

## SEPTEMBER 2015 SURVEY OF THE ROCKY MOUNTAIN POPULATION OF GREATER SANDHILL CRANES

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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 2015. 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).

A count of **24,330** RMP cranes (23.7% higher than the 2014 survey of 19,672) was tallied at 71 survey areas with 39.0% in Montana, 26.5% in Idaho, 15.2% in Utah, 14.8% in Wyoming and 4.5% in Colorado (Figure 1; Tables 2). The Kilgore area and Seedskaadee NWR were not surveyed in 2015. Both areas traditionally have had low counts and Seedskaadee has dropped out of the survey because of historically low counts. The majority (91%) of the survey areas were counted during the designated survey week (14-18 September) with 58% of the areas surveyed during the three-day target period (15-17 September) (Table 1).

Four premigration staging areas had concentrations exceeding 1,000 cranes: 1) Dillon-Twin Bridges, MT – 3,357; 2) the contiguous tri-state Upper Bear River Valley in ID, UT, and WY – 2,944; 3) Farson, WY – 2,007; and 4) Teton Basin, ID – 1,285. Over 500 cranes were recorded at 7 other premigration sites: Melville, MT – 912; Toston-Townsend, MT – 861; Ashton-St. Anthony, ID – 840; Clark Fork of the Yellowstone, MT – 678; White Sulphur Springs, MT – 578; Silver Creek, ID – 575; and Blackfoot Reservoir, ID – 537 (Table 1). The migration stopover near Jensen, UT on the Green River had 1,520 cranes (Table 1, Figure 1). These 12 areas accounted for 66% of all cranes recorded.

Sandhill cranes were also counted again this year in Sheridan (83), Johnson (35), and Natrona (477) counties in Wyoming, but they were not included in the overall estimate. Track counts, summer sightings and telemetered birds all indicate that these are RMP cranes that have expanded or shifted their range eastward. Under the guidelines of the RMP sandhill crane management plan, we will include these areas in the 2016 survey estimate for Wyoming.

A total of 209 sandhill cranes was counted in Millard (2), Piute (0), Sevier (126), and Wayne (81) counties in Utah. We are still awaiting a decision on whether to include these counties, traditionally thought of as within the range of the Lower Colorado River Valley (LCRV) sandhill crane population (Manes et al., 1988), into the overall survey estimate. A study involving both LCRV and RMP cranes with satellite transmitters attached to them is ongoing and hopefully will shed some

light on the amount of range overlap between these two management populations. To date, there has not been strong evidence to indicate that these cranes are part of the RMP.

The Jensen and Pelican Lake area, UT, primarily a migration stopover site on the Green River in Uintah County, had estimates of 1,520 and 220 cranes recorded during the survey week (Table 1). Both of these estimates were above their respective 10-year averages and suggest that some migration was occurring during the survey week. In the San Luis Valley, CO 266 cranes were counted, which was below the 10-year site average of 409 cranes. There were also only 4 cranes observed at Harts Basin/Fruitgrowers Reservoir, CO, another stopover area. These lower counts suggest that while some migration was underway, it appears that the majority of RMP cranes were still staging on the premigration areas that were surveyed during the week. Few cranes were counted on breeding areas during the survey, also indicating that timing appeared good for the selected week. Personal observations of cranes migrating over the Colorado Front Range and reports of cranes leaving MT and ID during late October also suggest that the mild fall weather slowed the migration of cranes this year.

To date, 2015 is on track to be the warmest year on record in several western states, as well as globally. The winter of 2014-2015 across the tristate area and into Utah and Colorado had well-above average temperatures. Record to near record temperatures persisted into the summer. June temperatures in Idaho and Utah were record setting and the remainder of the breeding states had well-above average temperatures. The warming trend continued into September with record temperatures in Utah and Colorado, the second warmest September for Wyoming and above average temperatures for Montana and Idaho.

Precipitation was generally below average during the winter of 2014-2015. June precipitation varied from above average in Colorado and Utah to below average in Idaho and Montana. The remainder of the summer precipitation was average across the region except for Montana, which had below average precipitation. September precipitation was below average in Colorado and Wyoming and average across the remainder of the region. Localized precipitation was well-above average in eastern Idaho and southwest Montana during September.

