

# **Annual Reports 2008**

Greater Yellowstone Trumpeter Swan  
Working Group

Annual Meeting  
October 15-16, 2008  
Holiday Inn  
West Yellowstone, MT

**GREATER YELLOWSTONE TRUMPETER SWAN WORKING GROUP  
2008 NESTING SEASON SUMMARY REPORT**

Management Unit: **Idaho (entire state)**

Name/position: **Ruth Shea (The Trumpeter Swan Society) and Carl D. Mitchell (USFWS)**

Date prepared: **October 8, 2008**

**I. 2008 Nesting Season Results**

2008 was an extremely poor nesting year in Idaho, characterized by the failure of many pairs to initiate nesting, unusually late nest initiation and hatch, and poor cygnet survival.

*Occupied territories and active nests* - Idaho had 24 occupied territories but only 11 of those pairs (46%) initiated nesting. This is the lowest percent of occupied territories that contained active nests since spring of 1993, the first nesting season following termination of winter feeding. During 1980-2007, Idaho had an annual average of 26.9 occupied territories of which an average of 18.4 (68%) held active nests (Table 1). The failure of territorial pairs to initiate nesting this year was particularly apparent in the Ashton-Idaho Falls subunit, where only 1 of 6 occupied territories contained a nest. Camas NWR and Sand Cr. WMA, both important lower elevation nesting areas, had no successful nesting this year.

*Nest success and hatching*- Nest success was 64% (7/11) with a minimum of 17 cygnets hatched, including at least 10 in Island Park and 7 at Grays Lake. Hatching was unusually late; several nests hatched about July 7, and one nest at Grays Lake likely hatched 4 eggs about July 20. This is the latest hatch date that I am aware of in the GYE. The estimate of cygnets hatched is minimal because hatching was spread out over an unusually long time period and occurred primarily after the early July aerial survey had been flown in Island Park. Lily pads were extremely tall and made ground observations very difficult.

*Cygnet survival to fledging* – Statewide, only 5 cygnets fledged in 4 broods (Mesa Marsh, Silver Lake, and 2 broods at Grays L.). Idaho's cygnet production was the worst since 1957 and was only 22% of Idaho's 1980-2007 annual average of 22.4 cygnets fledged/yr. Compared to Idaho's 1980-2007 means, all production parameters were below average, although adult numbers were slightly above the long-term mean (Table 1).

*Habitat conditions* - A cold winter and exceptionally cold spring likely contributed to the very low productivity. Ruth has constructed a Winter Severity Index that measures the extent to which mean monthly temperatures in Island Park, Idaho, during November–March differ from freezing. The data cover a 71 year period (1937-2008). Colder winters, in which monthly means are substantially below freezing, score higher than warmer winters with monthly means closer to freezing

In Island Park, last winter was the 3<sup>rd</sup> coldest in the past 20 years (Fig. 1); only winter 1988-89, when much of the GYE froze and hundreds of Trumpeters died, and winter 1992-93, when feeding was terminated at RRLNWR, were colder. However, many recent winters have been unusually mild and the mean severity score for the past 20 winters (1988-2007) was 51.76. In contrast, during the previous 51 winters (1937-1987), the mean severity score was 64.08. Although last winter was one of the coldest winters in recent years, temperatures were quite similar to the average “old-time” winter.

The impact of the cold winter on the physical condition of swans as they entered the nesting period was likely heightened because the worst of the cold weather occurred at the end of winter during March and extended through April and into May. Monthly mean temperatures in Island Park in March and April were the coldest since 1979; May temperatures were the coldest since 1996. Although the Canadian Trumpeters began heading north to lower elevations in March where they could encounter more diverse foods, foraging conditions for Greater Yellowstone resident swans during the crucial pre-breeding period were extremely poor.

*Adult numbers* - During the September survey, 112 adults were observed; 22 were assumed to be breeding adults from the 11 active nesting territories and the remaining 90 were considered to be nonbreeders of various ages. Fifty-eight percent of the adults occurred in the core area from Idaho Falls northward and 42% occurred in expansion areas south of Idaho Falls.

## II. Egg/cygnets salvage summary and any releases of captive-raised stock or wild salvage birds.

Five eggs were salvaged from 2 nests at Grays Lake and sent to the Wyoming Wetland Society facility in Jackson, WY (see GLNWR report). Seven yearlings were released at Fort Hall, ID in June and a group of 2 yearlings and 4 cygnets were released at Fort Hall in September (see Fort Hall and Wyoming Wetland Soc. reports)

III. Banding/marking accomplished: The 7 yearlings released at Fort Hall in June were marked by USFWS with stainless steel lock-on leg bands, and yellow and black coded neckbands (1M1 to 1M9, 2M0) . Swans released in September were banded but not collared. (see Fort Hall report).

## IV. Habitat projects completed or planned by TTSS and partners:

As part of a partnership effort between TTSS, USFS, IDFG and the Teton Regional Land Trust funded by a NAWCA grant, work was done at Sand Creek WMA to improve swan nesting habitat. Because 2007 projects on the Caribou-Targhee NF to drawdown several nesting lakes were accomplished under budget, remaining funds were shifted and used by IDFG to complete the needed work at Sand Cr. Ponds. This work involved removing woody vegetation and improving nesting islands and repairing eroded portions of the dam on Pond 4.....

