

SEPTEMBER 2013 SURVEY OF THE ROCKY MOUNTAIN POPULATION OF GREATER SANDHILL CRANES

Philip P. Thorpe, USFWS, DMBM, 755 Parfet St, Suite 235, Lakewood, CO 80215
Patrick Donnelly, USFWS, Intermountain West JV, P.O. Box 8419, Missoula, MT 59807
Dan Collins, USFWS-Region 2 Migratory Bird Office, P. O. Box 1306, Albuquerque, NM 87103

Greater sandhill cranes of the Rocky Mountain Population (RMP) were counted at fall premigration staging areas in Colorado, Idaho, Montana, Utah, and Wyoming during September 2013. Migrants that had arrived at the 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 the 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 Cessna 206 for a portion of the survey. Aerial and ground surveys were conducted by personnel from the respective state agencies, FWS and volunteers (participants listed in Table 1). Dan Collins, from the FWS southwest region, was added to the FWS aerial survey crew this year to replace Doug Benning.

A count of **20,360** RMP cranes (32.1% higher than the 2012 survey of 15,417) was tallied at 73 survey areas with 35.5% in Montana, 25.7% in Idaho, 17.6% in Wyoming, 13.4% in Utah, and 7.8% in Colorado (Figure 1; Tables 2). Counts were up in all states except Wyoming, which had a similar count to 2012. Kilgore and Seedskaadee NWR were the only locations not surveyed in 2013. Both areas traditionally have low counts. All but six areas in Montana were surveyed during the five day designated count period, 9-13 September (Table 1). The majority (73%) of the areas were surveyed during the 3-day core period (10-12 September).

In addition to the normally surveyed areas, 692 cranes were added from 7 new locations this year and have been incorporated into the survey counts. Survey areas in the Yampa, William's Fork, Little Snake and White River drainages in Colorado were added or expanded in 2012-13. Naming protocols in Colorado were reorganized by river drainage to better define survey areas. Montana added the Clark Fork of the Yellowstone in 2012. This survey area is on the northeast fringe of the RMP crane range and initially, there was some discussion on the origin of these cranes and whether to include them in the survey count. The cranes were seen in early September, so they are likely RMP cranes since mid-continent cranes (lesser sandhill cranes) usually don't migrate through eastern Montana or Wyoming that early. More observations during the summer would help determine if these cranes are part of a local breeding population or migrating in from other areas of the RMP crane range; it would also further confirm that they are RMP cranes. Sandhill cranes found east of Sheridan, Wyoming need further confirmation of subspecies prior to including them in the RMP crane population count. Mid-continent sandhill cranes have expanded their range west and there is potential for mixing of the two subspecies. Observations during the summer would confirm if these are RMP cranes. Utah added five counties (Millard, Piute, Sevier, Wasatch and Wayne) to the survey in the past three years. Four counties are in the known range of the Lower Colorado River sandhill crane population (Manes et al., 1988), therefore, further evidence should be gathered before including the counts in the RMP survey. RMP cranes have expanded their range and it is possible that these birds are part of that expansion. The four excluded counties had 127 sandhill cranes.

Four premigration staging areas had concentrations exceeding 1,000 cranes: 1) Dillon-Twin Bridges/Beaverhead-Ruby Rivers, MT – 2,434; 2) Farson, WY – 1,354; and 3) Teton Basin, ID – 1,065. Over 500 cranes were recorded at 7 other premigration sites: Grays Lake, ID – 907; Yampa River, CO – 879; Melville, MT – 682; Ashton-St. Anthony, ID - 662; Musselshell River, MT – 606; Elk River, CO – 532; and Toston-Townsend, MT – 519. The migration stopover near Jensen, UT on the Green River had 1,066 cranes (Table 1, Figure 1). These 12 areas accounted for 53% of all cranes recorded.

The 2013 spring, summer and fall were characterized by a moderate to severe drought across the survey area, with pockets of extreme drought in southwest Montana and southern Wyoming. Temperatures were 0.8-3.0° C above normal across the survey area from May to September. A large low pressure system dominated the weather in the eastern third of the survey area during the selected survey week. Rain and overcast skies persisted over southwest Wyoming and the FWS survey crew had poor weather conditions when we finally were able to survey the Farson and Big Piney areas. Other participants in Wyoming and Colorado had similar weather conditions during the survey. Survey conditions in Idaho and Montana were good, with calm winds and mostly sunny skies.

