

Sandhill Crane

(*Grus canadensis*)

State Status: Endangered, 1981

Federal Status: None

Recovery Plans: State, 2002



Figure 1. Sandhill crane (photo by Joseph V. Higbee).

Three subspecies of sandhill crane occur in Washington: a small number of greater sandhills (*G. c. tabida*) breed in Klickitat and Yakima Counties; about 23,000 lesser sandhills (*G. c. canadensis*) stop in eastern Washington during migration; and 3,000-4,000 Canadian sandhills (*G. c. rowani*) and possibly some lessers and greater sandhills stop on lower Columbia River bottomlands (Engler et al. 2003), the only major stopover site between northern breeding areas and wintering sites in California. In recent years, up to 1,000 sandhills have wintered on lower Columbia bottomlands, primarily at Ridgefield National Wildlife Refuge (NWR), Washington, Sauvie Island Wildlife Area, Oregon, and surrounding areas (Littlefield and Ivey 2002). Most of the cranes seen in Washington winter in California.

The greater sandhill cranes that breed in Washington are part of the Central Valley Population, so called because they winter in California's Central Valley. Other members of this population nest in Oregon, California, Nevada, and interior British Columbia. The lesser sandhill cranes are of the Pacific Flyway Population that stop in Washington during migration between their breeding grounds in Alaska and wintering areas in California.

Historically, sandhill cranes bred in the south-central, northeastern and southeastern regions of Washington, and the southern Puget Sound basin. Crane numbers were severely reduced due to widespread habitat destruction and unregulated hunting which continued until passage of the federal Migratory Bird Treaty Act in 1916. The species was extirpated as a breeder from the state after 1941 when the last nest was documented at Signal Peak, Yakima County, in south-central Washington (Littlefield and Ivey 2002, Jewett et al. 1953). After an absence of 31 years, they were found summering in the Glenwood Valley on Conboy Lake National Wildlife Refuge, Klickitat County in 1972, but it was not until 1979 that nesting was confirmed. The Conboy Lake NWR provides nesting habitat for most (~80%) of the cranes breeding in Washington.

In 2012, a total of 27 breeding pairs were monitored representing the entire known Washington State breeding population of sandhill cranes (Table 1). A total of 10 juveniles (colts) were banded, of which 8 survived to fledge. An additional 2 colts that were not banded also fledged later in the season bringing the total juvenile (colt) production in 2012 to 10 birds. The total summer population of greater sandhills in Washington was around 80 birds (not including young of the year).



Figure 2. Sandhill crane nesting habitat in Klickitat County, Washington.

Since 1996, crane colts at Conboy Lake NWR have been captured at approximately 8 weeks of age, one

Table 1. Greater sandhill crane breeding pairs and production in Washington, 1995-2012 (Stocking et al. 2008, USFWS-Conboy NWR, and WDFW data).

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Population estimate ^a	22	26	34	39	40	47	50	50	49	53	60	60	62	62	-	82	80	-
Breeding pairs	8	10	15	14	16	15	16	13	18	19	18	19	23	23	23	30	30 ^b	27 ^b
Pairs, nest unconf ^b	3	3	-	3	2	4	4	7	3	1 ^d	7	5	2	-	-	-	-	-
Subadult (non-breeders) on-refuge ^e	0	0	4	5	4	9	10	10	7	15	10	12	12	14	f	f	f	-
Young produced ^g	1	3	5	5	5	6	0	2	6	5	5	7	6	5	f	f	f	10 ^b
Recruitment	4.5	11.5	16.7	14.7	13.9	16.2	0.0	5.0	14.3	13.2	10.0	14.6	12.0	12.0	f	f	f	-

^aData includes confirmed pairs, unconfirmed pairs, and sub-adults but does not include young fledged that year.

^b Does not include data from Yakama Nation which have had 3-5 pairs since 2005.

^cTerritorial pairs without confirmed nesting data

^dUnable to confirm 2 traditional pairs at Deer Creek and Panakanic Valley based on limited surveys.

^e“on-refuge” refers to cranes nesting within the Glenwood Valley

^f Data not yet available

^g this number reflects young known or suspected of joining the fall migration

^hRecruitment = no. fledged young / no. of breeding adults + fledged young X 100 (excludes subadults).