## V. Tasks accomplished for TSIP (Trumpeter Swan Implementation Plan) 2008

Nest monitoring and habitat improvements were accomplished. TTSS has also been working with USFWS, private landowners and other federal and state agencies to explore potential ways to improve water management at Grays Lake NWR and associated wetlands, and to develop a plan for increasing summering subadults and nesting pairs in Teton Basin.

VI. Summary of any additional monitoring or research plans for 2008 – none

Table 1. Trumpeter Swan nesting and population data for entire state of Idaho, 1980-2008.

Area/Year	Occupied Territories	Active Nests	Min	Min	Cygnet Fledged	September Adults	September Total	%	Estimated Nonbreeders	Est. % Nonbreeders
			Successful Nests	Cygnets Hatched				Cygnets in Sept.		
2008	24	11	7	17	5	112	117	4.30%	90	80.36%
2007	27	15	8	24	15	113	128	11.72%	83	73.45%
2006	28	24	14	48	39	132	171	22.80%	84	63.64%
2005	27	27	12	38	22	136	158	13.90%	82	60.29%
2004	24	18	8	33	23	112	135	17.00%	76	67.86%
2003	27	23	15	48	27	100	127	21.30%	54	54.00%
2002	31	17	13	26	14	103	117	12.00%	69	66.99%
2001	30	23	15	50	26	126	152	17.10%	80	63.49%
2000	36	28	21	81	40	102	142	28.20%	46	45.10%
1999	33	25	15	52	23	103	126	18.30%	53	51.46%
1998	41	27	16	47	37	110	147	25.20%	56	50.91%
1997	35	24	13	37	19	112	131	14.50%	64	57.14%
1996	36	21	16	54	20	127	147	13.60%	85	66.93%
1995	24	21	15	38	21	118	139	15.10%	76	64.41%
1994	33	26	20	78	49	79	128	38.30%	27	34.18%
1993	28	11	2	6	6	94	100	6.00%	72	76.60%
1992	25	17	11	34	8	109	117	6.80%	75	68.81%
1991	21	15	10	32	26	138	164	15.90%	108	78.26%
1990	23	16	14	47	28	92	120	23.30%	60	65.22%
1989	25	14	7	17	16	101	117	13.70%	73	72.28%
1988	25	16	12	37	28	87	115	24.30%	55	63.22%
1987	28	20	11	30	15	63	78	19.20%	23	36.51%
1986	23	17	8	24	14	83	97	14.40%	49	59.04%
1985	24	18	14	42	27	83	110	24.50%	47	56.63%
1984	31	16	11	34	21	72	93	22.60%	40	55.56%
1983	18	4	3	10	6	92	98	6.10%	84	91.30%
1982	15	12	10	34	24	no survey	no data		no data	
1981	14	11	8	39	22	no survey	no data		no data	
1980	20	10	8	24	10	73	83	12.00%	53	72.60%
<b>Mean (1980-2007)</b>	<b>26.9</b>	<b>18.4</b>	<b>11.8</b>	<b>38.0</b>	<b>22.4</b>	<b>102.3</b>	<b>124.6</b>	<b>17.6%</b>	<b>64.4</b>	<b>62.1%</b>

Fig. 1. Winter severity ratings at Island Park, ID, winters 1988-2007

Winter Severity Index = the sum of the monthly severity indices (=32-ave monthly temp) for Nov through March;  
Index values are higher in colder winters.