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

Manes, S. S., R. C. Drewien, J. D. Huener, T. W. Aldrich, and W M. Brown. 1992. Distribution of color-marked greater sandhill cranes banded in Utah. Pages 55-60 in D. A. Wood, editor. Proceedings of the 1988 North American Crane Workshop. Florida Game and Fresh Water Fish Commission Nongame Wildlife Program Technical Report 12

Table 1. Counts in September 2013 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 4-16 September.

Map No. & Location(a/g) Date	No. cranes	Source
<u>COLORADO</u>		
1 Yampa River (g) 9/11	879	
Axial Basin (g) 9/11	(9)	M. Grooms, CPW
County Line grain fields (g) 9/11	(97)	E. Jones, J. Yost, CPW
Craig vicinity fields (g) 9/11	(3)	E. Jones, CPW
Hayden airport/racetrack (g) 9/11	(253)	L. Miller, L. Rossi, J. Pollock, CPW
Morgan Bottoms (g) 9/11	(495)	S. Znamenacek, CPW
Yampa River SWA (g) 9/11	(22)	J. Yost, CPW
2 Elk River		
Selby's grain fields (g) 9/11	532	S. Baumgartner, D. Domson, M. Middleton, CPW
3 White River	91	
East of Meeker (g) 9/11	(7)	B. Franklin, CPW
Little Beaver-Irish Mesa (g) 9/11	(84)	B. Holmes, CPW
4 Williams Fork River		
East of Hamilton (g) 9/11	8	E. Jones, CPW
5 Little Snake River (g) 9/11	13	
Slater (g) 9/11	(11)	M. Bauman, CPW
Two Bar Ranch (g)	(2)	M. Grooms, CPW
6 Delta Co., Harts Basin (g) 9/13	0	E. Horn, Eckert
7 San Luis Valley (g) 9/11,13	<u>71</u>	S. Miller, FWS
Subtotal	1,594 (7.8%)	
<u>IDAHO</u>		
1 Amer. Falls Res. (a) 9/9	288	FWS survey ^a
2 Ashton-St. Anthony (a) 9/10	662	" "
3 Bear River Valley	410	
Bear Lake Valley (g) 9/10,13	(262)	T. Matthews, K. Batdorf FWS
Border-Pegram (a) 9/10	(16)	FWS survey
Bennington-Soda Spr. (a) 9/10	(3)	" "
Grace-Thatcher (a) 9/9	(5)	" "
Thomas Fork (a) 9/10	(124)	" "
4 Blackfoot Res. (a) 9/10	333	" "
5 Camas NWR (g) 9/10	200	P. Johnson, F. Downs, FWS
6 Camas Prairie (g) 9/10	21	Z. Huling, IDFG
7 Carey Lake area (g) 9/10	0	C. Shackelford, IDFG

Table 1 (continued)

