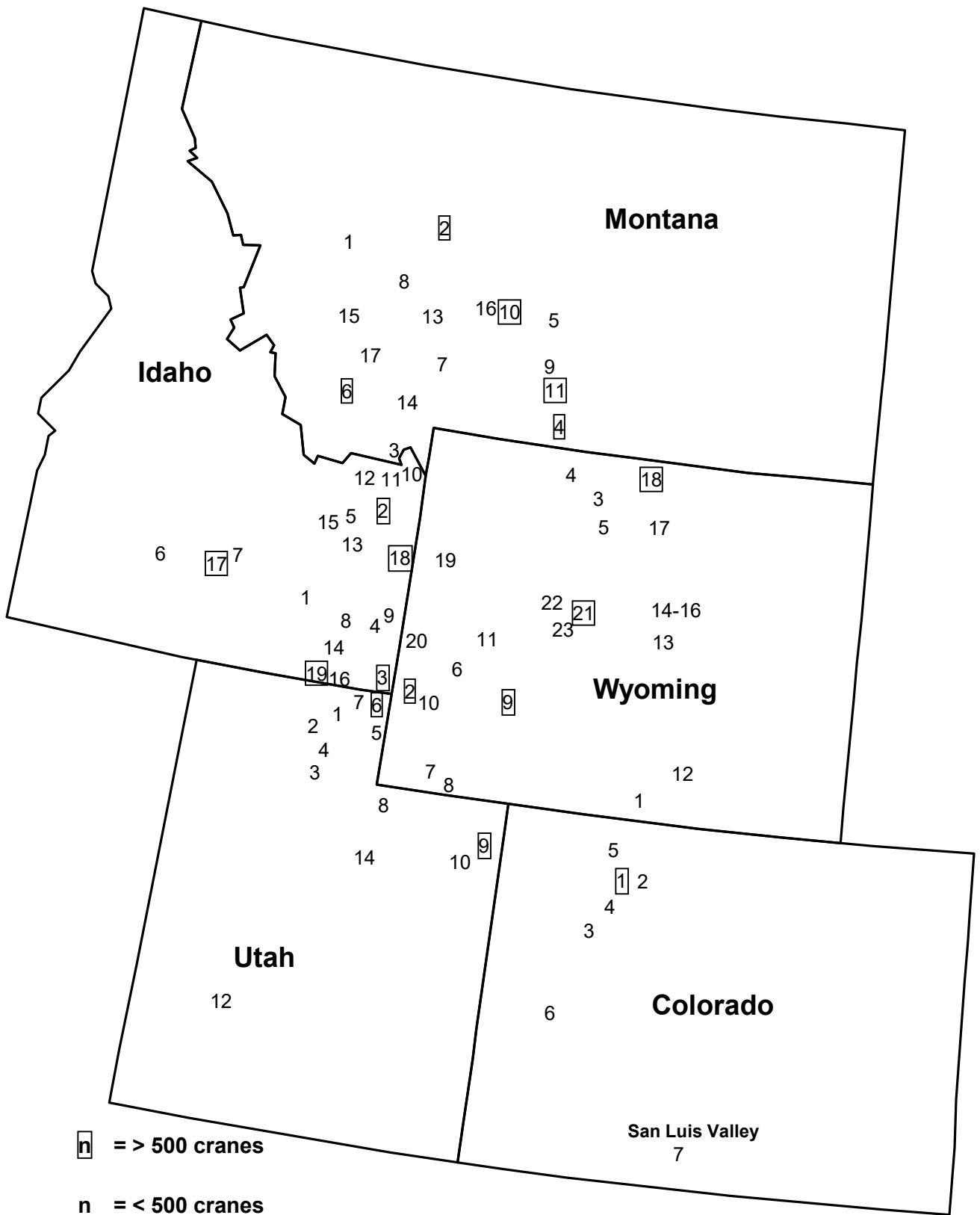


Figure 1. September survey locations for the Rocky Mountain Population of Greater Sandhill Cranes. See Table 1 for location names and numbers.