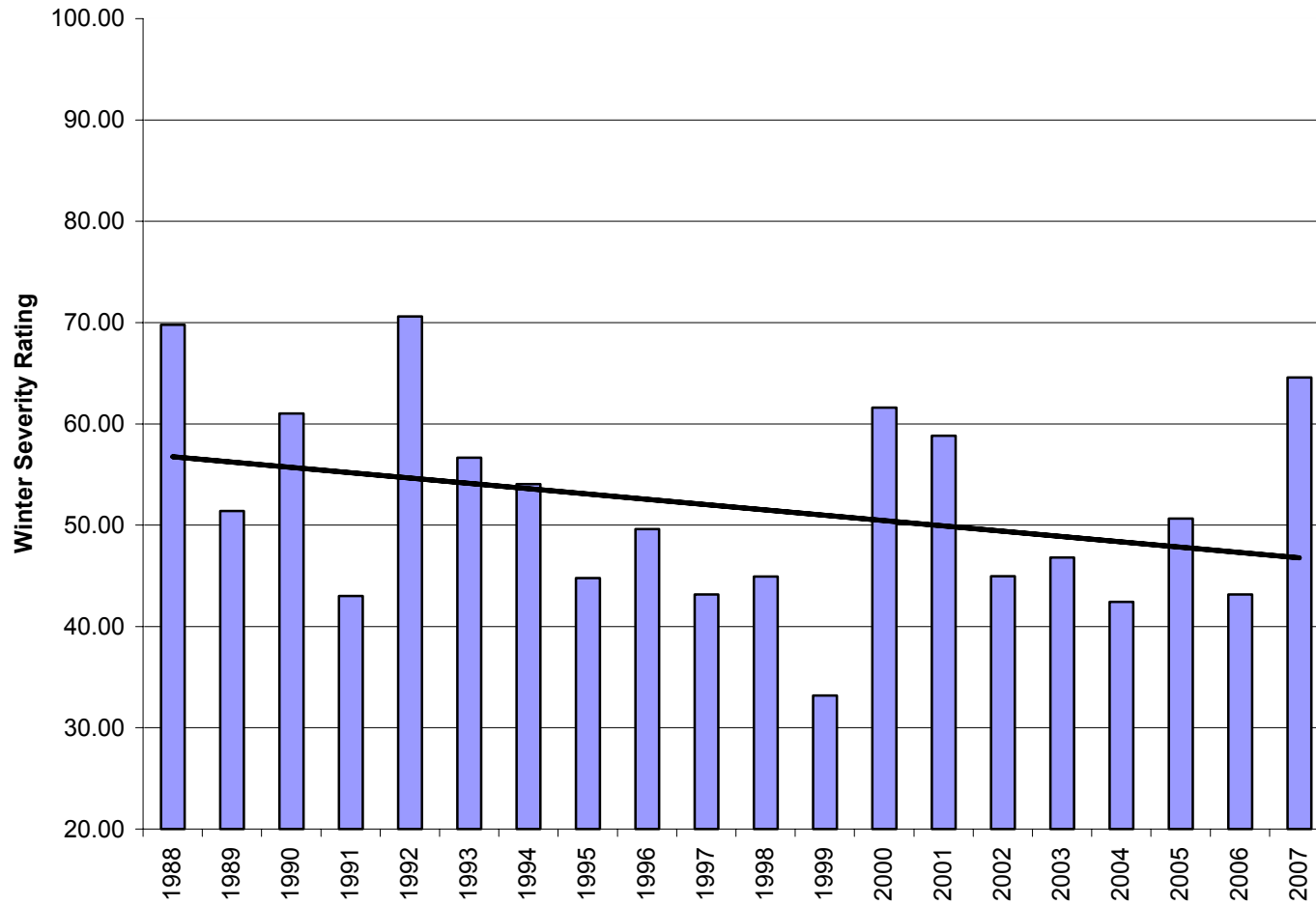
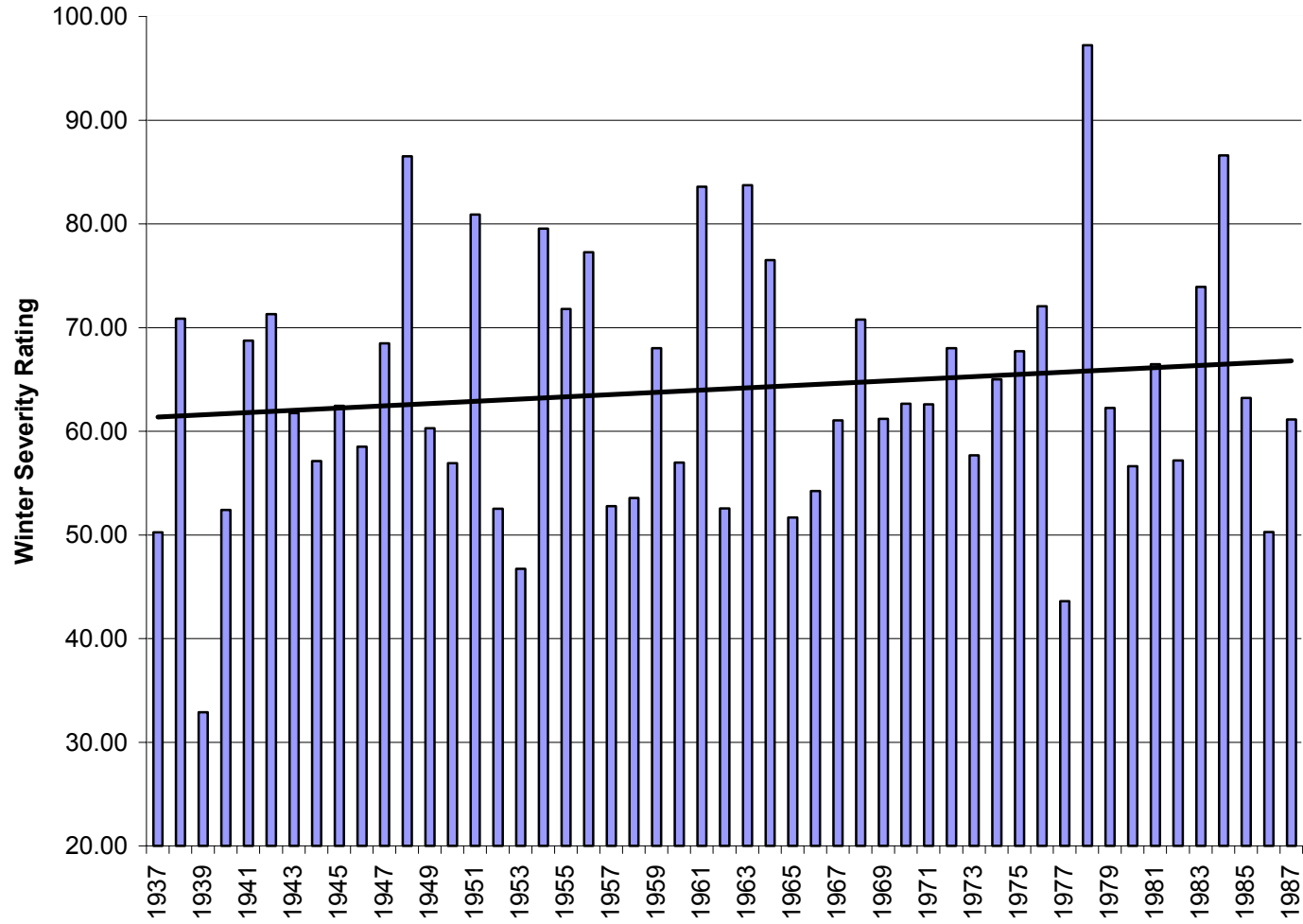


