

**Alberta Conservation Association
2022/23 Project Summary Report**

Project Name: Turkey Distribution and Trends

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Partnerships

Alberta Environment and Protected Areas

Alberta Fish & Game Association

British Columbia Ministry of Forests

Calgary Fish & Game Association

District of Invermere

Lethbridge Fish & Game Association

Onoway Fish & Game Association

Private landholders in southwestern Alberta

Regional District of East Kootenay

Sarcee Fish & Game Association

Spruce Grove Fish & Game Association

Wheatland Conservation and Wildlife Association

Village of Radium Hot Springs

Zone 1 – Southern Alberta Fish & Game Association

Key Findings

- We contacted 30 private landholders and asked them for counts of wild turkeys that regularly visited their site during winter 2022. The sum estimate was roughly 790 wild turkeys observed across five geographic focal areas in southwestern Alberta. We are collecting this information annually to establish an index for evaluating the population trend over time.
- We conducted an online volunteer summer brood survey that resulted in 23 respondents counting 376 wild turkeys including 126 hens, 122 poults, 41 males, and 87 with sex unknown.
- At the time of this report in late Feb 2023, we have translocated more than 175 wild turkeys from communities in the Columbia Valley of eastern British Columbia (Edgewater, Invermere, and Radium Hot Springs) and released them at select sites in southwestern Alberta north of Highway 3 to Turner Valley.
- We tested wild turkeys coming from British Columbia into Alberta for evidence of disease and all were negative.
- Plans are underway to translocate wild birds from cooperating jurisdictions for the next ten years as part of a long-term strategy to build a sustainable wild turkey population within Alberta.
- Translocation efforts also include the capture and relocation of wild birds from within Alberta to jump start many dozens of local populations.

Abstract

In Alberta, the demand for hunting wild turkeys is very high, with 5,585 applicants pursuing 200 tags in 2022 (3.6% draw success awarded to only those with 12+ years priority), while an additional 18,736 hunters applied to boost their priority level. With 24,300+ 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 wild turkeys from South Dakota were translocated to the Cypress Hills in southeastern Alberta. At the same time, three wild 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.

In 2021, we initiated a citizen science approach to monitor wild 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 contacted 118 landowners in 2021, with many reports that turkeys were once commonly sighted in previous years but were no longer present or remained with very low numbers. In 2022, we again gathered input from 30 landholders who observed turkeys in the previous year, and together they reported roughly 790 wild turkeys observed through winter across the five zones. We are using these annual landowner counts to establish an index and help us better understand how wild turkey populations vary over time. Our online volunteer summer brood survey had 23 replies with 376 wild turkeys sighted including 126 hens, 122 poults, 41 males, and 87 with sex unknown. Poults to hen ratios are an indication of breeding success and, with an adequate sample size, these ratios can help predict population trajectory.

At the time of this report, we are translocating wild turkeys from communities in the Columbia Valley of eastern British Columbia (Edgewater, Invermere, and Radium Hot Springs) and releasing them at select sites in southwestern Alberta north of Highway 3 to Turner Valley. We have moved 177 wild birds to date and expect this number to increase before the field season ends this winter.

Plans are underway to translocate wild birds from cooperating jurisdictions for the next ten years as part of a long-term strategy to build up a sustainable wild turkey population within Alberta. Translocation efforts also include the capture and relocation of wild birds from within Alberta to jump start many dozens of local populations.

Introduction

The demand for hunting wild turkeys in Alberta is very high. In 2022, there were 5,585 applicants for 200 available tags (3.6% draw success awarded to only those with 12+ years

priority), while an additional 18,736 hunters applied to boost their priority level. With 24,300+ 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 wild turkeys from South Dakota were translocated to the Cypress Hills area in southeastern Alberta (GoA 2022). At the same time, three wild 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: 1) establishing an index of the population trend and 2) 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 are strengthening the current wild turkey population in southwestern Alberta, and in future years, look to expand their range in central Alberta. Our aim is to foster viable subpopulations with resilient numbers enabling them to rebound after particularly harsh winters and years with lower recruitment. To accomplish this, we are taking two approaches including: 1) translocating wild turkeys from other jurisdictions and releasing them at suitable sites where private landholders are willing to host the birds, most often associated with cattle feeding over winter,

and 2) relocating wild turkeys from known, viable source areas within southwestern Alberta and moving them to other locations to jump start local populations.

