Tundra Swan Hunting Seasons in South Dakota

The Eastern Population (EP) of tundra swans are managed under a joint four flyway management plan developed in 1982 and updated in July 2007. The harvest strategy in the plan specifies a maximum harvest rate of 10%, with recreational hunting harvest at or below 5%. Currently, only 5 states have hunting seasons on EP swans including the Central Flyway states of Montana, North Dakota, and South Dakota and the Atlantic Flyway states of North Carolina and Virginia. The other 5% is allocated to subsistence harvest from the arctic breeding grounds. In recent years the harvest rate during recreational hunting seasons has been under 4%.The population objective for EP tundra swans is to maintain at least 80,000 birds based on a 3-year population index from the annual Midwinter Waterfowl Survey in the Atlantic and Mississippi Flyways. Most EP swans winter in the Atlantic Flyway along the coasts of North Carolina, Maryland, and Virginia. In recent years, about 10% of the population has wintered in the Mississippi Flyway around Lake Erie. Submerged aquatic vegetation such as sago pondweed is a preferred food for swans but due to water quality degradation on the wintering areas they have shifted some of their feeding activity to invertebrates such as clams and also field feeding on winter wheat, barley, waste corn, and soybeans. The population of EP tundra swans is doing well, increasing from 40,000 birds in the late 1950's to over 100,000 by 2009. So, how does South Dakota fit into the EP tundra swan picture?

South Dakota's first tundra swan hunting season occurred in 1990. Attempts to open the season earlier in the 1980's were unsuccessful but a concerted outreach effort to sportsmen convinced the SD GFP Commission to open the season with 500 permits for resident hunters only. There were 635 applicants for the 500 permits and the total swan kill (excluding unretreived harvest) was 339 birds. The areas opened to hunting were 11 counties in northeast South Dakota. Day and Marshall County reported the highest harvest. Large numbers of tundra swans migrated through northeast South Dakota in 1990 feeding mostly on submerged aquatic vegetation. Sand Lake National Wildlife Refuge hosted a peak number of 5,500 swans from November 3-6. Hunting was very good and many birds were taken on public land, especially on famed Hedke Pass between North & South Waubay Lake in Day County and Parson's Pass in Marshall County. Sadly, as I pen this in 2009, both are under many feet of water and no longer support many swans or hunting activity. Fishermen are now the main users of these once famed hunting passes.

South Dakota's first 5 years of swan hunting (1990-94) were experimental and the South Dakota GFP signed a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service to determine 3 main Objectives. These were:

1. To determine the fall distribution, chronology of migration, and identification of major concentration areas of tundra swans in South Dakota.

2. To determine the number of tundra swans harvested by permit holders in South Dakota.

3. To evaluate hunter activity and success, hunting methods and harvest locations, and estimate crippling losses associated with the hunting of tundra swans.

Let's take a look at each of these objectives and also include the years' after the experimental period to include more contemporary hunting seasons. Things have changed a bit over the years.

<u>Fall Distribution, Chronology of Migration, and Identification of Major Concentration Areas of Tundra Swans in South Dakota</u>

During the fall migration in South Dakota tundra swans are associated with alkaline marshes that support good stands of sago pondweed. In the early years of swan hunting Day, Marshall, Codington, Clark, McPherson, and Brown County held the most swans. Major concentration areas from 1990-94 included Bitter Lake, North and South Waubay lakes, Waubay NWR, and Opitz Lake in Day County; the areas southwest of Roy Lake and Stink Lake in Marshall County; the lakes west of Watertown in Codington and Clark County; the Long Lake area in McPherson County; and Sand Lake NWR in Brown County. When the high water years hit in the early to mid 1990's swans switched their migration patterns. This was likely in response to the availability of sago pondweed. GFP aerial surveys in late October, 1994, revealed virtually no swans in Marshall County. More swans were staging in McPherson and Brown County. Some of the highest counts have been from Sand Lake NWR. Refuge personnel at Sand Lake run weekly waterfowl counts during the fall and 6,000 swans were tallied on October 25, 1991. I still remember a spectacular sight on an aerial survey flown on October 26, 1992 when GFP pilot Joe Marbach, Will Morlock and I estimated 4,000 tundra swans on Opitz Lake. Other counties hosting lesser numbers of swans during the fall migration include Campbell, Walworth, Edmunds, Faulk, Spink, Roberts, Grant, Hamlin, Deuel, and Kingsbury. During most years the peak of the swan migration in South Dakota is during the last week of October and the first week of November. This has been very consistent during the 20 years of tundra swan hunting seasons from 1990 – 2009.