Map No. & Location(a/g) Date	No. cranes	Source
8 Chesterfield Res. (a) 9/9	103	FWS survey
9 Grays Lake NWR (a) 9/10	907	" "
10 Henrys Lake Flats (a) 9/11	59	" "
11 Island Park Res. (a) 9/11	0	" "
12 Kilgore	no survey	
13 Market Lake WMA (g) 9/11	5	J. Maupin , IDFG
14 Marsh Valley (a) 9/9	122	FWS survey
15 Mud Lake WMA, (g) 9/12	248	J. Knapp, IDFG
16 Oxford Slough-Swan Lake (a) 9/9	136	FWS survey
17 Silver Creek (g) 9/10	421	C. Shackelford, IDFG
18 Teton Basin (g) 9/12	1,065	Teton Regional Land Trust
19 Malad River (a) 9/9	<u>248</u>	B. Stringham, UDWR
subtotal	5,228 (25.7%)	
<u>MONTANA</u>		
1 Blackfoot/Ovando Valley (a) 9/9	159	R. Vinkey, MFWP
2 Cascade-Ulm (a) 9/10	228	G. Taylor, MFWP
3 Centennial Valley (a,g) 9/11	96	B. West, S. Essig, J. Dickenson, FWS
4 Clark Fork of the Yellowstone (a) 9/10	452	S. Stewart, MFWP
5 Deadman's Basin (a) 9/4	225	J. Paugh, MFWP
6 Dillon-Twin Bridges (a) 9/11	2,434	FWS survey
7 Gallatin Valley (a) 9/10	215	J. Cunningham, MFWP
8 Helena Valley (a) 9/11	327	J. Sika, MFWP
9 Melville (a) 9/5	682	J. Paugh, MFWP
10 Musselshell River (a) 9/4	606	J. Paugh, MFWP
11 Otter Creek (a) 9/5	88	J. Paugh, MFWP
12 Teton River-Eureka Res. (a) 9/10	335	G. Taylor, MFWP
13 Toston-Townsend (a) 9/15	519	F. Jakubowski, MFWP
14 Upper Madison Valley (a) 9/11	300	FWS survey
15 Warm Springs (g) 9/6	191	D. Dziak, MFWP
16 White Sulphur Spr. (a) 9/11	297	A. Grove, MFWP
17 Whitehall (a) 9/11	<u>64</u>	FWS survey
subtotal	7,218 (35.5%)	

Table 1 (continued)

Map No. & Location(a/g) Date	No. cranes	Source
<u>UTAH</u>		
1 Cache Co. (a) 9/9 Great Salt Lake Basin	483	B. Stringham, UDWR
2 Box Elder Co. (a) 9/11	476	B. Stringham, UDWR
3 Davis Co. (a) 9/11	5	" "
4 Weber Co. (a) 9/11	37	" "
5 Morgan Co. (g) 9/10	89	" "
<u>Rich Co.</u>		
6 Bear River Valley (a) 9/9	327	B. Stringham, UDWR
7 Round Valley (a) 9/9	59	" "
8 Summit Co. (a) 9/10	6	" "
<u>Uintah Co.</u>		
9 Jensen (a) 9/10	1066	B. Stringham, UDWR
10 Pelican Lake area (a) 9/10	127	" "
11 Leland Bench (a) 9/10	30	" "
12 Wasatch Co. (g) 9/12	<u>27</u>	D. Bunnell
subtotal	2,732 (13.4%)	
<u>WYOMING</u>		
1 Baggs (g) 9/10	5	L. Roberts, WGFD
2 Bear River Valley (a) 9/10 Big Horn Basin	379	FWS survey
3 Greybull River/Otto (a) 9/10	197	L. Roberts, WGFD
4 Shoshone River/Ralston (a) 9/10	366	" "
5 Worland (a) 9/10	113	" "
<u>Green River Basin</u>		
6 Big Piney-Daniel (a) 9/13	239	FWS survey
7 Bridger Valley (g) 9/10-12	22	J. Short, M DeHart, WGFD
8 Lonetree (g) 9/10-12	0	J. Short, M DeHart, WGFD
9 Farson (a) 9/13	1,354	FWS survey
10 Hams Fork (a) 9/10	35	" "
11 Pinedale-Cora-Boulder (a) 9/11	0	S. Patla, WGFD
12 Seedskaadee NWR	no survey	
13 Saratoga (g) 9/13 Snake River Basin	12	L. Roberts, WGFD

Table 1 (continued)

Map No. & Location(a/g) Date	No. cranes	Source
14 Jackson Hole Natl Elk (g) 9/12	279	E. Cole, T. Schoultz, B. Mulcahy, C. Mulcahy, FWS
15 Star Valley (a,g) 9/10 <u>Wind River Basin</u>	223	FWS survey, R. Drewien, J. Bohne
16 Hidden Valley (a) 9/10	56	L. Roberts, WGFD
17 Ocean Lake (a) 9/10	228	" "
18 Riverview Valley (a) 9/10	<u>80</u>	" "
subtotal	3,588 (17.6%)	
TOTAL CRANES	20,360	

^a Fish & Wildlife Service aerial survey flown by P. Thorpe, P. Donnelly, and Dan Collins.

