

Alberta Conservation Association
2021/22 Project Summary Report

Project Name: Turkey Distribution and Trends

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Partnerships

Alberta Environment and Parks

Alberta Fish & Game Association – Minister’s Special Licence Program

Private landholders in southwestern Alberta

Key Findings

- We contacted 118 private landholders and asked them for counts of turkeys that regularly visited their site during winter 2022 (January – March). The sum estimate was roughly 839 turkeys observed across five geographic focal areas in southwestern Alberta. We are collecting this information annually to establish an index for evaluating the trend over time.
- We conducted an online volunteer summer brood survey that resulted in 17 respondents counting 165 wild turkeys including 49 hens, 76 poults, 11 males, and 29 with sex unknown. We also contacted landowners directly asking them for observations of turkeys in summer 2021. We had 29 replies with sightings of 431 wild turkeys including 110 hens, 184 poults, 51 males, and 86 with sex unknown.
- At the time of this report, we captured 14 wild turkeys (we anticipate translocating up to 16 more by the end of March) from a known viable population located on private lands

near Beaver Mines and released these birds on a privately owned ranch in the Porcupine Hills in efforts to re-establish a population in an area previously inhabited by turkeys.

- Next year, we anticipate translocating wild turkeys into Alberta from other jurisdictions and releasing these birds in the southwestern and central areas of the province to expand their range.

Abstract

In Alberta, the demand for hunting wild turkeys is very high, with 6,062 applicants pursuing 200 tags in 2021 (3.3% draw success awarded to only those with 12+ years priority), while an additional 17,696 hunters applied to boost their priority level. With 23,500+ hunters seeking a turkey tag, it has become a once-in-life-time opportunity for most hunters, and many will never be drawn at the current allocation rate.

Wild turkeys were first introduced into Alberta in 1962 when 21 turkeys from South Dakota were translocated to the Cypress Hills in southeastern Alberta. At the same time, three turkeys were sent to the Brooks Pheasant Hatchery for breeding purposes and future introductions. Since then, several translocations have established populations of varying size, scattered throughout southwestern Alberta. Although, there is concern that numbers have decreased in some locations in recent years, particularly within the Porcupine Hills.

In 2020-2021, we initiated a citizen science approach to monitor turkeys with private landholders across their range in southwestern Alberta. We divided the anticipated range of wild turkey into five zones from south to north and contacted at least ten landholders from each. Direct sightings from landholders enabled us to identify the winter location of local populations in winter 2021 along with their associated habitat features (e.g., roosts, feeding sites). We gathered input from 118 landholders who observed roughly 839 turkeys observed across the five zones. Annual survey results are intended to establish an index of population trend over time that will assist with the allocation of tags. Our online volunteer summer brood survey had 17 replies with 165 wild turkeys sighted including 49 hens, 76 poults, 11 males, and 29 with sex unknown. In addition, we had replies from 29 landholders over summer who sighted 431 wild turkeys including 110 hens, 184 poults, 51 males, and 86 with sex unknown.

We captured 22 wild turkeys from a known viable population located on private lands near Beaver Mines and released the birds on a privately owned ranch in the Porcupine Hills in efforts to re-establish a population in an area previously inhabited by turkeys. Next year, we anticipate translocating wild turkeys from southeastern British Columbia (and possibly other jurisdictions) into southern and central Alberta to supplement the current wild turkey population and increase hunting opportunity.

Introduction

The demand for hunting wild turkeys in Alberta is very high. In 2021, there were 6,062 applicants for 200 available tags (3.3% draw success awarded to only those with 12+ years priority), while an additional 17,696 hunters applied to boost their priority level. With 23,500+ hunters seeking a turkey tag, it has become a once-in-life-time opportunity for most hunters, and many will never be drawn at the current allocation rate.

Wild turkeys were first introduced into Alberta in 1962 when 21 turkeys from South Dakota were translocated to the Cypress Hills area in southeastern Alberta (GoA 2022). At the same time, three turkeys were sent to the Brooks Pheasant Hatchery for breeding purposes and future introductions. Since then, several translocations have established populations of varying size, scattered throughout southwestern Alberta. Although, there is concern that numbers have decreased in some locations in recent years, particularly within the Porcupine Hills.