Weather conditions for the FWS aerial survey were good on Monday, 14 September, but by Monday night and through the middle of the week several low pressure systems moved across the tristate area bringing wind, rain and snow above 9000 feet. The FWS survey was able to fly limited areas every day, but had to extend the survey into Saturday 19 September to complete the survey because of the weather. Because of the weather, several other surveyors had similar problems with getting the survey done during the target week. Because cranes were in large numbers on their staging areas, we feel that counts were good, even with some of the overcast skies that we had to survey under.

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 2015 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 12-20 September.

Map No. & Location(a/g) Date	No. Cranes	Source
<b><u>COLORADO</u></b>		
1 Yampa River (g) 9/15	<b>454</b>	
Axial Basin (g) 9/15	23	B. Holmes, A Kircher, CPW
County Line grain fields (g) 9/15	149	A. Reishus, CPW
Craig vicinity fields (g) 9/15	68	E. Jones, J. Lambert, CPW
Hayden airport/racetrack (g) 9/15	120	J. Szyba, CPW
Morgan Bottoms (g) 9/15	77	S. Znamenacek, CPW
Yampa River SWA (g) 9/15	17	L. Rossi, J. Pollock, CPW
2 Elk River	<b>236</b>	
Selby's grain fields (g) 9/15	236	S. Baumgartner, A. Sponseller, CPW
3 White River	<b>115</b>	
East of Meeker (g) 9/15	0	B. Holmes, CPW
Little Beaver-Irish Mesa (g) 9/15	115	" "
4 Williams Fork River	<b>0</b>	
East of Hamilton (g) 9/15	0	E. Jones, CPW
5 Little Snake River (g) 9/15	<b>14</b>	
Slater (g) 9/15	10	M. Bauman, CPW
Two Bar Ranch (g) 9/15	4	J. Lambert, CPW
6 Delta Co., Harts Basin (g) 9/15	<b>4</b>	E. Horn, J. Wallace, D. Gulinet, Volunteers
7 San Luis Valley (g) 9/16-17	<b>266</b>	D. Lee, FWS
Subtotal	<b>1,089</b>	<b>4.5%</b>
<b><u>IDAHO</u></b>		
1 Amer. Falls Res. (a) 9/14	<b>71</b>	FWS survey <sup>a</sup>
2 Ashton-St. Anthony (a) 9/17	<b>840</b>	" "
3 Bear River Valley	<b>1,272</b>	
Bear Lake Valley (g) 9/14,17	219	B. Wishnek, T. Matthews, J. Jirak, FWS
Border-Pegram (a) 9/18	80	FWS survey
Bennington-Soda Spr. (a) 9/18	131	" "
Grace-Thatcher (a) 9/15	163	" "
Thomas Fork (a) 9/18	679	" "
4 Blackfoot Res. (a) 9/16	<b>537</b>	" "
5 Camas NWR (g) 9/17	<b>426</b>	P. Johnson, B. Wehausen, F. Downs, A. Kristof, A. Mattson, FWS
6 Camas Prairie (g) 9/17	<b>0</b>	T. Gregory, IDFG
7 Carey Lake area (g) 9/17	<b>0</b>	" "
8 Chesterfield Res. (a) 9/15	<b>196</b>	FWS survey
9 Grays Lake NWR (a) 9/18	<b>489</b>	" "
10 Henrys Lake Flats (a) 9/18	<b>1</b>	" "

Table 1 (continued)

Map No. Location(a/g) Date	No. Cranes	Source
11 Island Park Res. (a) 9/17	<b>0</b>	FWS survey
12 Kilgore	no survey	" "
13 Market Lake WMA (g) 9/15	<b>25</b>	" "
14 Marsh Valley (a) 9/16	<b>149</b>	FWS survey
15 Mud Lake WMA, (g) 9/17	<b>54</b>	J. Gray, IDFG
16 Oxford Slough-Swan Lake (a) 9/16	<b>214</b>	FWS survey
17 Silver Creek (g) 9/17	<b>575</b>	C. Shackelford, IDFG
18 Teton Basin (a) 9/18	<b>1,285</b>	FWS survey
19 Malad River (a) 9/14	<b>320</b>	B. Stringham, UDWR
subtotal	<b>6,454</b>	<b>26.5%</b>