Fig. 2. Winter severity ratings at Island Park, ID, winters 1937-87

Winter Severity Index = the sum of the monthly severity indices (=32-ave monthly temp) for Nov through March



GREATER YELLOWSTONE TRUMPETER SWAN WORKING GROUP  
2008 NESTING SEASON SUMMARY REPORT

**Management Unit Name: Bear Lake National Wildlife Refuge**

Name/position: Carl D. Mitchell, Wildlife Biologist

Date prepared: 23 September 23, 2008

**I. 2007 Nesting Season Results—Fill out Table below**

Unit Name:	2008 nesting season data
Number of sites occupied	2
Number of nesting pairs	2
Number of pairs hatched young	0
Number of cygnets hatched	0
Total number of mature cygnets September	0
Number of broods with mature young Sept.	0
Number of subadults observed on unit	Unknown. Summer counts ranged from 14 to 8 white birds.

**--Describe habitat conditions pre-nesting and nesting season.**

Habitat was late opening up due to cold wet spring weather, but appeared to be in good condition with adequate water levels and good submerged aquatic plant growth.

**--Describe mortalities or disturbance problems during nesting season.**

None observed.

**--Discuss briefly trends, problems, etc. specific to this year**

Fewer white swans were present than in previous years, and fewer swans were present in fall than in early summer. Five pairs were present in June, but, like other Idaho areas, most did not nest.

**II. Describe any egg/cygnets salvage operations, or plans to release captive-raised swans.** No swans or eggs were salvaged or released at Bear Lake in 2008.

**III. Provide number & release dates of captive-raised or wild salvage birds.** Not applicable.

**IV. Any banding/markings accomplished—describe.** No banding or marking occurred at Bear Lake NWR in 2008.

**V. Describe wetland habitat projects for swans planned or completed.**

Work on the Bloomington and Saint Charles creek Units continues. Work is scheduled to be completed in 2009.

GREATER YELLOWSTONE TRUMPETER SWAN WORKING GROUP  
2008 NESTING SEASON SUMMARY REPORT

**Management Unit Name: Grays Lake National Wildlife Refuge and vicinity**

Name/position: Carl D. Mitchell, Wildlife Biologist

Date prepared: 23 September 2008

**I. 2007 Nesting Season Results—Fill out Table below**

Unit Name:	2008 nesting season data
Number of sites occupied	8
Number of nesting pairs	4
Number of pairs hatched young	4
Number of cygnets hatched	Minimum 7
Total number of mature cygnets September	2
Number of broods with mature young Sept.	2
Number of subadults observed on unit	Unknown. White bird totals range from 19-31 on and near GLNWR.

--**Describe habitat conditions pre-nesting and nesting season.** Late ice-off dates, but otherwise good conditions prevailed until mid-late summer in most sites.

--**Describe mortalities or disturbance problems during nesting season.** None observed.

--**Discuss briefly trends, problems, etc. specific to this year.** Up to nine pairs were present, but many did not nest.

**II. Describe any egg/cyagnet salvage operations, or plans to release captive-raised swans.** Five eggs were removed from two nests in the Beavertail Point area on 23 June 2008. The NE Beavertail territory nest had 5 good eggs, and four were removed. The SW Beavertail territory had two good eggs, one dead embryo and one infertile egg. One good egg was removed. One salvaged nest hatched the remaining egg and successfully fledged the cygnet.

**III. Provide number & release dates of captive-raised or wild salvage birds.** No birds were released on Grays Lake NWR in 2008.

**IV. Any banding/marking accomplished—describe.** No banding or other marking was conducted at Grays Lake in 2008.

**V. Describe wetland habitat projects for swans planned or completed.** Planning and funding for renovating several stock ponds on the lakefront area continue. Planning for various wetland creation projects in the central marsh continues.

GREATER YELLOWSTONE TRUMPETER SWAN WORKING GROUP  
2008 NESTING SEASON SUMMARY REPORT

**Management Unit Name: Camas National Wildlife Refuge**

Name/position: Carl D. Mitchell, Wildlife Biologist

Date prepared: 23 September 2008

**I. 2007 Nesting Season Results—Fill out Table below**

Unit Name:	2008 nesting season data
Number of sites occupied	0
Number of nesting pairs	0
Number of pairs hatched young	0
Number of cygnets hatched	0
Total number of mature cygnets September	0
Number of broods with mature young Sept.	0
Number of subadults observed on unit	Unknown. Summer and fall counts ranged from 7 to 14 white birds.

**--Describe habitat conditions pre-nesting and nesting season.**

Late ice-off and many wetlands were dry.

**--Describe mortalities or disturbance problems during nesting season.**

None observed.

