

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Swift Fox

Region: 6

Hunting District: Trapping District 6

Year: 2020

1. Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).

There are two proposed changes to the swift fox trapping season in TD6.

1. Expand the Trapping District 6 (TD 6) Swift Fox eastern boundary to align with the current eastern boundary of Deer/Elk hunting district 670:
 - a) Current eastern boundary- Junction of Hwy 2 with Route 537 at Hinsdale, then north along said route to the Milk River and the confluence with Rock Creek, then north along said creek to the Canadian Border (red line on Fig. 1).
 - b) Proposed eastern boundary- east along Hwy 2 "to Nashua, then northerly along Porcupine Creek to the West Fork of Porcupine Creek, then northerly along said creek until the north boundary of the Fort Peck Indian Reservation, then easterly along said boundary until MT Highway 24, then northerly along said highway to the Canadian border" (Figure 1).

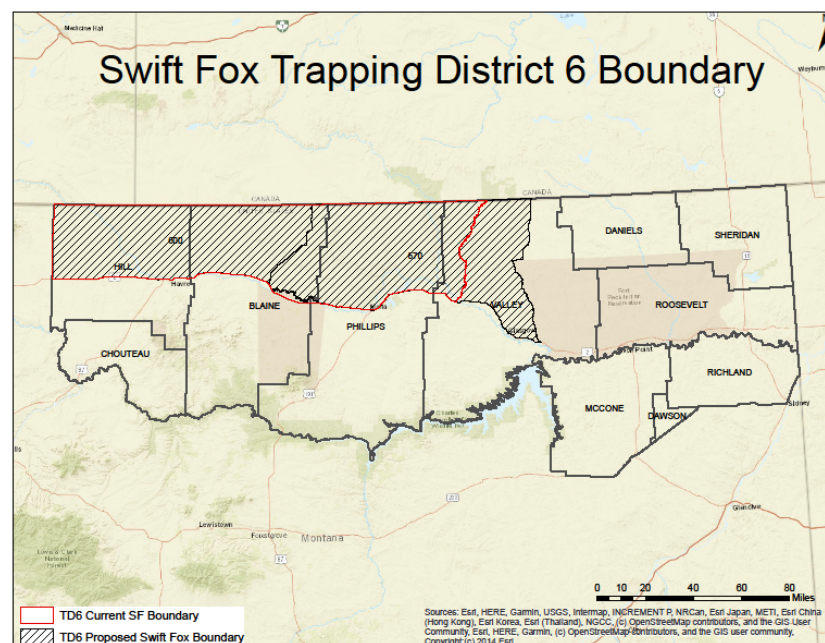


Figure 1: Current and proposed Swift Fox Trapping District Boundary.

2. Shorten the season length from the current November 1 – March 1 to be November 1 – January 15th.

Summary of Prior History

The swift fox season was initiated in 2010 after significant population expansion and increase in numbers. The swift fox season currently coincides with the general furbearer season from November 1 through March 1. Harvest is limited through a per trapper limit of 3 swift fox and a TD6 quota of 10 fox. The quota has ranged from 10-30 over the last 10 years (Figure 2). The eastern boundary only applies to swift fox. This boundary was created a decade ago to have a buffer between the portion that is open to trapping and the ongoing swift fox translocation effort on the Fort Peck Indian Reservation. That translocation was completed in 2010 and swift fox are now found continuously across the trapping area, in the buffer zone, and on Fort Peck Reservation.