**MONTANA**

1 Blackfoot/Ovando Valley (a) 9/12	<b>0</b>	S. Eggeman, MFWP
2 Cascade-Ulm (a) 9/18	<b>202</b>	K. Smucker, MFWP
3 Centennial Valley (a) 9/18	<b>1</b>	K. Cutting, FWS
4 Clark Fork of the Yellowstone (a) 9/15	<b>678</b>	S. Stewart, MFWP
5 Deadman's Basin (a) 9/15	<b>349</b>	J. Paugh, MFWP
6 Dillon-Twin Bridges (a) 9/19	<b>3,357</b>	FWS survey
7 Gallatin Valley (a) 9/17	<b>309</b>	J. Cunningham, MFWP
8 Helena Valley (a) 9/16	<b>190</b>	K. Podruzny, MFWP
9 Melville (a) 9/15	<b>912</b>	J. Paugh, MFWP
10 Musselshell River (a) 9/15	<b>483</b>	" "
11 Otter Creek (a) 9/15	<b>284</b>	" "
12 Teton River-Eureka Res. (a) 9/20	<b>485</b>	K. Smucker, MFWP
13 Toston-Townsend (a) 9/19	<b>861</b>	A. Grove, MFWP
14 Upper Madison Valley (a) 9/19	<b>266</b>	FWS survey
15 Warm Springs (a) 9/15	<b>201</b>	D. Dziak, MFWP
16 White Sulphur Spr. (a) 9/15	<b>578</b>	E. Lula, MFWP
17 Whitehall (a) 9/19	<b>337</b>	FWS survey
subtotal	<b>9,493</b>	<b>39.0%</b>

**UTAH**

1 Cache Co. (a) 9/14	<b>350</b>	B. Stringham, UDWR
<u>Great Salt Lake Basin</u>		
2 Box Elder Co. (a) 9/14	<b>335</b>	B. Stringham, UDWR
3 Davis Co. (a) 9/14	<b>13</b>	" "
4 Weber Co. (a) 9/14	<b>28</b>	" "
5 Morgan Co. (a) 9/18	<b>91</b>	" "
<u>Rich Co.</u>		
6 Bear River Valley (a) 9/16	<b>980</b>	B. Stringham, UDWR
7 Round Valley (a) 9/16	<b>100</b>	" "
8 Summit Co. (a) 9/18	<b>27</b>	" "

Table 1 (continued)

Map No.	Location(a/g) Date	No. Cranes	Source
<u>Utah Co.</u>			
9	Jensen (a) 9/18	<b>1,520</b>	B. Stringham, UDWR
10	Pelican Lake area (a) 9/18	<b>220</b>	" "
11	Leland Bench (a) 9/18	<b>10</b>	" "
12	Wasatch Co. (g) 9/14	<b>24</b>	D. Bunnell
	subtotal	<b>3,698</b>	<b>15.2%</b>
<b><u>WYOMING</u></b>			
1	Baggs (g) 9/15	<b>0</b>	N. Huck, WGFD
2	Bear River Valley (a) 9/18	<b>692</b>	FWS survey
<u>Big Horn Basin</u>			
3	Greybull River/Otto (a) 9/17	<b>109</b>	N. Huck, WGFD
4	Shoshone River/Ralston (a) 9/17	<b>109</b>	" "
5	Worland (a) 9/17	<b>134</b>	" "
<u>Green River Basin</u>			
6	Big Piney-Daniel (a) 9/14	<b>114</b>	FWS survey
7	Bridger Valley (g) 9/16	<b>28</b>	A. Deru, WGFD
8	Lonetree (g) 9/16	<b>0</b>	" "
9	Farson (a) 9/14	<b>2,087</b>	FWS survey
10	Hams Fork (a) 9/14	<b>2</b>	" "
11	Pinedale-Cora-Boulder (a) 9/14	<b>0</b>	" "
12	Seedskadee NWR	no survey	
13	Saratoga (g) 9/17	<b>3</b>	N. Huck, WGFD
<u>Snake River Basin</u>			
14	Jackson Hole Natl Elk (g) 9/16	<b>33</b>	E. Cole, C. Mulcahy, B. Mulcahy
15	Star Valley (a,g) 9/18	<b>192</b>	FWS survey, R. Drewien, J. Bohne
<u>Wind River Basin</u>			
16	Hidden Valley (a) 9/17	<b>0</b>	N. Huck, WGFD
17	Ocean Lake (a) 9/17	<b>0</b>	" "
18	Riverview Valley (a) 9/17	<b>93</b>	" "
	subtotal	<b>3,596</b>	<b>14.8%</b>
<b>TOTAL CRANES</b>		<b>24,330</b>	

<sup>a</sup> Fish & Wildlife Service aerial survey flown by P. Thorpe, P. Donnelly, and Dan Collins.