Identifying potential conflicts prior to a translocation event is important for the success of this initiative so we maintain regular communication with participating landholders to ensure that concerns are heard and addressed. Prior to the release of translocated birds, we meet and discuss the needs of wild turkeys and their tendency to seek food and roost sites close to people, particularly over winter.

We also have established working relationships with turkey biologists in several other jurisdictions in preparation for future turkey translocations into Alberta. We anticipate that we will complete several additional translocations from other jurisdictions over the next few years.

Methods

Establishing a population trend

We contacted 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 growing network of landowners within each zone per year to obtain information on turkey observations (Figure 1). 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. Landholders provide a total/maximum count of birds observed on their private lands occurring in late fall and/or throughout the winter months when wild 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 wild turkeys to build a network of feedback across each zone among years.

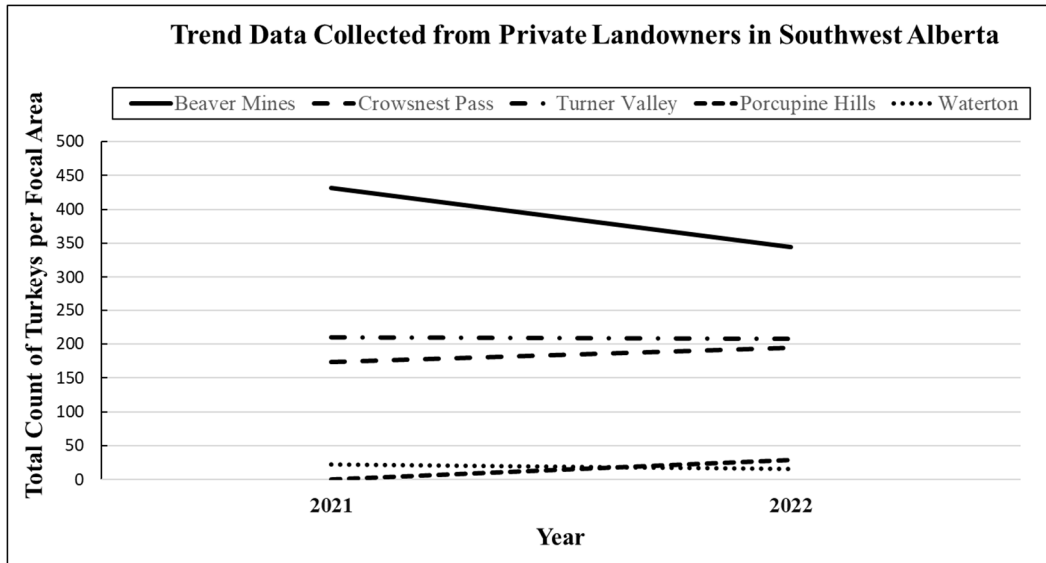


Figure 1. Trend data collected from private landholders in southwestern Alberta.

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 8-foot by 16-foot box/funnel traps made of galvanized steel mesh fence panels. Traps are set up and pre-baited for 1–5 days between trapping events, with feeds such as green feed, grain (usually wheat), sunflower seeds, and cracked corn spread within the trap to entice birds within the trap. We set traps in proximity to known feeding/roosting site(s) and monitored them through the baiting and trapping phases with cell-based camera traps and direct observation. On the day of capture, we set the trap approximately 30 minutes before wild turkeys were observed to arrive during the pre-baiting phase. Individuals enter the box trap through a funnel and find it difficult to find the exit due to the funnel design. Once the target number of wild turkeys enter a trap, we approach and block the exit.