There are currently two main components to this project: establishing an index of the population trend and establishing viable populations and range expansion.

Establishing an index of the population trend

Our goal is to better understand the population trend over time and further define the geographic extent of wild turkey range. These data will assist with the allocation of tags, as well as provide a better understanding of the fluctuations that occurs regionally and among years. To accomplish this, we are indexing wild turkey numbers annually by surveying private landholders and gathering approximate winter counts across five geographic focal areas (zones) in southwestern Alberta. We are also collecting brood sighting information from the public through an online survey as well as through direct contact with landholders. This brood survey information

provides an estimate of breeding success (e.g., average brood size and hen to poult ratio), as well as the dispersal of birds in summer compared to winter locations.

Establishing viable populations and range expansion

We aspire to strengthen the current wild turkey population in southwestern Alberta and expand their range in central Alberta to establish long-term, viable populations with resilient numbers to rebound after particularly harsh winters and years with lower recruitment. To accomplish this, we will continue working with private landholders to translocate and re-establish turkeys from known, viable source populations to areas previously inhabited and/or of suitable habitat within southwestern Alberta. We will also supplement the current wild turkey population by translocating turkeys from other jurisdictions and releasing them at various locations in partnership with private landholders in southwestern Alberta.

Identifying potential conflicts prior to the translocation event is key to the success of this initiative; therefore, we maintained regular correspondence with all private landholders involved in the project to ensure that deliverables were met, and any concerns were addressed. Prior to the release, we contacted private landholders adjacent to the release site to 1) identify potential conflicts and/or issues; 2) gauge local opinion/acceptance on hunting turkeys and discuss hunter access; and 3) identify potential food sources and/or agricultural attractants that released turkeys may pursue on neighbouring properties.

We also established relationships and maintained ongoing correspondences with turkey biologists in other jurisdictions in preparation for potential future turkey translocations into Alberta. We anticipate that we will complete several translocations from other jurisdictions next year to bolster the current provincial population.

Methods

Establishing a population trend

In 2021/2022, we continued to contact private landholders to gather approximate winter counts and other anecdotal information on wild turkeys throughout southwestern Alberta. Our goal over the next five years is to establish an index of population trend for wild turkeys by contacting a minimum of ten private landholders within each zone per year to obtain information on turkey

observations (see mock Figure 1 below illustrating the nature of expected data trends). From south to north, the southwestern Alberta zones include Waterton/Mountain View, Castle/Beaver Mines, Crowsnest/Livingstone, Porcupine Hills/Chain Lakes, and Longview/Turner Valley regions (Figure 2). Landholders provide a total/maximum count of birds observed on their private lands occurring in late fall and/or throughout the winter months when turkeys are known to group up (i.e., to roost and forage). This approach does not enable a precise count of birds, but rather the identification of local flocks that are summed across the zone. We also ask landholders to recommend neighbours that may have turkeys to build a network of feedback across each zone among years.