**--Discuss briefly trends, problems, etc. specific to this year**

Dry areas have been the norm for several years. Probably a hard, prolonged winter prevented the Big Pond pair from initiating a nest and laying eggs.

**II. Describe any egg/cyagnet salvage operations, or plans to release captive-raised swans.** None at Camas NWR.

**III. Provide number & release dates of captive-raised or wild salvage birds.** Not applicable.

**IV. Any banding/marking accomplished—describe.** None.

**V. Describe wetland habitat projects for swans planned or completed. None planned at present. Wetland management will continue to consist of trying to fill a limited number of pools and keeping them full through the breeding and fledging period.**

GREATER YELLOWSTONE TRUMPETER SWAN WORKING GROUP  
2008 NESTING SEASON SUMMARY REPORT

**Management Unit Name: Red Rock Lakes NWR and Centennial Valley**

Name/position: Jeff Warren, Wildlife Biologist

Date prepared: 10/9/2008

**I. 2008 Nesting Season Results—Fill out Table below**

Unit Name:	2008 nesting season data
Number of sites occupied	9
Number of nesting pairs	9
Number of pairs hatched young	1
Number of cygnets hatched	2
Total number of mature cygnets September	1
Number of broods with mature young Sept.	1
Number of subadults observed on unit	

**--Describe habitat conditions pre-nesting and nesting season**

We had a cold, wet spring in 2008. Ice remained on large wetlands until the second week of May. Snow pack was above average, resulting in good water conditions during the spring/early summer. Precipitation from mid-June through August was below normal, with many smaller basins dry by late summer.

**--Describe mortalities or disturbance problems during nesting season.**

None to report.

**--Discuss briefly trends, problems, etc. specific to this year**

Poor production this year, likely a result from the spring conditions.

**II. Describe any egg/cygnets salvage operations, or plans to release captive-raised swans**

None to report.

**III. Provide number & release dates of captive-raised or wild salvage birds**

NA

**IV. Any banding/marking accomplished—describe.**

None to report.

## **V. Describe wetland habitat projects for swans planned or completed**

BLM undertook habitat improvements on 3 unoccupied territories along the Red Rock River in 2008. A summary of these activities follows.

### **Centennial Valley Wetland Habitat Enhancement**

BLM and TSS funding of \$8,600 supported the project to excavate approximately 2300 feet of isolated oxbow channels on three sites on BLM and the J-L Ranch in the Red Rock River floodplain in the Centennial Valley. Excavations were approximately 24"-30" deep, of accumulated sediment and vegetation from these old channel oxbows. The goal is to provide open water, nesting islands and aquatic habitat on historic nesting territories.

Administrative delays kept from completing the project in 2007 but once the pending Corps of Engineers 404 permit for the project was processed, excavations proceeded in the summer of 2008. BLM provided contract survey/design, permit administration and project inspection. To comply with the Corp of Engineers 404 permit, the excavated oxbows will be monitored for the next few years to determine nesting and re-occupancy, before more excavations can be completed. Six alternate sites have been evaluated and are proposed for future enhancement work pending the monitoring results of the completed oxbows and a 404 permit acquisition.

Following completion of the excavations, a site inspection in September documented 10 Trumpeter swans on the Red Rock directly adjacent to the newly excavated oxbows. These territories have been occupied in the last few years, but have not had nesting success.

**Wyoming**  
**GREATER YELLOWSTONE TRUMPETER SWAN WORKING GROUP**  
**2008 NESTING SEASON SUMMARY REPORT**

**Management Unit Name: Wyoming outside of Yellowstone National Park**

Name/position: Susan Patla, WGFD Nongame Biologist

Date prepared: October 2008

**I. 2008 Nesting Season Results—Fill out Table below**

Unit Name:	2008 nesting season data
Number of sites occupied	34
Number of nesting pairs	16
Number of pairs hatched young	12
Number of cygnets hatched	41
Total number of mature cygnets September	36
Number of broods with mature young	11
Number of subadults observed on unit	53
	Fall flight: subtracted out 68 territorial adults from total of 121 white birds

Wyoming' productivity was almost half of the record number of cygnets produced in 2007 (n=74). Spring conditions were completely different from the warm, dry spring of 2007. We had sub-freezing nighttime temperatures into mid-May, and some shallow wetlands were still frozen in early June. Results from these past two years appear to validate the hypothesis that a major limiting factor for swan productivity in Wyoming and the Tri-State area is pre-nesting habitat condition. Warm springs result in early ice-off, stimulating production of aquatic vegetation.

**Monitoring Flights in 2008:**

June 9-Incubation

July 7 & 8- Nesting Success

September 17- Tri-State Fall Survey Productivity and Population Flight

**Describe habitat conditions:**

See note above. Record cold late spring.

**Describe mortalities or disturbance problems during nesting season:**

**Complete Brood loss:**

- 1) Carney Slough, Green River—incubated entire period, no young seen, may have died shortly after hatch?

**Brood Reduction:**

- 1) New Fork River Fayette wetland-lost a late hatch brood of 4; water very low on marsh
- 2) Swift Ranch, New Fork—found a group of five that hatched by early June at new site but one lost by September.

**Note if occupancy and productivity trends on your unit are up or down.**

Wyoming: Occupancy similar to last year; productivity lower but still above 10 year average.