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 2. September premigration staging area counts by state of the Rocky Mountain Population of greater sandhill cranes during 1987, 1992, 1995-2005, 2007-2015.

Year	Colorado <sup>a</sup>	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
Mean	1,309	7,127	5,187	2,381	3,191	19,194

<sup>a</sup> Colorado counts include migrants that had arrived at the staging area in the San Luis Valley.

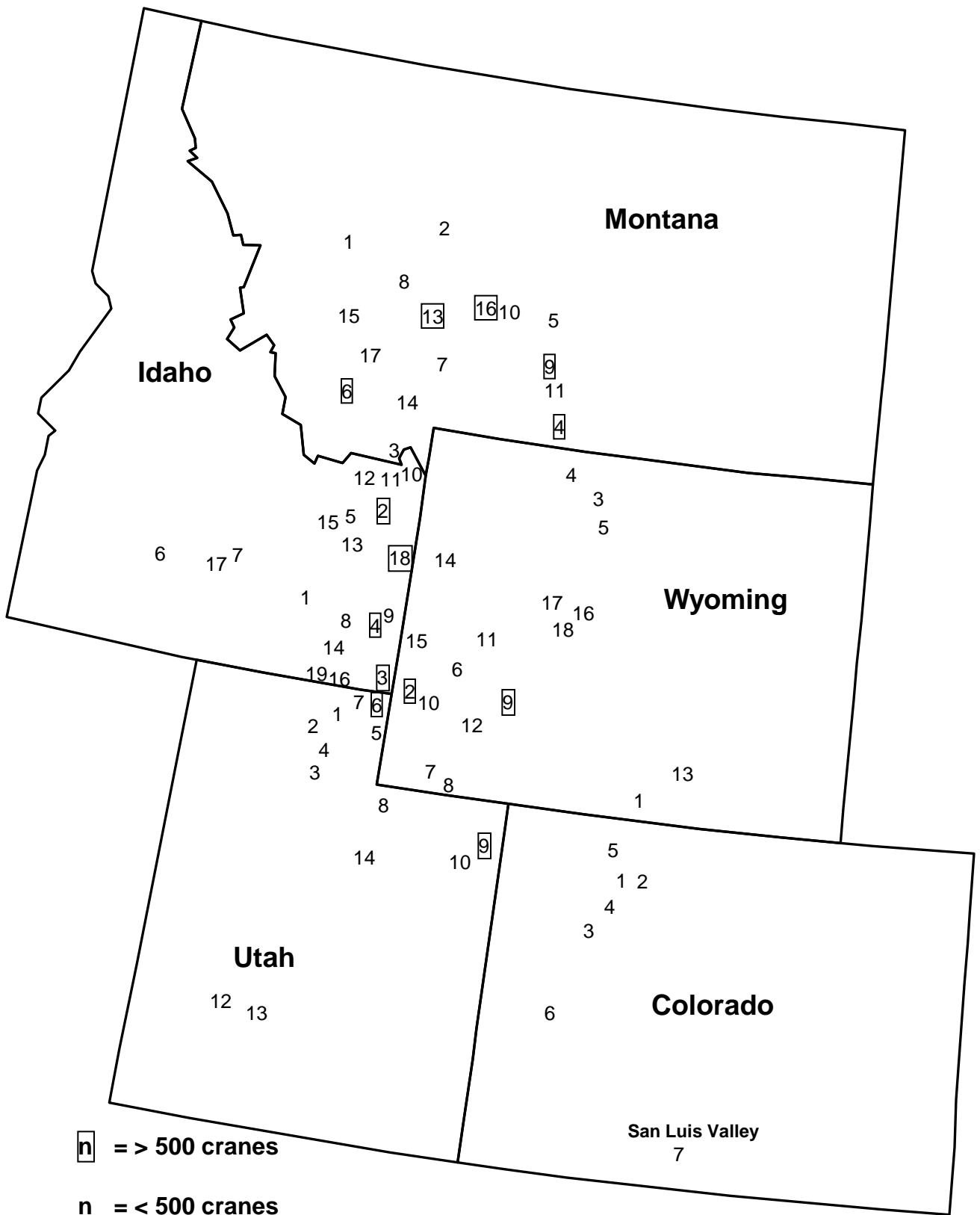


Figure 1. September survey locations for the Rocky Mountain Population of Greater Sandhill Cranes. See Table 1 for location names and numbers.