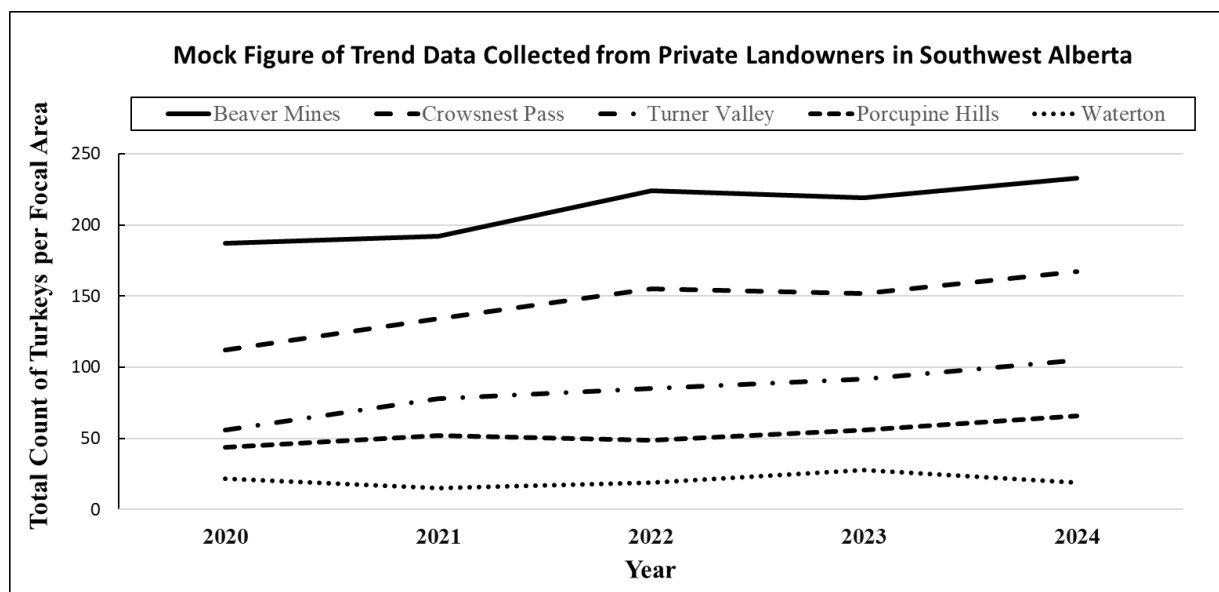


Figure 1. Mock figure of trend data collected from private landholders in southwestern Alberta.

We also conducted an online brood survey to gather citizen science (volunteer) counts of hens, poults, and males observed during the summer months. To supplement this, we called private landholders throughout the summer and fall to gather data on observed brood sizes, hen to poult ratios, and population dynamics.

Establishing viable populations and range expansion – turkey translocations

We adapted a trapping method used by the National Wild Turkey Federation (NWTF; Joe Foster 2021, Pers. Comm.) and constructed an 8-foot by 16-foot box/funnel trap made of galvanized

steel mesh fence panels. The trap was set up and pre-baited for 1 – 5 days between trapping events. A combination of green feed, grain, sunflower seeds, cracked corn, and straw was used to entice turkeys into the trap, encouraging birds to acclimatize. The trap location was built in proximity to known feeding/roosting site(s) and monitored through camera traps and direct observation. On the day of capture, a trap was set approximately 30 minutes before turkeys were observed to arrive during the pre-baiting phase. Individuals that entered the box trap through the funnel found it difficult to find the exit due to the funnel design; a bent down panel at the end of the funnel (within the centre of the trap) intended to avert their escape. Once a target number of turkeys were inside the trap, we approached the trap and blocked the exit. We entered the trap by undoing a corner seam, and carefully gathered one turkey at a time using a shepherd's hook to sweep both legs and temporarily restrain the bird. Working with a second person, we fitted an aluminum leg band on the bird and placed it in a NWTF box. Birds were transported within an enclosed canopy or trailer to the release site immediately following the trapping event (i.e., same day).