We enter the trap by undoing a corner seam, and carefully gather one turkey at a time using a shepherd’s hook to sweep both legs and temporarily restrain the bird and then place it into individual purpose-made boxes. Later, in a controlled environment, we take fecal, mucus and

blood samples from each bird to test for possible disease agents (including Highly Pathogenic Avian Influenza, Mycoplasma and Salmonella). Each bird is fitted with an aluminum leg band, and sexed, aged, and body condition assessed.

We hold the birds in a temporary dome shelter while awaiting disease test results. The shelter is lined with wood chips, and provided with roost sites and access to food, water, and grit. Once negative test results are received the birds were immediately recaptured and again placed in individual boxes, and transported in trucks with canopies to release locations on private properties in southwestern Alberta.

We ensure that release sites contain a variety of habitat types including 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.

We release birds into suitable habitat at the same time to heighten site fidelity. We also provide portable feeders (as needed) at the release sights (i.e., cracked corn, grain, sunflower seeds, etc.) to help facilitate site fidelity. Future monitoring will include deploying real-time trail cameras to monitor turkey presence and sight fidelity at select sites. We will visit each release site to monitor birds, as well as obtain frequent updates from the landholder.

In preparation to further supplement the current wild turkey population in Alberta, we will continue to establish relationships and maintain ongoing communications with agencies in other jurisdictions. We anticipate that we will continue to translocate wild turkeys from other jurisdictions over the coming ten years.

Results

Establishing a population trend – landholder surveys

In 2022/23, we surveyed 30 landholders across five focal area zones identified in southwest Alberta, resulting in a total estimate of 792 wild turkeys observed (Table 1).

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	2	16
Castle / Beaver Mines	11	344
Crowsnest / Livingstone	10	195
Porcupine Hills / Chain Lakes	2	29
Longview / Turner Valley	5	208
TOTAL	30	792

Establishing a population trend – brood surveys

We conducted an online volunteer summer brood survey that resulted in 23 responses and 376 wild turkeys including 126 hens, 122 poults, 41 males, and 87 with sex unknown. An average ratio of roughly 2.01 poults per hen were observed.

Establishing viable populations and range expansion – turkey translocations

At the time of writing the translocation work is underway and we have captured and moved more than 175 wild turkeys from the communities of Edgewater, Invermere, and Radium Hot Springs in British Columbia to private properties located in southwestern Alberta.

Conclusions

Establishing a population trend

We completed landholder surveys over the winter months, during which we explained our project goals and gathered anecdotal information on local populations and the distribution of wild turkeys. These surveys provide an index of population trend over time. We have found that the majority of landowners welcome the presence of wild turkeys, and these surveys help us maintain an awareness of issues that may be affecting populations in localized areas. 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.

Establishing viable populations and range expansion

Initial translocation efforts are going very well in this first year of transboundary movements of wild turkeys. The birds are being moved from areas where they have become a problem for local

residents, generally within residential zones of communities in eastern British Columbia. They are moved to large ranching areas where cattle are being fed over winter, enabling the birds to have ready access to grain, whether in the feed itself or available in the cowpats. We will continue to pursue relationships with private landholders in southwestern Alberta that are interested in sourcing and/or hosting wild turkeys, and we anticipate continuing these translocation efforts both from outside Alberta and within Alberta over the next ten years. We are also actively pursuing source locations for wild turkeys from other jurisdictions that we anticipate translocating into Alberta in early 2024.

Communications

- Presentation to the Hillcrest Fish & Game Association. BC Turkey Translocations. Doug Manzer, February 2023.
- Presentation at the Alberta Fish & Game Annual Conference and Tradeshow. Turkey Translocations – Building for Tomorrow. Doug Manzer, February 2023.

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

Photos



Photo 1. Leg bands provide unique identification numbers for monitoring wild turkeys released in the Porcupine Hills. Photo: Mike Jokinen



Photo 2. ACA staff member, John Hallet, preparing an 8-foot by 16-foot box/funnel trap for an early morning trap event in Invermere, British Columbia. Photo: Mike Jokinen



Photo 3. ACA staff member, Doug Manzer, prepares to release wild turkeys on a private ranch located in the Porcupine Hills in southwestern Alberta. Photo: Mike Jokinen