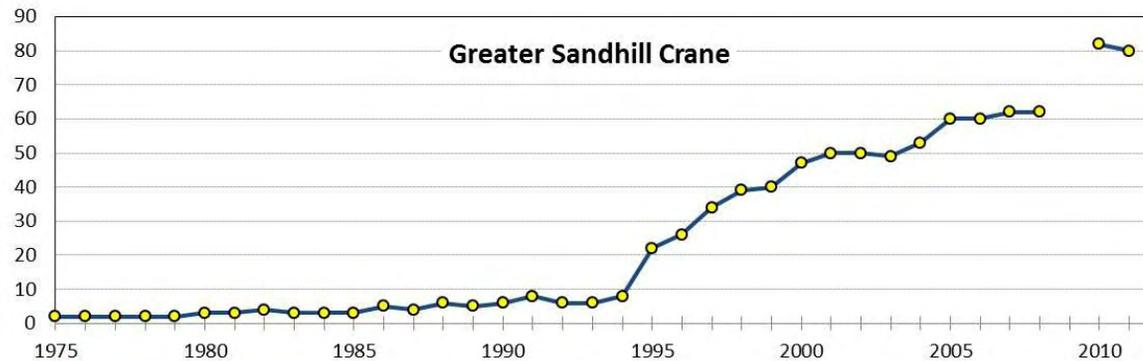


Figure 3. Population estimate of greater sandhill cranes in Washington, 1975-2012.

week before fledging, and have been color-banded with unique two-color combinations that allow identification of individual cranes. Cranes also have nested at 1 or 2 sites on the Yakama Indian Reservation, and have been observed in several other eastern Washington locations during the breeding season in recent years (e.g., central Cascades, Mount Spokane, Okanogan).

A stable population of cranes typically has a recruitment rate of 7-9%, while a growing population has a recruitment rate of $\geq 10\%$ (Littlefield and Ivey 2002). Using those figures, the Washington population has been growing slowly since monitoring began (Stocking et al. 2008). Nesting surveys are conducted in cooperation with the USFWS staff at Conboy National Wildlife Refuge. A combination of ground and aerial surveys were conducted from April through August of each year (2010-2012) to monitor nesting pairs and juvenile (colt) production.

Use of Washington habitats during migration. The subspecies composition of sandhill cranes which stage and winter along the Lower Columbia River in northwest Oregon and southwest Washington is uncertain, but may include all 3 forms using the Pacific Flyway: lesser, Canadian, and greater. During 2001-02, Ivey et al. (2005) attached satellite transmitters to 6 cranes to ascertain locations of their breeding areas, migration corridors and wintering sites. They reported that these cranes appear to be the intermediate Canadian form (*rowani*), and the staging counts of cranes along the Lower Columbia River may represent the entire population. They breed along the coast of British Columbia and southeast Alaska and some winter in Washington, while others stop during migration en-route to wintering areas in California. Genetic analyses of samples taken indicate that these *rowani* are distinct from the lesser and greater subspecies in the Pacific Flyway (Hayes et al. *in prep*). Ivey et al. (2005) recommended that they be managed as a unique population due to their limited numbers, distinct coastal migration route, and habitat issues at breeding, staging, and wintering areas.

As the Washington sandhill crane breeding population expands, cranes may re-occupy long vacant sites. Sandhill cranes were observed at a new location on the Gifford Pinchot National Forest in 2012 (Figure 4), and additional surveys will take place in 2013 to document any nesting attempts.

Conservation. A state recovery plan was completed in 2002 (Littlefield and Ivey 2002), with the goals of restoring a healthy breeding population of cranes and to maintain the flocks that winter or stop in Washington. Recovery objectives include a breeding population of ≥ 65 pairs, with at least 15 of these at sites outside the Glenwood Valley. The greater sandhill crane breeding population in Washington has continued to grow slowly. Several factors can affect Washington's sandhill cranes, particularly on private lands including water availability and management, and incompatible grazing and haying practices. For the migrant cranes, habitat on the lower Columbia bottomlands between Vancouver and Woodland is threatened with industrial development, conversion of agricultural lands to incompatible uses, and crane use is affected by disturbance by hunters and other recreationists. Wind energy project development may affect migrant lesser sandhills in eastern Washington by occasional collision mortalities, and the potential for habitat loss.

Partners and cooperators: U.S. Fish and Wildlife Service, Conboy Lake NWR, Ridgefield NWR, Yakama Nation, U.S. Forest



Figure 4. Meadow in Gifford Pinchot National Forest where cranes were observed in 2012.

Service, Gifford Pincho National Forest, International Crane Foundation, Washington Department of Natural Resources, and the West Coast Crane Working Group.

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