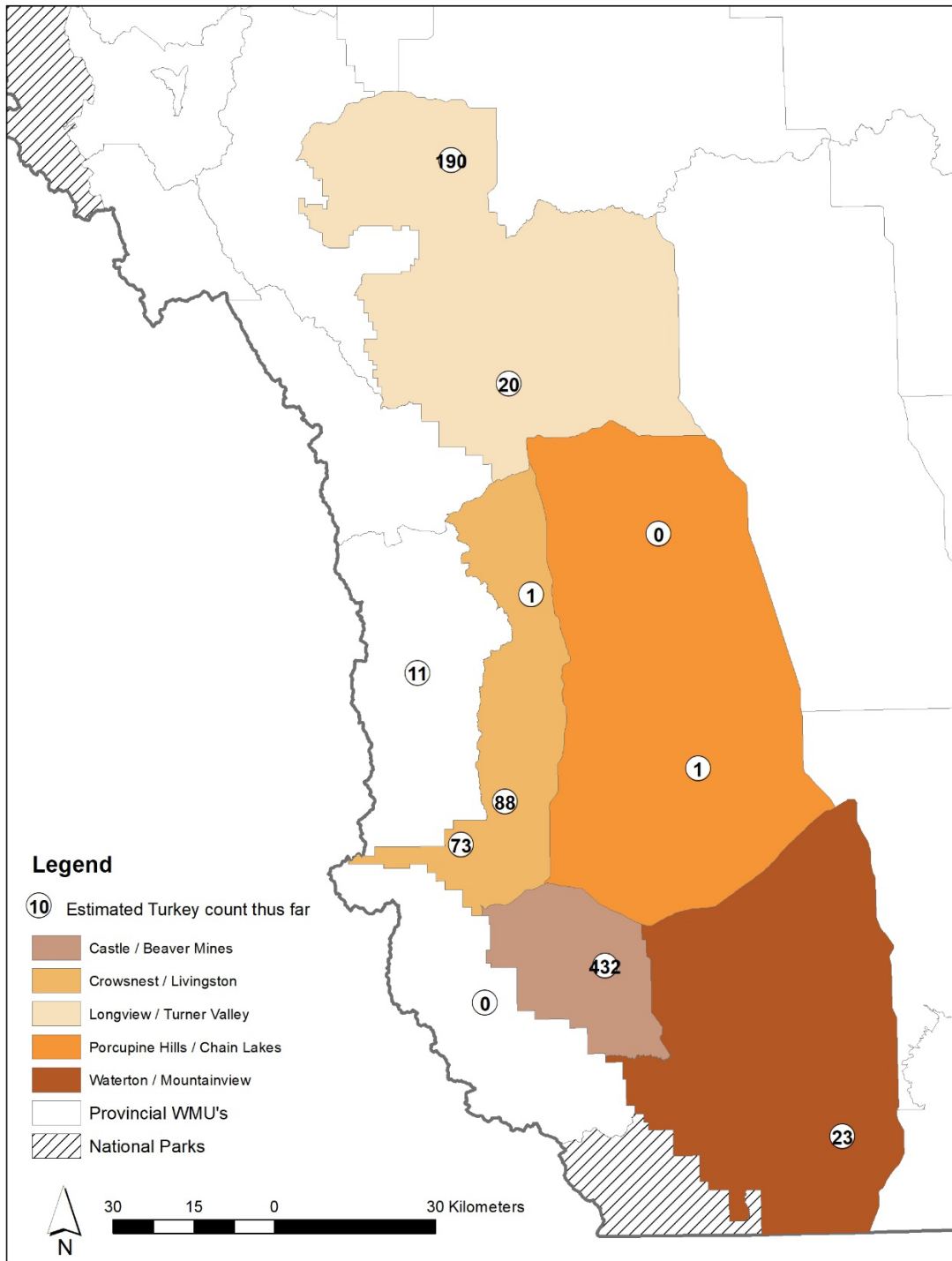


Figure 2. Landholder survey focal areas and estimated number of turkeys observed in southwestern Alberta in 2021.

The release site was located on private land in the southwestern area of Porcupine Hills, approximately 50 kilometres north of the capture location. The property falls within the

transition zone between the Foothills Fescue and Montane Natural Subregions of Alberta. Habitat types consist of coniferous forest, deciduous forest, shrubland, riparian, native grassland, modified grassland, and some cropland. Stands of Douglas fir, limber pine, and lodgepole pine provide suitable thermal and security cover, natural foraging opportunities (e.g., berry-producing shrubs), seeds, insects, nesting cover, and ample roosting habitat.

Having previous experience with turkey translocations, hosting birds, and providing hunting access, the landholder was very knowledgeable about turkeys and was keen to participate in the program. We released the birds into suitable habitat and released all turkeys on a given day at the same time to heighten site fidelity. We provided a portable feeder at the release sight (i.e., cracked corn, grain, sunflower seeds, etc.) to help facilitate site fidelity at the release site. We set out real-time trail cameras in the area to monitor turkey presence and sight fidelity. We also visited the release site to monitor the birds, as well as obtain frequent updates from the landholder.

In preparation to further supplement the current wild turkey population in Alberta, we established relationships and maintained ongoing correspondences with turkey biologists in other jurisdictions (British Columbia, Manitoba, and Washington). We anticipate translocations from these other jurisdictions to occur in the winter months of 2023, once consultation with local communities and stakeholders has occurred and all planning logistics have been sorted out.