**II. Describe any egg/cygnets salvage summary--none**

**III. Provide number & release dates of captive-raised or wild salvage birds--none**

**IV. Describe banding/marking accomplished—none.**

**V. Describe wetland habitat projects for swans planned or completed**

Funding for three wetland projects to construct nesting ponds for swans on private ranches in the Green River basin was obtained this year. One project along Duck Creek near Pinedale was funded through the NRCS WRP program and Wyoming Wildlife and Natural Resource Trust Board (WWNRTB). Another in Daniel on the Rimfire Ranch received funding through the BLM Healthy Land Initiative (Wyoming Landscape Conservation Initiative) and WWNRTB. The third project, the Friendly Pond in Big Piney, received funding from the WWNRTB, FWS Partners Project, and NRCS. Construction is underway on the Rimfire Ranch and Friendly Pond. Bids are being reviewed for the Duck Creek project and it should start shortly.

**VI. Describe tasks accomplished for goals under the TSIP (Trumpeter Swan Implementation Plan)**

**See habitat projects above.**

Note: Leucistic Young

**Sites that produced white cygnets included:**

**SNWR Hawley Pool 1—produced 1 white cygnet out of 3**

**SNWR Sage Pool—produced 3 of 3 white**

GREATER YELLOWSTONE TRUMPETER SWAN WORKING GROUP  
2008 NESTING SEASON SUMMARY REPORT

**Management Unit Name: Yellowstone National Park**

Name/position: Lisa Baril/Biological Science Technician

Date prepared: 9/23/08

**I. 2008 Nesting Season Results—Fill out Table below**

Unit Name:	2008 nesting season data
Number of sites occupied	3
Number of nesting pairs	2
Number of pairs hatched young	1
Number of cygnets hatched	2
Total number of mature cygnets September	2
Number of broods with mature young Sept.	1
Number of subadults observed on unit	0

**--Describe habitat conditions pre-nesting and nesting season**

Most lakes were frozen until late May/ early June; spring conditions were unseasonably cold (at least with respect to the last 10 years) with frequent bad weather. We experienced relatively normal summer conditions; this year was slightly cooler than in recent years, but weather data for this year is not yet available. Very few summer storm events occurred that would have caused issues with nesting swans.

**--Describe mortalities or disturbance problems during nesting season.**

A dead swan was observed on the Madison R. in late May which may have been the result of a predation event, but we could not cross the river to access the bird and determine cause of death.

**--Discuss briefly trends, problems, etc. specific to this year**

As stated above it was a late spring relative to recent years and as usual few pairs of swans occupied territories or nested.

**II. Describe any egg/cygnets salvage operations, or plans to release captive-raised**

Swans            None

**III. Provide number & release dates of captive-raised or wild salvage birds**    None

**IV. Any banding/marking accomplished—describe.**        None

**V. Describe wetland habitat projects for swans planned or completed**

None

GREATER YELLOWSTONE TRUMPETER SWAN WORKING GROUP  
2008 NESTING SEASON SUMMARY REPORT

**Management Unit:** *Grand Teton National Park*

Name/position: *Sue Wolff, Wildlife Biologist*

Date prepared: Oct 2, 2008

2008 Nesting Season Results:

Swans occupied 8 sites in 2008. Swan territories that had been active in the past, such as Christian Pond and Hedrick Pond were not active. Reasons for abandoned nest territories are unknown but may be due to predation, loss of one of the mates during the winter, or other unknown reasons.

Fourteen potential trumpeter swan nesting sites were monitored by Grand Teton National Park personnel. Three of these territories are located outside of the park. Sites were monitored to determine occupancy, nesting activities and cygnet production. Of these 14 sites, 8 sites were occupied and pairs nested at 2 territories: one located inside the park. These 2 sites successfully hatched and fledged young. A total of 6 cygnets fledged. Overall, occupancy and productivity in the park was lower in 2007 than the 20-year average.

Egg/cygnets salvage summary and any releases of captive-raised stock or wild salvage: *NONE*

Banding/markings accomplished: *NONE*

Habitat projects completed or planned: *NONE*

Tasks accomplished for TSIP (Trumpeter Swan Implementation Plan):

Grand Teton Park biologists continued to work with Park staff to try to improve management of water levels at the Elk Ranch Reservoir where a pair of swans produced 5 young in 1997 but has failed to produce young since. The Park monitored early season boating and hiker activity on Two Ocean Lake.

**GREATER YELLOWSTONE TRUMPETER SWAN WORKING GROUP  
2008 NESTING SEASON SUMMARY REPORT**

Management Unit Name: National Elk Refuge

Name/position: Eric Cole, Refuge biologist

Date prepared: 10/6/08

**I. 2008 Nesting Season Results—Fill out Table below**

Unit Name:	2008 nesting season data
Number of sites occupied	4
Number of nesting pairs	2
Number of pairs hatched young	2
Number of cygnets hatched	7
Total number of mature cygnets September	7
Number of broods with mature young Sept.	2
Number of subadults observed on unit	3

**--Describe habitat conditions pre-nesting and nesting season**

Spring was late and temperatures were below normal April-June. Temperature was normal and precipitation was well below normal July-September. Water levels were adequate throughout the nesting season.

