

### **10/6/2016**

Due to late summer rains in North Dakota, the Refuge was able to hold back water, which flooded new wetland vegetation that grew as a result of a summer draw down. This has provided premier waterfowl habitat for this fall. While it is hard to grasp how many ducks are on the Refuge at this time because of the dense vegetation, we estimate that there are thousands of puddle ducks using the Refuge pools at this time. These numbers primarily consist of Green-winged Teal, Northern Pintail and Gadwall.

The first group of Tundra Swans was spotted in the area this week. Very few diver ducks have been observed on the Refuge so far. We are still in the early stages of the waterfowl migration.

Wetland conditions around the Refuge this year are drier than what we have seen in many years. Many wetlands that have held water for six or more years are now dry. Waterfowl hunters have had spotty success thus far. With limited areas of water to hunt, we have also noticed that hunters are more concentrated this year.

The Refuge roads will be closed for the year at the end of the day on October 14th. The Refuge Archery deer season opens up the following morning. Despite the refuge roads closing, excellent wildlife viewing can still be found off Hwy 10, 117th Street and the Refuge Headquarters area.

### **10/24/2016**

We are starting to see a small increase in waterfowl numbers throughout the area. A few small flocks of snow geese have been observed in the area, along with increasing numbers of white fronts and tundra swans. The refuge is holding hundreds of thousands of ducks, but these ducks are happy on the refuge pools and are not venturing out to feed. The forecast calls for mild temps for the next several days. We anticipate that we will continue to see slowly increasing bird numbers, but no drastic changes without a major cold front. Refuge roads are now closed for the season.

### **10/31/2016**

Waterfowl numbers are holding steady on Sand Lake refuge. Scattered, small flocks of snow geese, Canada geese, and swans have been spotted throughout the Sand Lake district. There are roughly half a million ducks using the refuge currently, and for the most part they are content to stay on the refuge to feed. The weather forecast is calling for mild temps throughout this week, so we don't anticipate a big push of birds until colder weather sets in.

### **11/7/2016**

Waterfowl numbers continue to hold steady in the Sand Lake area. A group of roughly 5000 snow geese have been spotted on the lake, and there are still approximately a half million ducks using the refuge. There have been sightings of small flocks of swans, Canada geese and white fronts around Sand Lake as well. The weather forecast calls for mild temperatures through this week, so we don't anticipate a large increase in birds until a cold front moves in.

### **11/14/2016**

The Refuge is starting to see Snow Goose numbers increase steadily each day. The current estimate of Snow Geese on the Refuge is around 100,000. Mallard numbers are also holding strong and increasing to approximately 200,000. There are approximately 300,000 other ducks on the Refuge at this time also, which are mostly made up of Green-winged Teal and Pintail. There has also been unusually high numbers of White-fronted Geese on the Refuge the last couple weeks, while Tundra Swan numbers have remained quite low.

Excellent viewing of the Refuge waterfowl can be found along Hwy 10. Most ducks and geese that are going out to feed in the area fields appear to be leaving the Refuge to the west and northwest.

This fall's mild weather is forecasted to change at the end of this week with possible snow and much colder temperatures predicted. If the predictions hold true, Sand Lake Refuge and most other shallow water in the area may be frozen by the end of this coming weekend. If this weather pattern and prediction is accurate, we may see an amazing and very quick migration of waterfowl through the area in the next 10 days.

It is safe to say that migration into and through the area will depend on this week's cold front coming through and how cold temperatures get at night and how cold high temperatures are during the day.

### **11/21/2016**

The storm that passed through the area this past week left us with more average temperatures, some ice on the lake, and snow on the ground. At this time, approximately 75% of the Refuge has frozen over. Most other shallow water in the area has also frozen.

The Refuge has Snow Goose numbers of around 150,000. Duck numbers are approximately 250,000, with most of those being Mallards. There are still around 1,500 White-fronted Geese on the Refuge, while Tundra Swan numbers have remained low. Almost all waterfowl remaining on the Refuge are from the Hwy 10 area and south.

Excellent viewing of the Refuge waterfowl can be found along Hwy 10. Most ducks and geese that are going out to feed in the area fields appear to be leaving the Refuge to the west.

With no extremely cold temperatures predicted for the next 7 days, we expect these numbers to remain steady for quite some time.

### **11/28/2016**

Waterfowl numbers have decreased on the refuge since the last report. While the refuge has become 90% ice-free, some birds have left. We estimate there are approximately 85,000 snow geese and 100,000 ducks, as well as about 150 swans and 40 bald eagles, still on the refuge.

The weather forecast for this week calls for snow throughout much of North Dakota and South Dakota, with temperatures falling below freezing. If this forecast is accurate, it is very possible that the birds may keep moving south out of the area.

**12/05/2016**

We are seeing a decrease in bird numbers at Sand Lake refuge from last week. Cooler temperatures and sporadic snow has pushed some of the birds out of the area. We estimate there are roughly 50,000 - 60,000 ducks and around 80,000 snow geese still using the refuge, along with a few groups of swans and white-fronted geese. The majority of Sand Lake is ice-covered.

The weather forecast for this week calls for much colder temperatures with some chances for snow. As the ice builds on the lake and temperatures drop, we expect the birds to keep pushing south.

**12/12/2016**

Winter has finally set in at Sand Lake. Temperatures this past week were consistently below freezing with a couple days of sub-zero wind chill. The refuge has received about 5-6 inches of snow so far, and the lake is 100% ice-covered. Due to the weather and the lake freezing over, nearly all of the ducks and geese in the area have now left the refuge to head south, signaling the end of the 2016 fall migration.