Tundra Swan Harvest by Permit Holders in South Dakota

As mentioned previously, South Dakota has had a season on tundra swans since 1990. Permits are issued by a draw process and during the early years the number of applicants exceeded the permit quota. In 1996, for the first time, tundra swan permits for resident hunters did not all sell out. The first season in 1990 was reserved for South Dakota residents only and a year later in 1991, 8% of the available permits were reserved for nonresident hunters. This is consistent with the nonresident deer and pronghorn permit allocation ratio. The number of permits in South Dakota started out at 500 and increased to 1,000 and then to 1,500 in 1991 and 1992, respectively. In 2003 South Dakota loaned 200 of its 1,500 permits to North Dakota, leaving our state with 1,300. The reason for this being South Dakota has had unsold permits left over since 2002 whereas in North Dakota there have been more applicants (they have thousands more nonresident hunters) than available permits. Basically, we're helping out our sister state to the north. If we ever need to get the 200 permits back we can do so by making a request at a Central Flyway Council meeting.

Swan harvest in South Dakota peaked in 1992 at 814 birds, excluding birds hit but not retrieved. Since that time it has gradually declined to where the latest 10-year average (1999-2008) is 176 annually. That's a pretty significant decline and I suspect it's related to several factors. First, the number of swan hunters has declined. Secondly, the high water years in northeast, South Dakota have caused a decline in the marshes that support sago pondweed, limiting the number of swans and the duration of their stay in South Dakota. Another factor is that the tundra swan is considered a trophy bird by many waterfowl hunters and after hunting and taking a bird or two many hunters refrain from actively hunting them again. I'm an example of that kind of hunter. I've hunted waterfowl for about 50 years from the Canadian prairies to the Dakota marshes and around the home farm I grew up on in western Minnesota. The two swans I've taken were both on Parson's pass in Marshall County, one during a snowstorm. I remember swans trading back and forth across the pass that day and taking one during a snow squall. What a classic hunt. A year or two later I was back and took another near sunset that landed clear out in Cattail Lake. It was wounded and died several minutes later, but not before another swan flew around it and landed near it. I suspect it was its mate and that's the last tundra swan I'm likely to kill. Incidentally, that was probably the best retrieve I've ever made. I had my chest waders but fully

expected the water would be too deep to navigate several hundred yards out into the lake where the swan was floating. It was dead calm and getting dark. I was prepared to drive home to Brookings and get my duck boat if I had to but decided to try wading out first. I waded out and the water was only an inch or two below the top of my waders. Thankfully it never got any deeper and I made it out to the swan. By that time it was dark and the ducks started piling into the lake, all around me. What a sight and sound that was. I made it back to shore by keying in on some car headlights along the shore. Another time several years ago I was hunting waterfowl on Champlin Lake DU Heritage Marsh in Saskatchewan. It was about October 12th and beginning to freeze up. I and Rick Warhurst, a DU biologist from Bismarck, ND, witnessed one of the finest spectacles a hunter can experience while waterfowl hunting, hundreds of tundra swans flying right over our heads basically all day long. There is no swan hunting season in Saskatchewan but it sure added to the atmosphere while gunning for ducks and geese that day. That was a memory maker for sure.

Hunter Activity and Success, Hunting Methods, Harvest Locations, and Estimate of Crippling Losses Associated with the Hunting of Tundra Swans

The total number of licensed hunters, including both resident and nonresidents, reached their peak during 1991-1995 at nearly 1,500 annually. They gradually have tapered off to about 800 to 1,000 licensed hunters each year after the year 2000. Beginning in 2004 hunters could have up to 2 swan licenses as long as there were leftover licenses available. Eighty to 100 hunters have opted for 2 licenses in recent years. Success has varied from a high of 68% during the first season (500 licenses) to a low of only 4% in 2003. Overall, average annual hunter success rate for 1990 – 2009 is approximately 25%.

In regards to hunting methods, most tundra swan hunters in South Dakota hunt by pass shooting. They station themselves between two bodies of water and along the flight paths of the swans. There is much opportunity for this type of hunting in northeastern South Dakota on public land. In addition to pass shooting some hunters have learned that swans will readily decoy into snow goose floating decoys. Some hunters have crafted their own handmade swan decoys but most use standard snow goose floaters. They work well and shots tend to be in close, reducing the chance for crippling. GFP news releases during the early years of swan hunting advised hunters to use 12 or 10 gauge shotguns loaded with large steel shot (BB, BBB, or T), to refrain from sky-busting, and have a means of retrieval available. Today, other nontoxic alternatives are available besides steel for waterfowl hunting. Those that are comprised in part of tungsten, such as Hevi-Shot in size 2 or BB are very effective but much more expensive compared to steel. Crippling losses, as reported by hunters on the harvest survey, are approximately 20%.

Harvest locations have changed a bit over the years. In the early 1990's most of the swans were harvested in Day, Marshall, and Codington County. Marshall County dropped off quite a bit by the mid 1990's with Brown and McPherson County coming on strong. Other counties that have been steady producers for hunters include Clark, Campbell, and Roberts. For the 1990 season there were 11 northern counties open for swan hunting. By 1998 that increased to 35 counties east of the Missouri River.