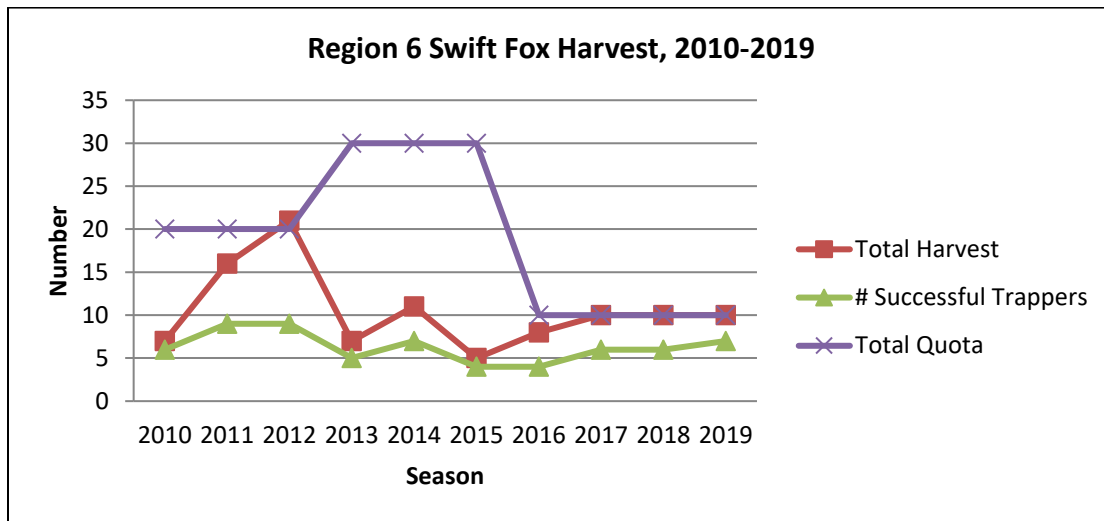


Figure 2: Swift Fox Harvest and quota in TD6 2010-2019

2. Why is the proposed change necessary?

1. Proposed Boundary Expansion: There is currently no biological or habitat difference to justify this boundary. Swift fox are in the proposed expansion area. They have been incidentally trapped there during the fur season, recorded during the International Census, and collared during a recent graduate/research study (Figure 3). There appears to be a viable population and the buffer is no longer justified. This change allows for swift fox that have been incidentally harvested to be kept by the trapper and to count against the quota. It also allows for simplification of the regulations and an increase in opportunity.

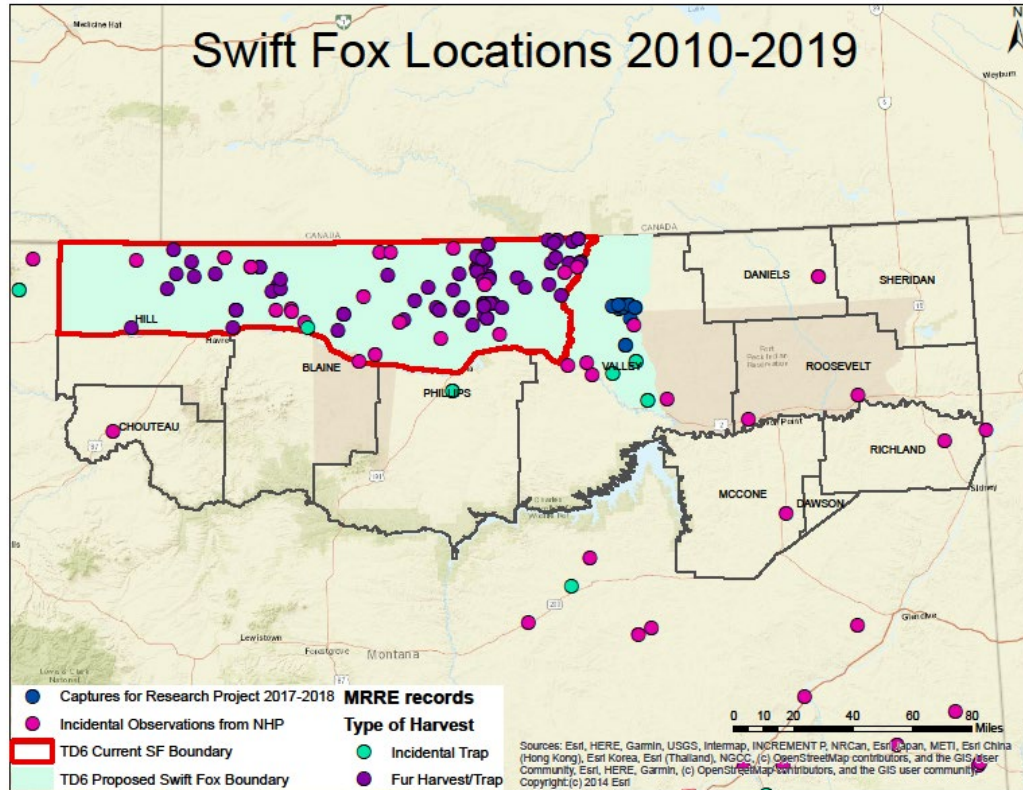


Figure 3: Swift fox observations reported through incidental observations, fur harvest (incidental and fur trapped), and captures for graduate research project during 2010-2019.