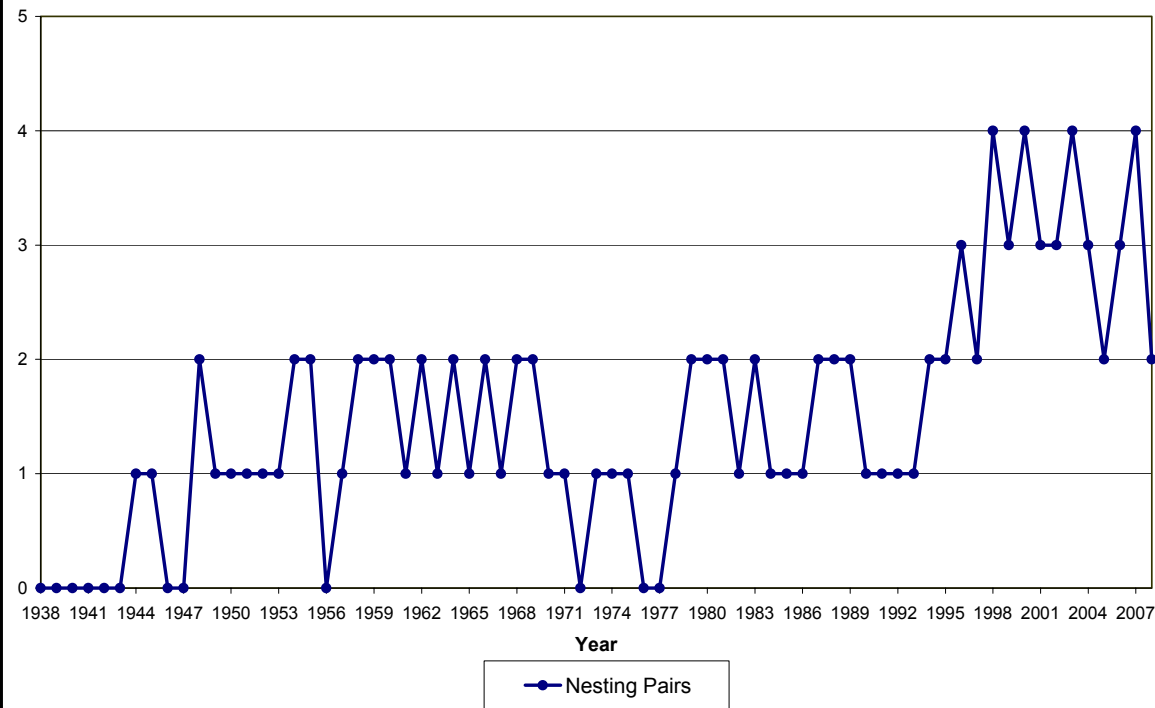
**--Describe mortalities or disturbance problems during nesting season.**

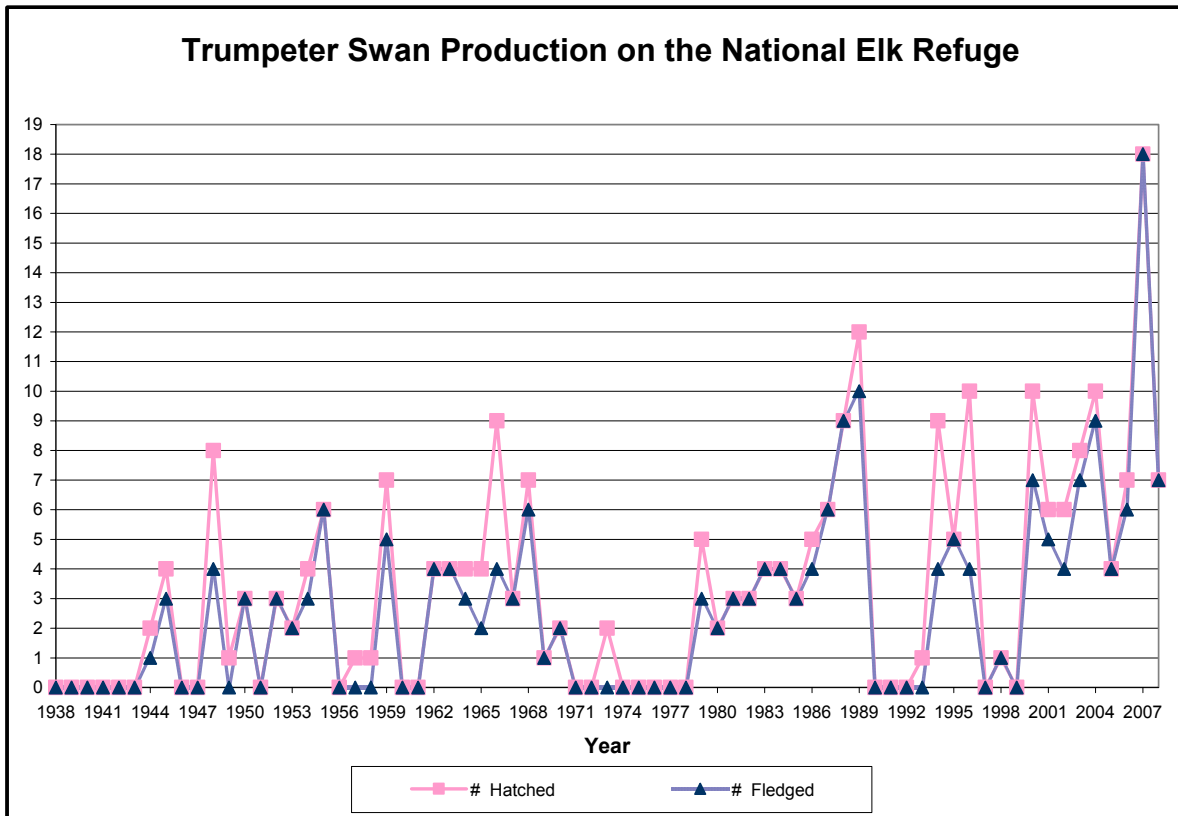
None noted.