Results

Establishing a population trend - landholder surveys

In 2021–2022, we contacted >10 private landholders within each of the five focal area zones identified in southwestern Alberta to gather approximate winter counts and other anecdotal information on wild turkeys. In total, we surveyed 118 landholders, resulting in a total estimate of 839 turkeys observed across five focal areas in southwest Alberta (Table 1, Figure 2).

Table 1. Summary of landholder winter count surveys completed in five focal area zones in southwestern Alberta.

Focal Area Zones	Number of Landholders Surveyed	Winter Count Estimates
Waterton / Mountainview	17	23
Castle / Beaver Mines	15	432
Crowsnest / Livingstone	22	173
Porcupine Hills / Chain Lakes	43	1
Longview / Turner Valley	21	210
TOTAL	118	839

Establishing a population trend - brood surveys

We conducted an online volunteer summer brood survey that resulted in 17 responses and 165 wild turkeys including 49 hens, 76 poults, 11 males, and 29 with sex unknown. We also conducted a landholder call brood survey that resulted in 29 responses and 431 wild turkeys including 110 hens, 184 poults, 51 males, and 86 with sex unknown.

Establishing viable populations and range expansion - turkey translocations

We successfully translocated 22 wild turkeys from a known viable source population located on a private ranch near Beaver Mines to a private property in the southwestern area of Porcupine Hills. This translocation was in effort to re-establish a population in an area previously inhabited by turkeys.

Conclusions

Establishing a population trend

Landholder surveys were completed over the winter months, during which we explained our project goals and gathered anecdotal information on local populations and the distribution of wild turkeys. We postulate that these data will eventually assist with the allocation of harvest tags set for southwestern Alberta, as we establish an index to better understand the population trend over time. Initiating and maintaining a positive relationship with these landholders is very important to the success of our project because many of the surveys will likely occur on private land. The benefits of recruiting landholder assistance to conduct surveys can lower costs and expand our survey range. Being accessible gives landholders a direct line of communication for

any questions or concerns and creates a strong sense of involvement. We are also actively contacting other stakeholders to avoid exclusion, gain more local knowledge, and potentially recruit more volunteers for later in the project. Citizen science and landholder brood surveys were completed during the summer and fall months to gather supplemental data on average brood size, hen to poult ratios and population dispersal dynamics after the breeding/nesting season.

Long-term relationships built on mutual respect and trust between conservation groups and landholders have allowed Alberta Conservation Association (ACA) to continue collaborating with producers and gather information on turkey populations in southwestern Alberta in 2021. To date, we have corresponded with 118 private landholders across five zones and gathered anecdotal information on turkey counts that we will use to develop a population trend over time. Our goal is to better understand turkey population dynamics and how local populations change over time.

This initiative has led to funding partnerships (~\$10,450 in 2021) and the support of Alberta Fish & Game Association – Minister’s Special Licence Program and several private donations. Partnerships enable the project to continue.

Establishing viable populations and range expansion

We will continue to pursue relationships with private landholders in southwestern Alberta that are interested in sourcing and/or hosting wild turkeys. We are also actively pursuing source locations for wild turkeys from other jurisdictions that we anticipate translocating into Alberta in early 2023.

Communications

- No presentations or tours were done this year due to restrictions associated with the COVID-19 pandemic.

Literature Cited

Government of Alberta (GoA). 2022. *Management Plan for Wild Turkeys in Alberta*. Alberta Environment and Parks. ISBN 978-1-4601-5378-9.

Personal Communication

Joe Foster. 2021. Idaho Chapter of the National Wild Turkey Federation.

Photos



Photo 1. ACA staff member, Doug Manzer, prepares to release a translocated wild turkey on a private ranch in the southwest Porcupine Hills. Photo: Corey Rasmussen



Photo 2. Once captured, wild turkeys are carefully placed into wax cardboard boxes and transported to the release site in the back of an enclosed truck.

Photo: Corey Rasmussen



Photo 3. Leg bands provide unique identification numbers for monitoring turkeys released in the Porcupine Hills. Photo: Corey Rasmussen