Table 2. September premigration staging area counts by state of the Rocky Mountain Population of greater sandhill cranes during 1987, 1992, 1995-2005, 2007-2013.

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
Mean	1,322	7,213	4,903	2,295	3,180	18,473

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

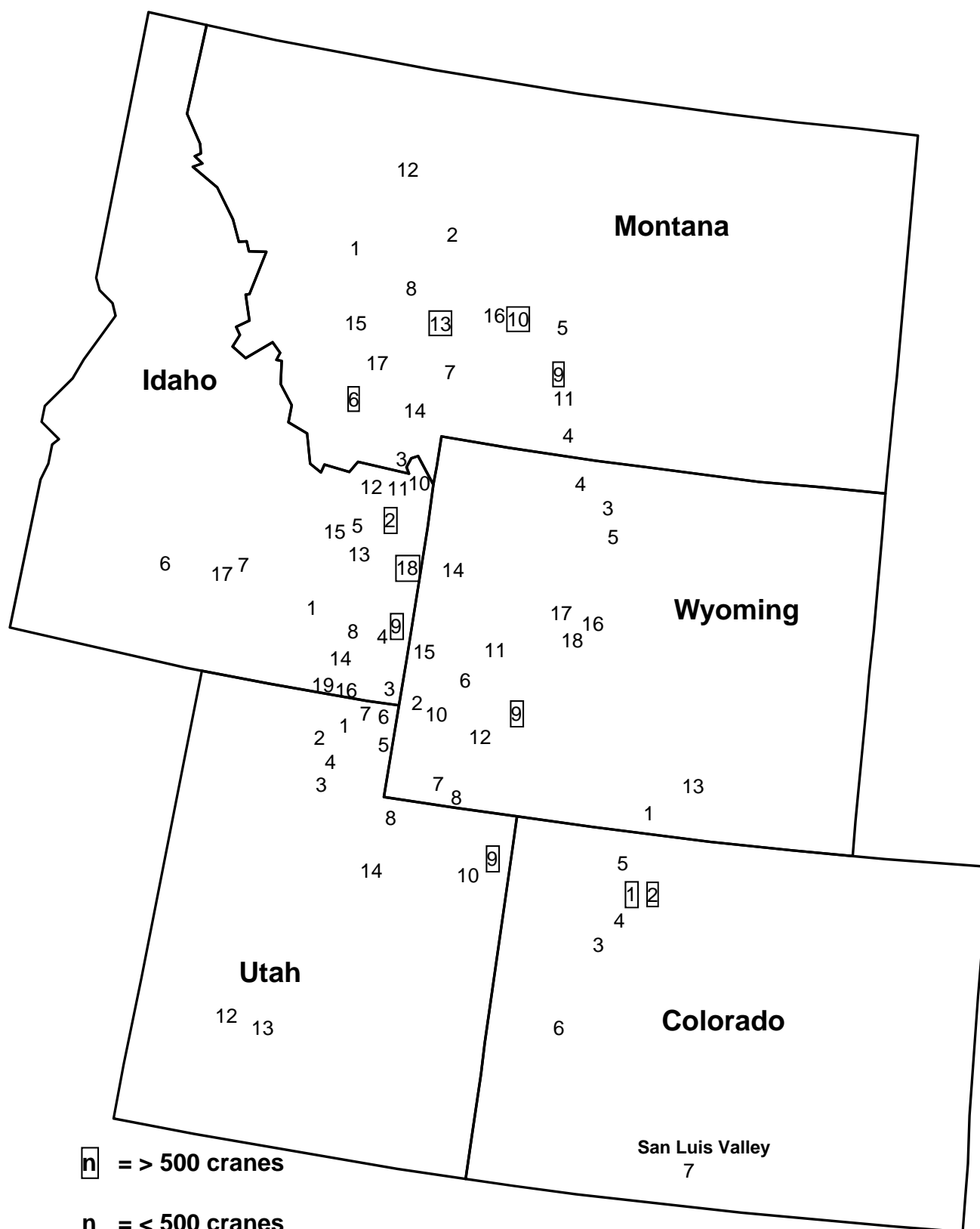


Figure 1. September survey locations for the Rocky Mountain Population of Greater Sandhill Cranes. See Table 1 for location names and numbers.