**--Discuss briefly trends, problems, etc. specific to this year**

Trends for number of nesting pairs, number cygnets hatched, and number of cygnets fledged are all stable compared to recent years (see figures below).

# Nesting Pairs of Trumpeter Swans on the National Elk Refuge





**II. Describe any egg/cygnets salvage operations, or plans to release captive-raised swans:**  
None.

**III. Provide number & release dates of captive-raised or wild salvage birds**  
None

**IV. Any banding/marking accomplished—describe.**  
None.

**V. Describe wetland habitat projects for swans planned or completed**

Pierre's #1 Pond dike repair and Pierre's #2 Pond water control replacement planned for October, 2008. Romney Ponds #1, #2, and #3 and Bill's Bayou water control structure replacement planned for fall, 2009.

**GREATER YELLOWSTONE TRUMPETER SWAN WORKING GROUP  
SEEDSKADEE NATIONAL WILDLIFE REFUGE  
2008 NESTING SEASON SUMMARY REPORT**

Prepared by:  
John W. Martin  
Natalie A. Fath

Management Unit Name:  
**Seedskadee National Wildlife Refuge, U.S. Fish and Wildlife Service**

Name/position: **John W. Martin-Park Ranger/Biologist**  
**Natalie A. Fath-Biological Science Technician**

Date prepared: **30 September 2008**

**2008 NESTING SEASON RESULTS**

<b>Unit Name: Seedskadee NWR</b>	<b>2008 Nesting Season Data</b>
# of sites occupied	3
# of nesting pairs	3
#of pairs hatched young	3
# of cygnets hatched	10
Total number of mature cygnets in September	10
Number of broods with mature young in September	3
Number of Sub-adults observed on unit September 25 2008	15

**--Describe habitat conditions pre-nesting and nesting season.**

Weather was the single greatest influence on habitat during the interface of winter-spring 2008. Spring consisted of prolonged cold and wet (rainy and/or snowy) periods in between warmer periods. Mid-February briefly experienced temperatures in the mid-50s. Heavy ice (2+ feet thick) persisted along the Green River until early-April. This concentrated over-wintering flocks into open water that was limited along most of the Refuge (approximately 27 miles) from OCI Wyoming to Dodge Bottom. The first day over 70° was 25 April and the first day over 80° was 18 May. The overall growth of vegetation was postponed by 30-45 days.

**--Describe mortalities or disturbance problems during nesting season.**

A major disturbance factor for the 2008 breeding season at Seedskadee NWR was the Green River flows controlled through Fontenelle Dam. Rather than release high flows early during the spring, in an attempt to mimic natural flows, runoff was held back this year. Previous spring runoff had failed to fill Fontenelle Dam due to prolonged drought. Due to the late spring, melting snows from the Wind River Range did not peak until late July and early-August when flows jumped from 1100 cfs to 4600 cfs through the Refuge. By that time waterfowl had nested along waterways and impoundments at the lowest levels. When peak flows occurred many waterfowl nests were destroyed. The direct impacts on nesting swans in 2008 are uncertain but may have been a factor in at least one nest failure on the Refuge.

**--Discuss briefly trends, problems, etc. specific to this year.**

Although hopeful from a management perspective for a repeat of the 2007 breeding season's success on the Refuge, increasing predator pressure and unusual weather may have been contributing factors for low productivity for the 2008 breeding season.

**--Describe any egg/cygnets salvage operations, or plans to release captive-raised swans:**

**None at this time.**

**--Provide number & release dates of captive-raised or wild salvage birds:**

**N/A**

**--Any banding/markings accomplished—describe:**

**N/A**

**--Describe wetland habitat projects for swans planned or completed:**

**None at this time.**

**Trumpeter Swan breeding history at Seedskadee NWR.**

	<b>Breeding Pairs</b>	<b>Nests Constructed</b>	<b>Successful Nests</b>	<b>Cygnets Hatched</b>	<b>Cygnets Fledged</b>	<b>Cygnets Mortalities</b>
<b>1997</b>	1	1	1	5	5	0
<b>1998</b>	1	1	1	5	1	4
<b>1999</b>	1	1	1	4	4	0
<b>2000</b>	1	1	1	4	4	0
<b>2001</b>	2	2	2	5	5	0
<b>2002</b>	0	0	0	0	0	0
<b>2003</b>	4	4	4	17	16	1
<b>2004</b>	3	3	3	17	9	8
<b>2005</b>	5	5	4	19	18	1
<b>2006</b>	4	4	3	15 or 16	14	1 or 2
<b>2007</b>	6	6	4	13	11	2
<b>2008</b>	5	3	3	10	10	0