2. **Proposed Shortened Season:** Over the species range from north to south, the swift fox breeding season extends from late December to early March (Cypher 2003). The breeding season occurs later in the northern part of their range. In Montana it occurs from late December or early January through early March (Foresman 2012). Swift fox are monogamous. They form pair bonds and both parents assist in raising the young. Ending the season January 15 will reduce if not eliminate the harvest of fox during their breeding season, likely improving successful breeding and pup survival to a small degree. While the population will remain viable without this change, the adjusted season would better align with the species biology, improve reproductive potential, and continue to provide trapper opportunity. This change should not significantly limit coyote trappers opportunity to take a fox since approximately 88% of swift fox harvest occurs before the propose closure date of January 15.
3. **What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**

The management objective for TD6 swift fox is to maintain healthy populations while allowing sustainable harvest.

The health of the population is assessed from trend information based on harvest reports, harvest records, an international population census, and other opportunistic data such as camera surveys and observation records. No one parameter is conclusive, therefore, all parameters must be considered. However, it is extremely difficult to determine the health of a population with such low sample sizes.

- 1) Records of swift fox have shown an increase in distribution over the last few years, not only in Region 6, but across eastern Montana. This has occurred at the same time that Wyoming has documented increased expansion. The area proposed for expansion has routinely had fox incidentally trapped, incidental sightings, and fox collared for the Clemson Graduate study, suggesting that swift fox are well distributed across the trapping district (Figure 3).
- 2) Results of International Swift Fox Census.

There have been 4 international censuses conducted on swift fox in Montana, 2000-01, 2005-06, 2014-15 and 2018. The main objectives are to determine relative changes in distribution and abundance.

Swift fox population estimates from the international census increased greatly from 1996-2006 (Table 1), and fox distribution increased significantly during that period also.

Table 1. Swift fox population estimates for the international census are in north-central Montana and southern Alberta and Saskatchewan.

	1996	2000-01	2005-06	2014-15
Montana	.	221	523	347
Alberta/Saskatchewan	281	656	647	523
Total	281	877	1,162	870

The Census in 14-15 showed a decline in swift fox population, however the statistical analysis was not conducted using the same methods as previous and therefore the estimated population abundance was not directly comparable between the years. While fox were thought to be well distributed across their range, 45% less of the replicated townships (Montana and Canada combined) had evidence of swift fox. This was slightly offset by the fact that there were several incidental sightings in townships that did not have detections.

The Census in 14-15 included camera traps as well as live traps, to compare detection probability of the two methods. Probability of detection was 0.86 for cameras and 0.93 for live traps, meaning there is no significant difference in detection probability between the two methods. This suggested that cameras are a viable alternative to live trapping to determine distribution in future surveys.

However, abundance cannot be determined using cameras as there is no way to differentiate fox from a photo.

A camera survey was conducted during the summer/fall of 2018. The objective of this monitoring was to assess whether there had been further changes to the distribution or occupancy of swift foxes on both sides of the international border

During this survey, fox were still thought to be well distributed and we saw an increase in township occupancy in Montana. There were a total of 80 townships surveyed in Montana. Of those townships 19 had foxes detected in 2014/2015 compared to 24 with foxes in 2018.

While the increase of occupancy in 5 townships isn't a huge difference, this along with the fact they are still distributed across the range surveyed, is promising that they have the capability to recover under favorable conditions.

The status of swift fox, except for what appears to be natural fluctuations due to the extreme winter of 2010-11, appears stable and with similar extent of occurrence. However, with the addition of a severe drought and record-breaking winters (snow and cold) we have not seen them recover as quickly as we would like. Therefore, the proposed shortened season aims to reduce or eliminate the chance of a breeding parent being harvested.

4. Provide information related to any weather/habitat factors that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, temperature / precipitation information).

The decline in population between 2005/06 and 2014/15 is likely a result of the severe winter weather. The population likely has not recovered quickly because of more extreme weather, including droughts and record snow and cold. Swift fox can breed at a year old and have multiple pups therefore under favorable conditions swift fox can expand quickly.

5. Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).

The proposal to expand the boundary and shorten the season was discussed with the Fort Peck Tribes Fish and Wildlife agency, who had no concern. Due to the Covid-19 pandemic, no trapper meetings were held this spring, however contacts were made with the vice president east, who stated he didn't think it would be an issue and he would mention it to those he had contact with. Efforts were made by the furbearer coordinator to ensure changes were known by the trapper's association.

Submitted by: Heather Harris
Date: 05/14/20

Approved: Mark Sullivan 5/18/20
 Regional Supervisor / Date

Disapproved / Modified by: _____
 Name / Date

Reason for Modification: