Elk-Agriculture Two Year Pilot Program – Final Report to Deputy Ministers

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Executive Summary

This report provides a final summary and evaluation of work completed under the Two-Year Elk-Agriculture Pilot Program for elk management in the Takhini Valley. The evaluation includes identification of pilot program implementation highlights and challenges, and key recommendations for continued work related to elk-agriculture management.

The Two-Year Pilot Program was put forward by the Elk-Agriculture Focus Group in January 2023 to implement six recommendations to deter the Takhini Valley elk from agriculture properties and gather information to support management decisions (Appendix A: Recommendations for a Two-Year Pilot Program to Manage Elk and Agriculture Interactions).

An Elk-Agriculture Steering Committee was created to oversee the implementation of the pilot program recommendations, and included representatives from:

- Government of Yukon
    - Energy Mines and Resources – Agriculture Branch
    - Environment – Conservation Officer Services Branch and Fish and Wildlife Branch
- Yukon Agricultural Association
- Yukon Fish and Game Association
- Ta'an Kwäch'än Council.

Pilot program implementation highlights include hiring of Elk-Agriculture Coordinator (enabling a direct contact for landowners experiencing conflict as well as the sharing of information on available management tools), the development of a Limited Exclusion Zone, and the launch of a collaring program to collect data on elk movement and behaviour.

Pilot program implementation challenges include limited committee capacity and resources, high committee turnover, limited efficacy of hunting tools in the current legislative and regulatory environment, lack of common understanding regarding management options within the Limited Exclusion Zone, unclear Government of Yukon objectives for the Takhini elk herd, and conflicting policies between government departments (namely maintaining herd sustainability while promoting agricultural production and land development).

Key recommendations identified for Deputy Minister and Minister consideration for future elk-agriculture work include:

- Opening the 2016 Elk Management Plan for review;

- Exploration of a change in the *Wildlife Act* re: 1 km residential buffer requirement; and
- Developing a funding program focused exclusively on elk-ag conflict prevention (fencing) and compensation that is shared between both Environment and Energy, Mines and Resources.

Introduction

This report provides a summary and evaluation of the work that was completed under the Two-Year Pilot Program to Manage Elk and Agriculture Interactions (herein referred to as the 'pilot program'), which occurred between June 2023 and December 31, 2025. The pilot program work was overseen by the Elk-Agriculture Steering Committee (referred to as "the Committee") and focused on implementing six recommendations developed by the preceding Elk-Agriculture Focus Group (Appendix A: Recommendations for a Two-Year Pilot Program to Manage Elk and Agriculture Interactions).

Elk-agriculture conflict and management is a complex, ongoing and dynamic issue not only in the Yukon, but elsewhere in Canada. Management efforts and their efficacy are influenced by multiple factors that include landowner capacity and preferences, government policy, habitat and climate conditions, wildlife biology data, public values, and political drivers. As a result, making progress toward resolving or reducing the conflict is difficult to achieve. Landowners in the Yukon, predominately those in the agriculture sector, bear the direct and ongoing costs of Takhini elk conflict, including crop losses, infrastructure damage, time, and stress. These impacts create significant pressures on Government of Yukon programs - particularly Agriculture Branch funding programs, Fish and Wildlife Branch, and Conservation Officer Services Branch (COSB) resources.

Based on the above-described complexity of the issue and the experience implementing the pilot program, this report also includes three key recommendations to Deputy Ministers and Ministers of Environment (ENV) and Energy, Mines and Resources (EMR) that the Steering Committee feels are most likely to have meaningful, long-lasting impacts in reducing elk-agriculture conflict in the Yukon.

Concurrent management activities:

It is important to understand that during the pilot program period (2023 to 2025), there were multiple concurrent activities/tools related to elk-agriculture management that interacted with pilot program efforts, but not all were explicitly within the scope or mandate of the pilot program. See Table 1 below for a breakdown of activities.

Table 1. Breakdown of elk management efforts and their interaction with the pilot program

Activity/tool:	Description	Program/oversight body	Specific to pilot program?
Hunting – Permit Hunt Authorization (PHA) permits	PHA permits are quota-controlled, lottery-based hunts used to responsibly manage elk harvest and maintain hunt quality. Quotas are based on sustainable harvest principles. For the Takhini elk herd (population ~250 to 270 elk), 4 to 6 permits are typically issued annually, allowing the harvest of any size bull between September 1 to March 31.	Department of Environment	No – established in 2009
Hunting - *Wildlife Act* Permits	*Wildlife Act* (adaptive) permits are more flexible than PHAs and may be issued through a variety of adaptive management tools. They are intended to be used for special management purposes, such as addressing agricultural conflicts and are not intended for general hunting - though in practice these permits have more recently been issued through the same system and are often available in similar areas to PHAs. WA permits are limited and targeted, typically authorizing harvest of younger bulls	Department of Environment	No – established in 2009

	and/or cows or in areas of recurring conflict. These permits are not based on a sustainable harvest quota.		
Additional flexibility for issuance of *Wildlife Act* permit to landowner	Coordinator ability to make a recommendation to Conservation Officer Services Branch (COSB) to issue a *Wildlife Act* permit to landowner to haze or kill an elk in conflict.	Department of Environment	Yes
Hunting - First Nations permits	Government of Yukon and the three First Nations with overlapping Traditional Territories negotiated that 20% of all permits are allocated to these First Nations. Distribution is based on the proportion of overlap with the elk range.	Department of Environment with Carcross/Tagish First Nation, Kwanlin Dün First Nation, and Ta'an Kwäch'än Council	No – established in 2009
Fencing support and elk damage compensation	Funding support exists under the Sustainable Canadian Agricultural Partnership program to elk damage mitigation and compensation	Department of Energy, Mines and Resources	No
Fencing trials	Electric and 3D fencing trials took place between 2017 and 2020 on two farms in the Ibex Valley area.	Department of Environment	No
Elk-Agriculture Coordinator position	Created under the two-year pilot program to facilitate communications and timely on-farm mitigation efforts	Elk-Agriculture Steering Committee	Yes

Annual elk composition surveys and periodic population surveys.	Fish and Wildlife conducts annual late-winter recruitment surveys (since 2011) and periodic population surveys to monitor herd growth and inform harvest recommendations. The most recent population surveys occurred in 2021 and 2024.	Department of Environment	No
Elk population survey (drone / UAV)	In early-winter 2024, Fish and Wildlife used fixed-wing drones equipped with high-resolution infrared and colour cameras to obtain a population estimate of elk in the Takhini herd.	Department of Environment	No
Elk collaring program	A total of 30 Takhini bull and cow elk were collared in the winters of 2023 and 2024. Collars will collect data until spring 2026.	Department of Environment	Yes
Creation of a limited exclusion zone for elk	Created under the two-year pilot program to define an area to apply localized and range-scale deterrence efforts	Elk-Agriculture Steering Committee	Yes

Current scope of the issue

During the 2024-2025 period, COSB is aware of 13 different property owners who have reported complaints to COSB (separate from the Coordinator conflict calls), with some property owners reporting multiple complaints. Since being hired in March 2024, the Coordinator responded to 21 conflict calls over 10 different properties. Collaring data shows elk activity on at least 55 agricultural properties, though conflict concerns have not been raised on all properties with elk activity.

The above represents the latest conflict data under the pilot program period, but it is important to understand that reported complaints significantly underrepresent the actual scope of elk–agriculture conflict in most years. Documented complaints represent a minimum estimate of impact, rather than the total effect on agricultural operations. Conflict data also fluctuates year by year due to factors such as:

- winter weather conditions and impact on food availability
- fencing of properties that could previously be accessed by elk (decreasing reported conflict on the fenced property, but potentially pushing elk onto new properties)
- farms that experience conflict but do not report it or do not seek compensation
- new agricultural properties being developed and experiencing elk conflict for the first time.

From fiscal years 2020-21 through 2025-26, Energy, Mines and Resources has funded $691,288 towards exclusionary elk fencing and $118,478 towards elk damage compensation, for a cumulative total of $809,766.50 in elk-related funding. Additionally, the Department of Environment has spent approximately $200,000 to undertake an elk collaring program. Including $126,000 in Coordinator costs under the two-year pilot program, total YG spending related to elk-agriculture conflict for fiscal years 2020-21 through 2025-26 is $935,766.50. This figure does not include YG staff time or compensation; nor does it reflect association staff time or resources. As of April 2026, there is currently an additional $200,000 in funding applications under review for elk fencing and compensation claims.

Table 2. Recent elk population and conflict information

Fiscal Year	COSB reported conflicts	Elk population estimate	YG-funding for game fencing for elk	YG-funding for compensation for elk damage
2020-21	0	-	$12,648.00	$7,683.00
2021-22	1	247-259	$183,070.00*	$20,291.00
2022-23	0	-	$30,000*	$29,485.00
2023-24	8	-	$88,550	-
2024-25	9	-	$165,570.00	$25,537.50
2025-26	1	270-300	$211,450.00	$35,482.00
Totals:	**19**		**$691,288.00**	**$118,478.00**

*special elk fencing program (not cost-shared agriculture funding)

Note: The 2011 elk population estimate was 245-313 animals; the 2013 elk population estimate was 230 animals.

Evaluation of Two-Year Pilot Program and recommended next steps from the Elk-Agriculture Steering Committee

Based on the learnings and information gathered via implementation of the six core activities under the pilot program, the Steering Committee completed the evaluation below, including implementation highlights, challenges, and recommended next steps for elk-agriculture management.

Pilot Program Activity 1: Establish a Steering Committee

Implementation highlights:

- **Documentation of landowner experience:** The pilot program report and outcomes now formally document the long-standing experience of producers regarding mitigation tools, confirming the limited or inconsistent effectiveness of methods such as various hazing techniques and permit-based interventions (hunting on farms). Validation and acknowledgement of on-the-ground realities and producer knowledge is significant from the agricultural sector's perspective.

Implementation challenges:

- Committee capacity and resources: The Steering Committee had limited tools available, with the Coordinator role being the only new resource introduced. There was some misperception among stakeholders regarding what the Committee could realistically accomplish within the pilot mandate. Limited capacity to develop and adhere to a communications plan likely contributed to a lack of stakeholder trust and understanding.
- Committee turnover and knowledge gaps: High turnover of Committee representatives and limited initial understanding of timelines, reporting processes, and sources of information further constrained the Committee's effectiveness.
- Limited landowner participation: Producers expressed that they would have engaged more fully if new, effective tools had been available. The tools outside of the Coordinator role remained the same as those historically provided, operating within the same legislative and regulatory framework, limiting the potential for broader engagement or success.

Recommended next steps:

- Determine management objective for Takhini elk population: The Steering Committee recommends that the current priority for elk-agriculture management is for the Government of Yukon to determine and communicate the management objective for the Takhini elk population (whether via the Elk Management Plan review or separate Ministerial direction). Once that is accomplished, a committee or group with representatives from stakeholders to guide any implementation work could then be convened.
- It is not recommended that another Steering Committee or Focus Group be struck at this time.

Pilot Program Activity 2: Hire a Coordinator

Implementation highlights:

- Positive mental health impacts for landowners: Landowners have communicated that the Coordinator role has helped in terms of mental health and capacity to deal with elk-agriculture conflict. The Coordinator was able to consistently communicate options and available resources to affected landowners.

Implementation challenges:

- Expectations for Coordinator role: The Coordinator provided feedback that while there may be value in the role in terms of the option for enhanced, timely responsiveness to conflict, clarity around expectations for availability of the

Coordinator needs to be improved (i.e., expectation for 24/7 availability by landowners).

- Gap in Coordinator role: Note that there was a 6-week period in January-February 2025 where there was no Coordinator in place and COSB was the point of contact for responding to elk conflict. The Coordinator and COSB had the same tools to offer landowners, though the Coordinator was able to respond to conflict more quickly.
- Variable participation from affected landowners: The success of Coordinator role also varied depending on individual landowner perspective, history, experience, capacity and willingness to participate. See Appendix B: Elk-Agriculture Coordinator Final Report for a complete synopsis and perspectives from the Coordinator.
- Lack of effective tools: The currently available suite of options are limited in their effectiveness, and the Coordinator did not have any new management tools to share with property owners.

Recommended next steps: The current Coordinator was retained until the end of the 2025/26 fiscal year in order to be able to provide timely response during the annually anticipated peak period of elk-agriculture conflict. Following the conclusion of the role:

- Re-evaluate how a dedicated Elk-Agriculture Coordinator position can be effective. The Steering Committee sees potential value in continuing the role of the Elk-Agriculture Coordinator, although if the position is to be continued, clarity regarding the purpose and main function of the role needs to be sought. Without dedicated work to address and clarify management objectives and policy and regulatory issues (e.g. significant reduction in herd size, or support for large-scale fencing projects in high conflict areas), the Coordinator position is unlikely to result in meaningful progress towards reducing conflict. There would also need to be work done to determine the best place to house a future Coordinator position to maximize efficacy of the role.

Pilot Program Activity 3: Apply both localized and range-scale herd management

3a. Intensive herd (range-scale) deterrence:

Range-scale actions (consistent hunting or hazing pressure) were intended to condition the herd to avoid agricultural areas through broad landowner participation and hunter coordination. This was a core focus of the Elk-Agriculture Focus Group and subsequent pilot program activities.

Implementation highlights:

- Development of new Limited Exclusion Zone: The Limited Exclusion Zone (see 3d; also Appendix C) was developed and launched as an initial focus of the Steering

Committee. There are no specific examples of effective range-scale deterrence efforts that occurred in this zone under the pilot program.

Implementation challenges:

The current landscape for effectively implementing range-scale deterrence is challenging for the following reasons:

- Impacts of current legislative, regulatory and management regimes: The current legislative, regulatory, and management regimes do not enable the use of hunting as a farm or property protection tool, limiting effectiveness of hunting in mitigating elk–agriculture conflict. Current boundaries and herd management objectives focus primarily on maintaining herd sustainability, rather than driving to reducing elk numbers in the Limited Exclusion Zone and therefore reducing conflict.
- Lack of understanding regarding herd management objectives and corresponding deterrence options: The 2016 Elk Management Plan sets out the direction to "keep the [Takhini and Braeburn] elk herds healthy, to manage their habitat and range carefully, and to further understand and mitigate the impacts of elk presence on the landscape". However, the plan does not clearly define a healthy and self-sustaining elk population, nor set a desired population size target. The only population size discussion relates to requiring a new management regime (i.e., a new management plan) if the population were to decline to between 100 and 120 animals. The Department of Environment has communicated to the Steering Committee that maintaining a stable Takhini elk herd with sustainable harvest opportunities requires maintaining a minimum population of ~ 200 to 250 animals. It is unclear to the public—and the agriculture community in particular—what data has informed the current stable population target.
- Requirement for permissions from residences: Under the *Wildlife Act*, hunters must gain permission from all residences within 1 km of the hunt location. This condition applies to all hunting methods, including primitive hunting methods. The Takhini Valley area is densely populated, therefore it is common for a hunter to be unable to gain all necessary permissions to execute a hunt.
- Hunter/landowner trust: The Coordinator observed a general lack of trust between hunters/landowners/role of Coordinator. Many landowners are reluctant to allow unknown hunters on their property, and the Coordinator is unable to vouch for hunters.

Recommended next steps:

- Consider the application of a true exclusion zone in the conflict area. Changes to elk range units or zones is most appropriately considered through the review and

development of a new elk management plan. Critical considerations for revised elk exclusion zones should be:
    - Developing clear communications around what area and what management actions an exclusion zone would encompass using terminology that is understood by all stakeholders.
    - Understanding and articulating the rationale for pursuing the implementation of a true exclusion zone
    - Identifying anticipated risks and challenges for implementation, included any unintended consequences
- Focus on landowner and hunter relationship building. Mitigate discomfort with multiple new hunters by providing mandatory hunter-landowner education specific to elk permits, and/or a meet and greet session, as an example.
- Focus on clarity around objectives in elk management plans, including definitions for key terms related to sustainable herd size and sustainable harvest level, with a goal of conflict reduction. Providing clear definitions of management objectives for the Takhini elk herd in terms of sustainability is critical for stakeholder communications and understanding.
    - Determine what harvest level and approach would be likely to maintain pressure on the Takhini herd and result in a sustained long-term decrease in elk conflict on the agriculture landscape.
    - Continually update and include this harvest level in Government of Yukon policy and/or the elk management plan for the Takhini Valley herd.
- Explore a change to the *Wildlife Act* regarding the requirement for hunting permissions within 1 km of a residence. Other jurisdictions use a smaller radius for this public safety tool. A smaller radius could also be considered for primitive weapons.

3b. Increase farm-specific options for nuisance elk:

Options under the pilot program included hazing activities and deterrent tools (noise, visual and scent), dispatching elk via *Wildlife Act* permits for landowners, Coordinator action, coordination of existing permit hunters, and installation of fencing. These localized actions were intended to complement the core deterrent efforts implemented at a range scale.

Implementation highlights:

- Increased engagement opportunities: The hiring of the Coordinator enabled an avenue for increased landowner engagement, information sharing, hunter coordination, and testing of localized management options, including the potential for issuance of *Wildlife Act* permits for landowners, and Coordinator ability to euthanize

an elk. See 3.c Implementation highlights (p. 16) for a summary of the implementation of conflict management options during the pilot period.

- Input to ENV re: permits: For 2025-26, the Steering Committee ultimately supported ENV's recommendation for *Wildlife Act* permits for cow harvest, which was five animals.
- Information sharing re: fencing options: Game fencing is an effective management tool that has been utilized by producers experiencing conflict. Providing information on fencing and available funding support is an important component of the Coordinator role. The Coordinator discussed fencing options with landowners that included electric fencing, 3D fencing, and 8 ft game fencing.

Implementation challenges:

- Requirement for permissions from residences: Hunters must gain permission from all residences within 1 km of the hunt location. This condition also applies to primitive hunting methods. The Takhini Valley area is densely populated, therefore it is not uncommon for a hunter to be unable to gain all necessary permissions to execute a hunt.
- Limited *Wildlife Act* permit uptake: Although the Coordinator was able to recommend/facilitate issuance of *Wildlife Act* permits to landowners, there was very limited uptake. Reasons for limited uptake are believed to be:
    - Time commitment for the landowner to euthanize and process an elk - often taking time away from farming and/or day job
    - Inability for landowners to keep meat due to *Wildlife Act* permit regulations.
    - Limited landowner buy-in that there would be a positive impact from harvesting a small number of elk
- Limited interest in alternative fencing types: Interest in installing alternative fencing types is limited among landowners, with game fencing perceived as the most effective long-term management tool for preventing elk damage to agricultural properties. Electric and 3D fencing trials have seen mixed results – the two properties that have trialed these fencing types have seen success over the past few years, but a breach at one property occurred in winter 2024-25.
- Limited efficacy re: hazing: The Steering Committee does not consider hazing an effective management option, as with the absence of other suitable habitat or feed options, elk will soon learn to tolerate the hazing efforts and/or change habits to avoid hazing efforts (i.e. feed nocturnally) and return to feeding on farmed fields. Hazing efforts tried in recent years by COSB include dispersal of wolf urine, use of motion activated noise deterrents, visual deterrents such as flagging and streamers; and dragging hide around field perimeters from recently euthanized elk. Hazing efforts by the Coordinator included human presence, simulated hunting (stalking, noise makers),

and the use of a paintball gun, though range is limited. Landowners have tried LGDs (livestock guardian dogs), predator silhouettes, flagging tape on wires, noise makers on fences, and crackers, all with temporary or limited efficacy.

Recommended next steps:

- Focus on landowner and hunter relationship building. Mitigate discomfort with multiple new hunters by providing mandatory hunter-landowner education specific to elk permits, and/or a meet and greet session, as an example.
- Be clear in public communications about efficacy of hazing. Ensure that any Government of Yukon publications or communications are clear that there are limitations to the efficacy of hazing as a conflict management tool.
- Consider a landowner permit. Explore options for allowing landowners to harvest elk (keep the meat vs. *Wildlife Act* permit to euthanize only).
- Explore a *Wildlife Act* change regarding the requirement for hunting permissions within 1 km of a residence. Other jurisdictions use a smaller radius for this public safety tool, or perhaps a smaller radius is applied to primitive weapons.

3c. Streamline hunting activities: The previous Elk-Agriculture Focus Group recommended that the "conflict" hunt be ended and the PHA system be expanded. This approach aimed to provide additional elk hunting opportunities throughout the full season, contribute to range-scale herd deterrence, and reduce the number of hunters approaching landowners for access near private property. The Steering Committee was to provide an annual recommendation for adjustments to PHA permits.

Implementation highlights (summary of utilization of available options to hunt or euthanize elk during the pilot period):

Hunting opportunities for the Takhini herd during the pilot program included:

- 4 PHA permits to harvest a bull of any size
- 8 adaptive permits (formally called conflict hunt permits) for bulls with 5 points or less
- 4 permits to First Nations for bulls with 5 points or less.

For the 2024-25 hunting season (September 1st to March 31st):

- 3 out of the 16 possible hunting opportunities available within the Limited Exclusion Zone were utilized:
    - 2 of 4 PHA permit hunters were successful within the Limited Exclusion Zone
    - 4 of the 8 adaptive permits were filled; however, only one of these permits was filled in the Limited Exclusion Zone

- 2 bulls were harvested under an Exclusion Zone permit within the 2016 Elk Management Plan Exclusion Zone (near Haines Junction - considered to be part of the Takhini herd).
- 2 elk were euthanized by COSB (control kill) in January 2025. Both were euthanized at a single property experiencing conflict within the Limited Exclusion Zone.
- The Coordinator euthanized 1 cow elk in February 2025, testing the effectiveness of killing lead elk as a deterrent.

For the 2025-26 hunting season (September 1st to March 31st):

- 9 out of the 16 possible hunting opportunities available within the Limited Exclusion Zone were utilized:
    - This includes PHA permits and adaptive permits both issued through the PHA system
- 1 bull was harvested under an Exclusion Zone permit within the 2016 Elk Management Plan Exclusion Zone (near Haines Junction - considered to be part of the Takhini herd).
- 0 elk were euthanized by COSB (control kill) during the 2025-26 season.
- The coordinator euthanized 5 elk total between December 2025 and March 2026, 3 cows and 2 bull elk.
    - 2 cow elk were euthanized on separate dates on a single property along Takhini Farm Road
    - 1 cow elk euthanized on property along the Alaska Highway, Ibex valley area
    - 2 bull elk were euthanized on a single property along the Alaska Highway in the Ibex valley during one event, elk accessed and were found inside game fenced area

Note: 7 elk have been killed to date via motor vehicle collisions: 5 cows and 2 bulls; between Mendenhall and Takhini River Bridge.

Implementation challenges:

- Requirement for permissions from residences: The requirement for landowner permissions within 1 km of residences reduced the feasibility of utilizing some permits.
- Landowner apprehension about safety: Concerns related to hunter access on or near private property further limited participation.

- Limited opportunity for Steering Committee input re: permits: The Steering Committee's ability to recommend adjustments to available PHA permits for 2024-25 was limited by:
  - A lack of information sharing to the Steering Committee regarding ENV recommendation deadlines
  - Miscommunication regarding which permits the Steering Committee would have the ability to make recommendations towards (*Wildlife Act* permits could be adjusted based on Steering Committee recommendations, but not PHA permits).
  - The poor communication of Government of Yukon policy goals regarding elk management and sustainable herd size to the Steering Committee during the pilot program implementation period.

  Although the Steering Committee was not able to provide input on available PHA permits for 2024-25, experience to date is that PHA or adaptive permit opportunities are not effective conflict mitigation tools on their own.

Recommended next steps:

To increase efficacy of any hunt-related conflict mitigation efforts, the Steering Committee recommends:

- Focus on landowner and hunter relationship building. Mitigate discomfort with multiple new hunters by providing mandatory hunter-landowner education specific to elk permits, and/or a meet and greet session, as an example.
- Conduct an annual recruitment survey. Annual recruitment surveys provide valuable information about the health and overall population trends, which can inform management decisions that may help guide decisions on PHA and adaptive hunt permit numbers.
- Conduct a full population count on a regular interval. To maximize the number of permits that can be issued for sustained pressure in the region, it is recommended that the Department of Environment conduct a full population count every 3 to 5 years.
- Explore a *Wildlife Act* change regarding the requirement for hunting permissions within 1 km of a residence. Other jurisdictions use a smaller radius for this public safety tool (British Columbia: 100m; Alberta: 200 yards for firearms). A smaller radius could also be applied to primitive weapons.
- Apply consistent pressure on the landscape. Apply pressure via permits per specific time period (*Wildlife Act* permits), with a new pool of hunters for each time period. To move forward with this option, it will be critical to work closely with agricultural landowners.
- Examine and clarify contradicting Government of Yukon policy goals that include:

- promotion and support for increased land utilization and agricultural production across the Yukon;
- maintenance of hunting opportunities for elk; and
- maintenance of a stable Takhini herd size.

3d. Review Elk Management Zones in the 2016 Elk Management Plan

Implementation highlights:

- Development of new Limited Exclusion Zone: A Limited Exclusion Zone was developed and approved for implementation under the pilot program. See Appendix C: Recommendation to Deputy Ministers for Elk-Agriculture Limited Exclusion Zone. The Limited Exclusion Zone identified a working area that is useful for implementing focused management efforts.

Implementation challenges:

- No measurable decrease in conflict: Limited Exclusion Zone efforts did not result in a measurable decrease in conflict within the zone (which included deterrence team efforts, namely the new option for the issuance of *Wildlife* Act permits via the Elk-Agriculture Coordinator) for reasons detailed above under 3b.
- Misperception of zone function and purpose: The naming of the zone was also confusing for stakeholders as it did not function similarly to other exclusion zones that the Yukon public is familiar with.

Recommended next steps:

- Consider the application of a true exclusion zone in the conflict area. Critical focuses of this work should be:
  - Developing clear communications around what area and what management actions an exclusion zone would encompass using terminology that is understood by all stakeholders.
  - Understanding and articulating the rationale for pursuing the implementation of a true exclusion zone.
  - Identifying anticipated risks and challenges for implementation, included any unintended consequences.
- Re-defining zones in the 2016 Elk Management Plan:
  - Consider defining the entire Eastern Buffer Zone as a “special elk management zone”.
  - Seek recognition within the plan that “typical” wildlife management approaches do not necessarily apply to the Takhini elk herd, and include exemptions to address conflict within certain zones, such as a potential “special elk management zone”.

Pilot Program Activity 4: Support fencing options

Barrier (exclusion) fencing is effective to keep elk and other wildlife away from farms and is frequently a key part of management strategies in other jurisdictions. However, there are significant costs associated with materials, installation and maintenance. The application of fencing is not a one-size-fits-all for all farms and requires site-specific consideration.

Implementation highlights:

- Communication on fencing: The Coordinator was able to communicate to landowners on available fencing options, including an existing agriculture funding program (Sustainable CAP) that can provide some support for fencing projects for elk conflict management as well as compensation for elk-caused damage and losses. From April 2024 to present, $465,570.00 in funding for 8 fencing projects in the Takhini/Ibex Valley area was provided, and $61,109.00 in funding was provided in compensation for elk damage across 4 properties. The fencing projects and compensation that occurred during the pilot period were not explicitly related to pilot program efforts.
- Support for fencing of high-conflict area: The Steering Committee supported expediting the process to enable fencing of a high-conflict area of a farm in the Limited Exclusion Zone via a letter to EMR's Land Planning Branch. Another fencing project was also considered for a high-conflict area, however, the specific conditions on this farm property were ultimately not conducive to implementing the fencing project.

Implementation challenges:

- Variable uptake of fencing: Most landowners who are interested in fencing prefer to use 8 ft exclusionary game fencing as the most effective long-term solution vs. 3D or electric fencing. Electric and 3D fencing have been trialed on two properties in the Ibex Valley area. These trials have generally been successful (both projects outside the scope of the pilot program efforts), but breaches have occurred, and these fence types generally require more monitoring and maintenance. While considered the most effective fencing option, exclusionary fencing may not be appropriate for all properties for a variety of reasons, namely:
    - It is expensive and labour intensive to install and requires ongoing maintenance to remain effective
    - It has potential impacts to wildlife movement and corridors
    - Installation is dependent on individual landowner preference, capacity to undertake a large project, financial constraints/funding availability, and overall farm development plans

Recommended next steps:

- Develop a dedicated fund to support elk-agriculture conflict mitigation. Reduce reliance on existing agriculture funding programs (currently Sustainable CAP). The funding program should be jointly developed and supported by both the Department of Environment and Department of Energy, Mines and Resources.
- Government of Yukon to evaluate how to manage wildlife movement and corridors in the Takhini and Ibex Valley areas. This information and/or recommended practices could potentially be used in conjunction with installation of game fencing for elk-agriculture conflict management and be informed by the collaring data.
- Explore fencing options on crown land. Look for fencing strategies that could re-direct elk without blocking wildlife corridors.

Pilot Program Activity 5: Implement a collaring program

Collaring information provides significant benefits for refining the understanding of elk seasonal land use in the Takhini Valley. This information supports evidence-based decision-making and strengthens wildlife-land-use planning. Key applications include identifying critical habitats such as movement corridors, evaluating the effectiveness of deterrence measures, and assessing the utility of buffer and exclusion zones as delineated in the 2016 Elk Management Plan.

Implementation highlights:

- Collaring and drone survey work completion: Collaring and drone survey work was completed by the Department of Environment during the pilot program. A preliminary presentation of collaring data was delivered to the Steering Committee in November 2024.

Implementation challenges:

- Timing: Data analysis will not be completed within the pilot program timeline. As a result, the Steering Committee is unable to incorporate findings into specific recommendations at this time.

Recommended next steps:

- Conduct a late winter recruitment survey. ENV is planning to conduct a late-winter (February-March) recruitment survey in 2026.
- Utilize drone survey data to inform permits. Use recent drone survey estimate of 270 elk to develop a multi-year plan for *Wildlife Act* permits, including guidance on how permits should be distributed across space and time to maximize the deterrence effect.
- Analyze collar data to better understand elk habitat selection and movement in relation to key agricultural areas (public report). These results will help prioritize

fencing investments in areas with the greatest potential to reduce conflict. The Steering Committee requests that elk data analysis include identification of major corridors, whether there is indication of separate groups within the Takhini Herd, and time spent on private property vs time on crown land.

Pilot Program Activity 6: Social Survey

The Focus Group supported the implementation of a social survey to better understand public awareness, attitudes and values regarding elk in the Yukon.

Implementation highlights: N/A

Implementation challenges:

- Timing: Although the social survey was put forward as one of the activities for the Steering Committee to implement as part of the two-year pilot program, discussions with Fish and Wildlife Branch staff determined that this work would be better suited to a future review of the 2016 Elk Management Plan. The Steering Committee understands that such a survey should be comprehensive, completed by a third-party contractor, and include all key stakeholder groups.

Recommended next steps:

- Conduct social survey as part of opening the 2016 Elk Management Plan: The Steering Committee recommends that a focused social survey be conducted as part of the re-opening of the 2016 Elk Management Plan and that agricultural stakeholders are meaningfully and comprehensively engaged.

Conclusion: Key recommendations for Deputy Minister and Minister consideration April 2026 - onward

While the recommendations described above are all important to consider as part of elk-agriculture management in the Yukon, the Steering Committee puts forward the following three key recommendations as areas of focus and critical work for the near term:

Key Recommendation 1: Re-open the 2016 Elk Management Plan for Review

The Steering Committee recommends that the Government of Yukon re-open the 2016 Elk Management Plan for review, with the following components:

a) Foundational Economic, Policy, and Management Review

As initial groundwork prior to re-opening the Elk Management Plan, the Steering Committee recommends that the Government of Yukon retain a qualified contractor to conduct a Yukon-wide policy, management, and economic review related to elk on the territorial landscape.

This analysis is not intended to predetermine management outcomes or frame decisions as a binary choice regarding the presence or absence of elk. Rather, the intent is to support evidence-based decision making that improves management outcomes, reduces conflict, and clarifies policy direction while recognizing that elk are part of the Yukon landscape.

The analysis should:

- Consider elk populations and management contexts across the entire Yukon.
- Be designed in coordination with the planned social survey, avoiding duplication of effort and recognizing that the survey will explore the social and intrinsic values associated with elk.
- Examine and clarify areas of potentially conflicting Government of Yukon policy objectives related to elk management, agricultural operations, wildlife conservation, and public investment.
- Identify opportunities to strengthen management tools and conflict-mitigation strategies, including those that support agricultural interests, wildlife conservation objectives, and effective resource allocation.

- Evaluate the economic costs and benefits of different management approaches, ensuring that public expenditures are used as effectively and efficiently as possible.

A comprehensive analysis is needed to provide an objective, Yukon-wide foundation for revising the Elk Management Plan, given ongoing conflict, unclear management objectives, potentially competing policy directions, and significant public investment without demonstrable conflict reduction. This work will improve the effectiveness, coordination, and transparency of elk management by ensuring that future decisions are informed by a clear understanding of management outcomes, conservation priorities, economic implications, and the tools available to reduce conflict across the territory, while maintaining elk are part of the Yukon landscape.

b) Social Survey

As part of re-opening the 2016 Elk Management Plan, the Steering Committee recommends conducting a focused social survey, with meaningful and comprehensive engagement of all stakeholders.

c) Determination of a Management Objective for the Takhini Elk Population

The Steering Committee recommends that the Government of Yukon determine and clearly communicate a management objective for the Takhini elk population, and that this objective be explicitly documented within the Elk Management Plan, supported by formal Ministerial direction to relevant departments to ensure clarity, transparency, and consistent implementation.

This work should include:

- Clear definitions of key terms such as sustainable herd size and sustainable harvest level, with the objective of reducing conflict and improving stakeholder understanding.
- Inclusion of a clear and ongoing process within Government of Yukon policy and/or the Elk Management Plan that outlines how relevant stakeholder and organizational input may be sought, as appropriate. Having this mechanism in place could function as a means to gain First Nation and stakeholder input without requiring the formation of an additional steering committee.

d) Re-definition of Management Zones

As part of the Plan review:

- Consider defining the entire Eastern Buffer Zone as a “special elk management zone.”
- Seek recognition within the Plan that conventional wildlife management approaches may not be appropriate for the Takhini elk herd, and include appropriate exemptions to address conflict within specific zones, such as a designated special elk management zone.
- Utilize available collaring data to inform the development of updated management zones within the revised Elk Management Plan.

e) Analysis of a Potential Exclusion Zone

Conduct an analysis of key considerations, the process, and realistic timelines associated with the potential development of a true elk exclusion zone in the pilot area, including an assessment of unintended consequences for the Takhini elk herd and stakeholders.

This analysis should be placed in the appendix of the updated Elk Management Plan.

The inclusion of this analysis in the appendix would provide an understanding of the impacts and benefits that an Exclusion Zone could have on the elk herd and various stakeholder groups. Should the establishment of an Exclusion Zone be considered in the future, this information would support informed stakeholder consultation.

Key Recommendation 2: Explore change in Wildlife Act regarding the 1km residential buffer requirement specific to the Takhini Elk Herd

Any hunting-related conflict mitigation efforts put forward are and will continue to be limited in their efficacy given the current regulatory environment. Exploring this amendment to the Wildlife Act, will enable targeted application in areas of persistent elk–agriculture conflict.

Key Recommendation 3: Develop funding focused exclusively on elk-agriculture conflict prevention (fencing) and compensation that is shared between both Environment and Energy, Mines and Resources.

Continuing to rely on existing agricultural funding programs for large scale fencing and compensation support puts undue pressure on already limited programming and reduces the funding available for other sector development projects. The current funding program is also not intended to provide ongoing compensation support, as defined in program objectives and federal-territorial funding agreements.

Context and Perspectives from the Yukon Agricultural Association

This section summarizes relevant context from the Yukon Agricultural Association (YAA) including perspectives and nuances that inform the recommendations.

The Yukon Agricultural Association emphasizes that the recently completed pilot program was limited in its likelihood of success due to structural and design constraints. The committee lacked clearly defined parameters regarding herd management, authority to implement reduction measures, timelines for advancing recommendations, and the ability to pursue regulatory adjustments specific to the Takhini elk. YAA stresses that future studies or pilot initiatives must have clear objectives, authorized tools, and operational readiness from the outset to ensure effective and efficient implementation. Completing studies and pilots to their intended conclusion is critical, as previous efforts were curtailed due to herd sustainability concerns, which, in YAA's view, prevented the sustained pressure needed to influence elk behaviour and reduce agricultural conflicts; a pattern confirmed during this pilot.

YAA also highlights ethical and practical considerations. These elk are intended to support sustainable hunting, yet under the current framework, many remain on agricultural lands, producing low-quality hunting opportunities while directly damaging farmers' economic outlook through crop loss and property impacts. During the winter forage period, snow limits access to natural vegetation, and displacing elk from agricultural lands without adequate natural forage risks creating an ethically unacceptable situation, potentially starving the animals. At the same time, inaction has ethical and practical implications, as farmers are involuntarily providing supplemental forage that sustains the population. To support informed and ethical management, YAA recommends two targeted studies: one in the Government-designated core range, where elk are expected to sustain their population, and a second in high-conflict agricultural areas, where they are not meant to sustain themselves and where active management is required to protect farmers livelihoods. These studies would provide clarity on ecological sustainability, inform future herd management objectives, and help establish clear guidelines for population size and spatial distribution.

APPENDIX A: Recommendations for a Two-Year Pilot Program to Manage Elk and Agriculture Interactions

APPENDIX B: Elk-Agriculture Coordinator Final Report

APPENDIX C: Recommendation to Deputy Ministers for Elk-Agriculture Limited Exclusion Zone

Recommendations for a Two-Year Pilot Program to Manage Elk and Agriculture Interactions

Submitted by:

Elk – Agriculture Focus Group

Date: January 5, 2023

Introduction

In February 2022, the Deputy Ministers of Environment and Energy, Mines and Resources invited key stakeholders, First Nations and government representatives to form a Focus Group mandated to develop consensus-based recommendations for a second two-year pilot program for minimizing elk-agriculture conflicts. Specifically, the Focus Group was asked to:

1. Review the 2020-2022 pilot program, including the herd status and exclusion zone;
2. Consider other ideas that may mitigate elk-agriculture conflicts;
3. Consider information gaps and how they might be addressed; and,
4. Consider acceptable tolerance levels for conflict (e.g. to what extent can we reduce the herd versus what is an acceptable level of crop damage).

The Focus Group members included:

- Director of Conservation Officer Services Branch (COSB), Government of Yukon;
- Director of Agriculture Branch, Government of Yukon;
- Species Manager, Fish and Wildlife Branch, Government of Yukon;
- Executive Director of the Yukon Agricultural Association;
- Executive Director of the Fish and Wildlife Management Board; and
- Executive Director of the Yukon Fish and Game Association.

Representatives from the three affected First Nations (Champagne and Aishihik First Nations, Kwanlin Dün and Ta'an Kwäch'än Council) participated initially, but then declined further participation due to capacity limitations, requesting that they be kept informed of the Focus Group's progress.

Recognizing the introduced elk herd and agricultural development are parallel interests in the Takhini Valley, the Focus Group developed the following overarching goals to guide the development of the next two-year pilot program:

1. Maintain a healthy and self-sustaining free-ranging elk herd;
2. Identify and address data deficiencies pertaining to the elk herd's population size, seasonal movements and land usage;
3. Minimize the number of elk encroaching on agriculture areas and enhance elk deterrence by ensuring a coordinated and timely response (e.g. increase responsiveness to ensure the effectiveness of deterrents);
4. Ensure all mitigations are consistent with the goals and objectives of the *2016 Elk Management Plan*;
5. Reduce confusion and increase quality of hunting experience for landowners and hunters;
6. Improve communication and awareness among key stakeholders and partners; and
7. Recognize the commitments and obligations made through the Umbrella Final Agreement, specifically Chapters 11 and 16, and First Nations Final Agreements.

The original intent was to have the pilot program developed and in place prior to September 1, 2022 to align with the beginning of the hunting season. To support this timeline, preliminary recommendations were presented to the Yukon Fish and Wildlife Management Board in June 2022, at which time the Board indicated support.

2020-2022 Pilot Program Review

The Focus Group reviewed the outcomes from the implementation of the previous two-year pilot program, namely the conflict hunt, funding for the fencing program, and farmer and hunter feedback. The Focus Group identified several key actions from the 2020-2022 pilot program that would greatly improve the effectiveness of a second program including:

- Improve timeliness, consistency and responsiveness in actions to deter elk;
- Improve communication between government agencies;
- Improve communication with the public and stakeholders; and
- Enhance data quality to inform mitigation strategies.

Following their review of the previous program, the Focus Group developed three objectives and five recommendations for the new pilot program.

Program Objectives

Objective 1: Enhance management actions and response

A strong effort is required to respond to elk-agriculture interactions in order to proactively condition elk away from agricultural lands and to deliver a two-year intensive deterrent effect at both a localized and range/herd scale. Enhanced management actions will be achieved through consistent and timely response using a broad range of applications, including coordination of farm-specific engagement and permit hunt activities.

Objective 2: Improve communication and service

To foster trust and understanding, establish an environment that consistently allows for effective communication among all interest groups. Public awareness and education should be promoted to ensure that all affected landowners and hunters are aware of the tools and programs available, data being collected, and progress throughout the two-year pilot program.

Objective 3: Invest in and collect data

To gain a better understanding of elk behavior and population to support adaptive, evidence-based decisions, additional monitoring is required to improve the quality and quantity of data and information collected.

Recommendations

Guided by the three objectives, the Focus Group established the following recommendations and rationale to ensure successful implementation of the pilot program.

Recommendation 1: Establish a Steering Committee

It is recommended that a Steering Committee be established to oversee the implementation and communication of the pilot program.

Rationale: The Steering Committee will support, guide, and ensure all accepted recommendations are acted on in a timely manner that is consistent with the objectives established for the program.

The Steering Committee would be responsible for the following:

- Act as an advocate for communicating initiatives and tasks set out in the recommendations;
- Provide strategic direction for the program;
- Provide advice and input on budgeting, human resources, money, facilities, and schedule(s);
- Monitor program goals and scope, and determine how success will be measured;
- Assess and approve, reject or modify program plans;
- Prioritize program deliverables;
- Monitor and evaluate the quality of projects and adjust accordingly;
- Support, review, and assess the work of the Coordinator;
- Make recommendations pertaining to the elk Permit Hunt Authorization (PHA) including the number of permits that should be added or removed; and
- Provide advice on the development of a fencing program.

Recommendation 2: Hire a Coordinator

The Focus Group recommends a Coordinator be hired to oversee and support the implementation of all operational aspects of the next pilot program.

Rationale: A Coordinator is required to facilitate timely communication and coordination of response actions to condition elk away from agricultural properties.

A Coordinator would be responsible for:

- Building trust, positivity and collaboration by maintaining effective communication among farmers, hunters, and governments;
- Coordination of hunters, including helping direct hunting to areas where elk need to be deterred or redirected from agriculture properties;
- Fostering a team approach among individual farmers, hunters, and conservation officers when devising an appropriate response to elk encroachments;

- The development and maintenance of a reference map (hardcopy and digital) for participating properties and key areas;
- Leading educational awareness for landowners and hunters on items of protocol, mitigations, and related assessments;
- Reporting on progress, challenges, success and general updates; and
- Liaising with Conservation Officer Services Branch, Yukon Fish and Game Association, Yukon Agricultural Association, Department of Energy, Mines and Resources, Department of Environment, Yukon First Nations and animal specialists accordingly to support implementation of the two-year pilot program.

The Focus Group encourages the Departments of Environment and Energy, Mines and Resources to secure funding to hire the Coordinator. The Focus Group recommends that the Coordinator is a contractor housed at either the Yukon Agricultural Association or the Yukon Fish and Game Association. In the spirit of collaboration, the Government of Yukon, Yukon Fish and Game Association and Yukon Agricultural Association could support the Steering Committee in selecting the Coordinator.

Recommendation 3: Apply both Localized and Range-Scale Herd Management

To apply an intensive response for elk-agriculture interactions in the Takhini area, it is recommended that herd management be implemented at a localized and range scale. Localized actions would include response to on-farm elk presence, whereas range-scale actions are aimed to condition the herd to avoid agricultural areas at large. Three specific actions are recommended for implementation.

3(a) Intensive herd deterrence

Rationale: The two-year pilot program will aim to condition elk to avoid agricultural properties in the buffer zone. To accomplish this, it is necessary to have broad landowner participation. The Coordinator and COSB will work closely together to be highly responsive to on-farm elk-agriculture interactions in the buffer zone.

3(b) Increase farm specific options for nuisance elk

Rationale: Recognizing that each agriculture property is situated in a different landscape and agricultural landowners have differing tolerances towards elk, a suite of options for dealing with specific and/or persistent nuisance elk is required. Options will range from hazing activities to dispatching elk to fencing. These localized actions should complement the core deterrent efforts implemented at a range scale. The Coordinator will work closely with both landowners and COSB to ensure the appropriate localized mitigations are applied.

Specific actions to support recommendations 3(a) and 3(b) include:

- Directing hunters to target areas where elk are frequenting agriculture properties;

- Engaging directly with landowners to encourage appropriate responses to elk on their properties;
- Ensuring resources are made available to respond quickly to elk-agriculture interactions with a wide range of deterrents;
- Developing and implementing procedures to help coordinate and communicate how agriculture property owners, the Coordinator and COSB will respond;
- COSB issuing Authorized Kill Permits to farmers, dispatching elk, and/or overseeing extreme hazing activities (response tailored to each situation);
- Steering Committee examining alternative hunting methods for future hunting seasons; and
- Encouraging landowners to provide permission for hunting.

3(c) Streamline hunting activity

Rationale: Considering hunter and landowner feedback from the 2020-2022 pilot program, it is recommended that the "conflict" hunt be ended and the PHA system be expanded to allow for additional elk permits. Expanding the PHA enables hunters to hunt elk the entire season. This approach not only creates more hunting opportunities, it also results in increased deterrence and contributes to range-scale herd management. The expanded PHA may aid in reconditioning elk away from farmers' fields, driving them into less populated areas. It would also reduce the number of hunters contacting landowners seeking permission to hunt near their properties.

To ensure this recommendation could be implemented in a timely manner, adjustments to the PHA hunt were actioned by the Department of Environment for the 2022/23 hunting season. In addition to the four permits traditionally issued, an additional eight were added to the PHA hunt. In total, 12 PHA were issued for 2022/23. This quota is believed to be sustainable based on the recorded numbers of annually harvested conflict animals prior to 2019 and allows flexibility for those conflict animals that may be dispatched during the new pilot program.

The current allowance for the PHA will be adaptive and will be reviewed annually by the Steering Committee to ensure adequate pressure continues to be applied to condition elk away from agricultural properties and to achieve the overall intent of the program. The Steering Committee will make a recommendation to the Government of Yukon by February 1st of each year (or as soon as practicable) of the pilot program on the number of PHA permits to be issued for the following year. The number of PHA permits, if warranted, will be increased to place more pressure on elk for 2023-2024.

3d) Review Zones in the 2016 Elk Management Plan

The Steering Committee will examine and consider the establishment of an additional exclusion zone and make recommendations to the Government of Yukon accordingly.

Any amendments to zones would require consultation with First Nations and the Yukon Fish and Wildlife Management Board.

Recommendation 4: Support Fencing Options

A fencing program is recommended to continue for this pilot program. The Agriculture Branch will work with farmers to determine onsite needs and identify funding opportunities for the purchase and installation of fencing (barrier or electric).

Rationale: Barrier fencing is effective to keep elk and other wildlife away from farms. However, there are costs associated with materials, installation and maintenance. The application of fencing is not a one-size-fits-all for all farms and requires site-specific consideration.

Fencing has the potential for ancillary effects on wildlife movement. The program will consider these possible impacts during implementation.

Recommendation 5: Implement a Collaring Program

To construct a detailed understanding of the elk's spatial distributions and how they may change throughout the year in response to factors such as habitat needs and anthropogenic disturbances, it is recommended that the Department of Environment's Fish and Wildlife Branch implement a collaring program for elk in the Takhini Valley.

Rationale: Monitoring of elk in the Takhini Valley has varied considerably in terms of intensity and methodology. Beginning in 2014, annual minimum count surveys were employed to obtain a coarse index of the herd's abundance, which has informed harvest management decisions. Minimum count surveys are incomplete and, unlike systematic surveys (e.g. mark-resight) which account for the imperfect detection of animals, provide only a coarse index of a population's true abundance. They give no reliable estimate of the number of animals missed during a survey.

As a result, often the reported results conflict with local reports pertaining to elk numbers and their movement patterns. This incongruity contributes to frustration and strained communication when working with both farmers and hunters. For example, a relatively high count of 231 individuals recorded in February of 2020, along with ongoing concerns over elk-agricultural conflicts prompted changes to the allotted harvest of the Takhini Valley herd, wherein harvest restrictions and numbers were liberalized for the conflict hunt in the fall of 2020. Shortly thereafter, harvest restrictions were re-imposed following a subsequent survey in March 2021, which tallied 127 animals. This inconsistency in management action led to mistrust and confusion among both the agricultural and hunting communities.

Adaptive management and evidence-based decision-making requires detailed data on elk spatial and temporal movement. Such information provides clear benefits in terms of helping refine our understanding of elk seasonal land usages within the Takhini Valley. This, in turn, will refine wildlife-land-use planning exercises including defining critical habitats such as movement corridors, determining the effectiveness of our deterrence measures (measuring shifts in elk

distributions from agriculture lands to hinterlands) and assessing the utility of the current buffer and exclusion zones as delineated in the *2016 Elk Management Plan*.

Recommendation 6: Social Survey

The Focus Group also recognizes that a social survey would support further management decisions that could be implemented to support the pilot program. The Focus Group supports the implementation of a survey to develop an understanding of the publics' awareness, attitudes and values pertaining to elk in the Yukon.

Next Steps

The Focus Group recommends that Deputy Ministers support the implementation of the pilot program through establishing the Steering Committee and providing funding to hire a Coordinator for the next two years. The Steering Committee and Coordinator will then develop a workplan and budget required to implement the Focus Group recommendations.

The Steering Committee and Coordinator will develop a communication plan for the agriculture sector, hunters, and the public. The communication plan will contemplate engagement with hunters and landowners, methods to solicit and incorporate feedback, and sharing results of the pilot program.

To guide implementation, recommendations for the pilot program have been summarized in the attached implementation plan with proposed timelines for initiation.

Closing

The Focus Group thanks the Deputy Ministers for supporting our work and we look forward to implementation of the pilot program.

Elk – Agriculture Pilot Program Implementation Plan

Recommendation	Summary	Timing
Establish a Steering Committee	The Steering Committee will provide strategic oversight and communication support throughout the program.	On approval
Hire a Coordinator	The Coordinator will be responsible for: • The operational aspects of the pilot program including overseeing coordination of hunters and agriculture property owners • Responding in a timely manner to elk encroachments on agriculture properties and on-farm elk issues • Liaising with agriculture property owners, hunters, First Nations, Conservation Officer Services Branch, Yukon Agricultural Association, Yukon Fish and Game Association to implement the program and build positive relationships amongst all parties EMR and ENV would jointly fund the position. Ideally, the Coordinator would work at Yukon Fish and Game Association office or Yukon Agricultural Association office.	On approval
Apply both Localized and Range-Scale Herd Management	Both localized and range-scale actions are required to deter elk away from agriculture properties. Localized actions would include responding to on-farm elk presence, whereas range-scale actions are aimed to condition the herd to avoid agricultural areas at large. Three specific actions are recommended: 1. *Increase Localized Options for Nuisance Elk* When an agriculture property owner has elk causing property damage, a fast/intense response is required to deter elk away from the property. Actions may include hazing or dispatching elk. 2. *Intensive Range-Scale (Herd) Deterrence* Intended to condition elk to avoid agriculture properties on the broader landscape (across many farms). Actions are similar to localized, on-farm response including hazing and potentially dispatching elk, but would be tailored to how elk are moving and	On approval (PHA hunt initiated in October 2022)

	using agriculture properties across the landscape. Hunters will be directed to specific agricultural areas frequented by elk. The Steering Committee will also examine alternative hunting methods for future hunting seasons. 3. *Streamline Hunting Activity* A Permit Hunt Authorization (PHA) was implemented for the 2022-2023 season. The PHA will be adaptive and will be reviewed annually to determine if permits should be added or removed. The Steering Committee will recommend the number of permits to be issued for the following year by February 1 (or as soon as practicable). If warranted, the number of PHA permits will be increased to place more pressure on elk for 2023-2024.	
Support Fencing Options	A fencing program is recommended to continue to subsidize the purchase of fencing (barrier or electric) and installation. The fencing program will also assist with other mitigations to protect crops and feed. Barrier fencing has ancillary effects on wildlife movements that will be considered and monitored.	On approval
Improved Data Collection through a Collaring Program	Improved data is needed to understand how elk are using habitat in the Takhini Valley near agriculture properties and to inform future management decisions for hunting and zoning (exclusion and buffer).	Initiated in Dec. 2022
Review 2016 Elk Management Plan Zones	With data and information collected during the pilot program, the Steering Committee will review and consider an additional exclusion zone. Any amendments would require First Nation and Yukon Fish and Wildlife Management Board consultation.	Begin Summer 2023
Social Survey	Wildlife management decisions should not be solely based on ecological considerations, but also public benefits and impacts. A public survey of values pertaining to elk will help capture key issues facing elk management from the perspectives of farmers, hunters, First Nations and the residents of Yukon.	Begin Fall 2023

Elk-Agriculture Coordinator Final Report

Submitted to Elk-Agriculture 2-Year Pilot Steering Committee – April 2026

Submitted by: Neil Cosco

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1. General Overview

Elk were reintroduced to the Yukon in the 1950's to relieve hunting pressure on native species, moose and caribou, by giving Yukoners another big game animal to harvest. Since then, elk have found their way onto agricultural properties and have damaged fences, stored hay, and crops. Elk Management Plans were created in 1990, 2008, and 2016. As the elk population grew and landowner issues persisted, the 2008 plan: Goal 5, Objective 3, Action 1 called for establishing a working group to develop a plan to manage elk-agriculture conflicts. The 2016 plan also called for an Elk-Ag Working group. This was subsequently formed, followed by a pilot project from 2020-2022, the findings of which were reviewed by a focus group. That group recommended a Steering Committee, which was struck in 2024 and led to this report.

The 2016 Elk Management Plan states that a self-sustaining elk herd is the first goal. The plan does not specify exactly what number of elk that would constitute, but YG biologists have stated that between 200 and 250 elk is desirable if we want to have continued hunting opportunities. Currently there are an estimated 270 elk in the Takhini herd. The plan further states that an expected growth rate would be 0 to 3% if the population is 200 animals, -0.5% to 2.5% with 180 animals, and -1% to 2% if there are less than 160 animals. It also says that at 100 to 120 elk, a new management plan would be needed, as there are concerns that the population would not naturally sustain itself at that number. Landowners spoken to in the current project generally feel that 200-250 is too many and that this large number is the root cause of the elk conflicts. They point to the original elk management plan from 1990, which calls for a population "goal of 100, which is defined by winter carrying capacity, genetic availability and mortality", in the Takhini Valley. This disparity of perspectives creates the fundamental question of what is a sustainable population and how do we maintain it, while reducing the elk conflict. This report explains the options available, the feasibility of each, and the lack of a middle ground between agriculture and the current elk population.

2. Coordinator Position

The focus group in 2022 recommended that a Coordinator be hired by the Steering Committee to implement the goals and recommendations from the 2020-2022 pilot project.

2.1 Role of the Coordinator

In my role as Coordinator, I spoke with 22 landowners, 22 resident hunters and joined YFGA and YAA board meetings to help answer questions. There were 67 site visits to 13 properties and six elk were euthanized. On one property we set up a temporary electric fence around hay storage, but the elk never returned to test it. On another property we set up a variation of 3D electric fence around a field. To our surprise, the fence was never breached. It is unclear if the elk tested it, as there was a large amount of continuing conflict on other properties in the area. The euthanized elk were donated to various groups by COSB.

There was a specific list of responsibilities laid out in the focus group document for the Coordinator position:

"Building trust, positivity and collaboration by maintaining effective communications among farmers, hunters, and governments"

This was somewhat challenging as many of the stakeholders are untrusting of government, and despite my position being at arm's length, I was still viewed as a government employee. Having pre-existing relationships with a large number of the farmers and hunters, I was able to communicate effectively with most, although many felt that the role was mostly symbolic, intended to maintain communication, but lacked the capacity to offer new approaches or provide substantive solutions to the issues raised. This is elaborated upon further in this report.

"Coordination of hunters – helping direct hunting to areas where elk need to be deterred or redirected from agriculture properties"

My predecessor put seven hunters in contact with landowners, which resulted in one elk being harvested. I put seven hunters in contact with three landowners experiencing conflict. One elk was harvested, but it was by a landowner's son on their own property, so the outcome was not really the result of my involvement. This is a challenging task, as it is ultimately up to the landowner and hunter to come to an agreement, and landowners sometimes have concerns with activities of people they don't know on their properties. Hunter effort and ability is another factor that is hard to quantify but may have a significant impact. Without being on site with the hunter, I cannot take responsibility for what anyone will do.

"Fostering a team approach among the individual farmer, hunters, and conservation officers when devising an appropriate response to an elk encroachment"

The Steering Committee itself has representation from all three groups, so coordination is theoretically already there. In my own discussions with stakeholders, I found that they all felt that potential responses to elk encroachment are limited and ineffective, for reasons that are discussed later in this report.

"The development and maintenance of a reference map (hardcopy and digital) for participating properties and key areas"

Based on my discussions with landowners, site visits, collar data and my own observations, anywhere in the Takhini Valley that is not game fenced is a key area.

"Leading educational awareness for landowners and hunters on items of protocol, mitigations, and related assessments"

I found that most landowners and hunters were reasonably well aware of what is out there in all regards. In my interactions with all of them we discussed options, as laid out later in this report.

"Reporting on progress, challenges, success and general updates"

Monthly updates were provided to the Steering Committee until May, when there was less activity, and therefore no need for updates. In this report, which is presented to the Steering Committee, I

identify and discuss the various options for elk management, their challenges and successes, and I detail and discuss findings of various studies on the issue, both within and outside of the Yukon. It will serve as a major overall update.

"Liaising with Conservation Officer Services Branch, Yukon Fish and Game Association, Yukon Agricultural Association, Department of Energy, Mines and Resources, Department of Environment, Yukon First Nations and animal specialists accordingly to support implementation of the two-year pilot program."

I had regular communication with COSB, YFGA, YAA, EMR, and Environment at scheduled meetings, email, and phone conversations. I attended a YAA and YFGA meeting to help clarify some things with regards to elk. Emails were sent to Kwanlin Dun, Champagne Aishihik, and Ta'an Kwachan, however no responses were received.

There was a very high turnover rate within the Steering Committee, with only the chair being there for the full two-year duration. Both YAA and YFGA had a change in Executive Directors, both senior YG Biologist and Conservation Officers retired, and the original Elk Coordinator resigned, leading to my hire, so continuity of communication was often interrupted.

2.2 Effectiveness of the Coordinator Position

<u>Elk Conflict Deterrence</u>
Some farmers appreciated the increase in responsiveness I provided, but most were overall unsatisfied. The main reason for this is that I had the same tools at my disposal as COSB, which have been shown to be ineffective to date.

Collar data indicate that elk have entered approximately 55 properties since being collared, though this should be considered a minimum, as non-collared elk may have accessed additional locations. The perspectives of all landowners are not fully known, so not every instance should be assumed to be a conflict. Based on my discussions with landowners, most do not view the presence of elk on their properties positively, particularly when there are more than 15 or so animals. However, my understanding is that the number of reported elk-related complaints is considerably lower than the number of actual incidents.

Landowners explained that, over the years, reporting elk conflicts typically results in a Conservation Officer, or now the Elk Coordinator, responding, discussing fencing options, possibly hazing the elk, and then departing. The elk often return shortly afterward, leading to very temporary relief. Because this pattern has not produced satisfactory outcomes, many landowners no longer see value in reporting incidents.

For my part as Coordinator, after a complaint was received, I would arrive on site and be shown the damage attributed to the elk. I would then explain that the only immediate options are:
1. provide information on fencing,
2. haze the elk off the property, or
3. euthanize the elk

Most landowners knew that funding for game fencing was available. The absence of fencing on their properties generally reflected a lack of interest in adopting this measure, for reasons discussed later in this report. Landowners who were unfamiliar with the program were informed accordingly. In some cases, landowners did not wish to have an elk dispatched because the circumstances did not justify such an action, or it was not safe to proceed. When elk were present, they were either hazed or just documented. It was well known that the hazing provided very short term relief, so some landowners opted not to have the elk hazed, knowing it would not last very long, and was likely to cause more damage to their property.

While the use of hunters is technically a fourth option, it is not an immediate one as it requires coordination, permissions, and other considerations discussed elsewhere in this report.

Several agricultural properties experienced significant elk conflict this winter. One property had approximately 30 elk feeding in the field and later in their stored livestock feed for more than four months. Multiple deterrence attempts—by both hunters and myself—failed to change elk behaviour and merely resulted in additional fence damage. The landowner continues to experience ongoing losses as of April 3 and still has no reasonable, effective tools to protect their feed or fields.

Another property saw roughly 100 elk feeding among their horses. One horse received a gash on its cheek, likely from an elk antler, and several horses escaped through fences the elk had knocked down, ending up on the road. To reduce conflict, the landowner was forced to feed twice as much hay as planned to prevent fighting between elk and horses until the horses could be relocated. The 39 horses were moved to another property, and once the feed source was removed, elk conflict stopped immediately. This relocation was one of my few successes in reducing conflict. However, the landowner experienced significant financial and psychological stress while the elk were present, and continued financial strain having to board the horses on another property, while not being able to use his own land. As anticipated, within a week of the horses being removed, the elk shifted to another agricultural property, creating new conflict there.

<u>Coordinating and Liaising</u>

In terms of coordinating all stakeholders, one issue that became clear is the differing objectives with regards to elk management between the Department of Environment and the Agricultural Branch. This has led to conflicting information and difficulty trying to come to solutions.

The Department of Environment has suggested a few farming methods that will reduce elk conflict. These are to stop swath grazing and grazing standing crops. Both of these strategies involve leaving what is considered an attractant in a field, which is much harder to secure than if it were baled and stored in a designated place. If a field grazing technique is used, the landowner is not eligible for compensation for losses due to elk. The feeling is that by removing the primary attractant, conflicts would be reduced. Another idea along the same vein, but more intense, is to till the stubble into the ground after the crop is harvested. This leaves no edible residue, only dirt, so it is of no interest to elk. This is only practical on annual crops such as oats. For perennial crops, like grass or hay, that make up most of Yukon agriculture, it is not a viable option.

By contrast, there is a growing interest in the Agricultural industry towards regenerative and sustainable farming practices and reduction in greenhouse gas emissions. Swath grazing and grazing standing crops are very practical examples of those. They eliminate baling, transporting for storage, transporting to feed, and manure spreading, by letting the livestock do this on their own. This saves producers significant time and fuel expenses. There are also programs promoting no-till and reduced-till farming practices. Less tillage of the land can improve soil health, water retention, biodiversity, crop yield and it reduces erosion, labour and fuel costs.

Mediating between these diametrically opposed views of the two departments is beyond my capability.

In terms of my input to the Steering Committee, this report details the arguments for and against various options and why they are or are not effective. This may provide some guidance into determining policies and solutions in the future.

Application of Range Scale Deterrence

Conditioning elk to avoid agricultural properties was a primary recommendation for the Steering Committee and Coordinator position, but was out of the scope of both. It implies that quicker responses to on farm elk interactions would help condition elk away. This is not supported by past attempts in the Yukon, or any research I have found from other jurisdictions using the tools currently available. Sections 3 and 4 of this report discuss various options for deterrence and their pros and cons and illustrate that a range scale deterrence method would require a major political decision.

Increase Farm Specific Options for Nuisance Elk

From my research and conversations for this project, I found that there have been no new developments in elk mitigation strategies in the last twenty years. All known options have already been tried. Sections 3 and 4 discuss other possibilities.

My response to specific recommendations of the Steering Committee on this issue are:

“Directing hunters to target areas where elk are using agriculture properties” This refers to conflict hunts, which have been used in some form or another since 2013 in the Yukon. They have not produced effective results in terms of lowering elk conflict if elk are harvested at a sustainable level. As mentioned earlier, herd sustainability is a primary goal of the elk management plan. For elk hunting to be an effective tool to reduce conflict, there needs to be a policy shift, as discussed later in this report.

“Engaging directly with landowners to encourage appropriate responses to elk on their properties”. I discussed with landowners the fact that fencing is the best option, but that it takes time and money. I have suggested to some that they allow hunters permission to hunt, but this is more to give a hunter an opportunity than to expect the conflicts to be resolved. Depending on scheduling, this also may not be a timely response. Hazing and dispatching are the other options, with neither producing long lasting results, according to various studies and first-hand experience, discussed

later. Generally, the landowners failed to see the benefit of any of the responses, similar to their experiences with COSB in prior years.

“Ensuring resources are made available to respond quickly to elk-agriculture interactions with a wide range of deterrents” In terms of the current deterrent options, fencing and hunters are usually slow responses. Dispatching and hazing can be onsite quickly, but it is well known that they are not long-term effective tools, as illustrated later in this report.

“Implementing a process and procedures that help coordinate and communicate how agriculture property owners, the Coordinator and COSB are able to respond.” I established relationships with all groups, and found that all are aware of the current limited response options and their lack of effectiveness.

“COSB issue Authorized Kill Permits to farmers, dispatch elk, or oversee extreme hazing for appropriate response to each situation.” These have been implemented, however research and my discussion with farmers indicate that the kill permits, dispatching elk, and extreme hazing are not long-term effective strategies to limit elk conflict, for reasons discussed later in this report.

The Steering Committee was supposed to have input on the Permit Hunt Authorization, but that was severely impeded as the committee didn’t receive that data from the representative on the Committee from the Department of Environment until months after all the decisions were already made. This was a major procedural oversight, but the end result is still unlikely to have a significant impact on conflicts as the permits are regulated by what the Department deems sustainable, as discussed later.

“Steering Committee will examine alternative hunting methods for future hunting seasons.” Hunting at permit levels that are currently considered to be sustainable by Environment is not enough to affect elk behaviour. Alternative hunting methods may be more appealing to landowners to allow hunting on their property, but it does not change the current regulations, such as the 1km permission requirement from a dwelling, discussed below.

<u>Streamline Hunting Activities</u>

As mentioned, if the harvest level is to stay within what the Department of Environment says is sustainable, hunting is ineffective as either a short term or long-term elk deterrence tool. While the names have changed over the years, Wildlife Act permits, Permit Hunt Authorizations, and Conflict Hunt Permits, when at sustainable levels, have produced no results. Streamlining any hunting would do little to affect conflicts without a fundamental change in thinking/policy regarding harvest levels and elk populations.

<u>Support Fencing Options</u>

Studies in other jurisdictions and Yukon projects have shown that 8’ game fencing is the only highly effective option for keeping elk out of agricultural properties. However, it has many significant negative aspects. It is very expensive, it just moves the problem from one property to another without addressing the root cause, it can cause traffic issues trapping elk between fences and the highway, and it impacts the movements of all animals larger than a rabbit. For these reasons, some landowners are not interested in game fencing.

3D electric fencing was trialed on two Yukon properties before the Steering Committee was formed, with some success, but both properties have taken it down and replaced it with 8' wire fence due to elk breaching it. They stated that 3D is less effective and more maintenance. This is consistent with other jurisdictions' findings. Electric fencing is a psychological barrier, not physical, so eventually there is enough external pressure (cold weather, food scarcity, deep snow) that the elk breach the fence. Electric fence can be used as a deterrent, but should not be thought of as a solution.

8' game fencing all of the agricultural properties is the only way to maintain the elk population at its current level and not have conflicts. Estimations are that this would cost $15-20 Million, and likely be met with resistance from some landowners, environmental groups, and those concerned with government spending. There were conflicting opinions amongst biologists on the committee as to whether or not the elk population would be able to maintain its current level if all agricultural properties were inaccessible to elk.

3. Specific Conflict Mitigation Strategies in More Detail

3.1 Hazing/Harassment

Hazing or harassing of elk is a long standing and most obvious form of conflict mitigation. In essence, you create a negative pressure on the elk when they are in or entering a conflict. There have been many different styles and techniques used. Bear bangers, motion activated sirens or propane scare cannons on fence lines, guardian dogs, wolf silhouettes, wolf urine, paintball guns, simulated hunting, pursuit on snow machines, and shouting have all been used in the Yukon, none of which produced long term positive results. Even a property with a dog mushing business on site had elk conflicts within 100 meters of their dog yard. The 2019 Elk Ag Working Group Report stated the same results. The elk will initially modify their behaviour because of the hazing, but sooner or later they realize there is not a real threat and return to the conflict area. The more the elk are exposed to hazing, the less effective it becomes. I have seen the elk return within a few hours after very aggressive hazing.

Hazing begs the question of where do we expect the elk to go? Along the Alaska Highway it is of immediate concern due to potential traffic collisions. Elsewhere, the elk are chased off a very attractive food source where they can either go to another unfenced farm with good feed or go into the brush and eat lower quality natural feed.

Studies suggest it can be more effective when used in conjunction with other measures, especially hunting and habitat improvement, but on its own, hazing is of little value.

3.2 Hunting

The primary reason elk were introduced to the Yukon in the 1950's was to give a new big game opportunity to hunters in an attempt to take the pressure off native species like moose and caribou.

Hunting elk began in 2009. Harvest levels in the Takhini Valley have ranged from 3 to 35 elk a year, with an average of 13.4. YG biologists have stated that for a population between 200 and 250 animals, a maximum harvest of 11 animals is sustainable. Harvest success averages around 44% year to year so 25 elk permits could be issued a year with a reasonable expectation of 11 elk being harvested on average. 2022 had 11 permits issued with 1 elk harvested, 2023 and 2024 had 13 issued a year, and 7 harvested. Approximately 1200 people apply for an elk permit each year so the odds are very low that an applicant will be drawn. At the current rate of permits issued, it will take almost 100 years for everyone that applied in 2024 to get drawn for a permit, assuming no new applicants. Even if the permits are raised to 24 a year, which would still be considered sustainable, it would take nearly 50 years for everyone to get a draw so the hunting opportunities are extremely small and not particularly attractive to hunters.

There have been essentially two types of permits issued over the last 15 years of elk hunting. One is an 'any bull' permit, which is focused on giving Yukoners a hunting opportunity as the elk were originally intended. The other has had a few different names, but its primary objective is to have hunters help with elk conflict by harvesting one in a conflict situation.

The 'any bull' permits are very sought after because they have the least restrictions, similar to a moose or caribou tag. Any bull is legal within the prescribed zone: no antler point requirement, specified location, or shorter season. After the first 2 years of the elk hunt, there have been between 0 and 4 of these permits issued a year. With 1200 applicants, the vast majority will never draw this permit in their lifetime, meaning they will never get the intended hunting experience.

The other permits have had a variety of names over the years, but in essence they are all the same from a conflict management perspective. A hunter is issued a permit with the primary goal of dispatching a conflict elk, not any elk, with the hunter keeping the meat. Some have had sex restrictions, antler point restrictions, and 2 week seasons to allow many hunters opportunities and more sustained pressure. Permits have ranged from 0 to 70 issued a year, with 9 being issued in each of the last 2 years. Some hunters do not view this as a true hunting experience as it typically involves shooting an elk in a field after a call from a landowner. While they appreciate the meat they get, it does lack many aspects hunters typically desire, like connection to nature or mental and physical challenge. Many view it as a meat collection rather than a hunt. For this reason, some hunters only apply for the 'any bull' permit, and not the conflict hunt.

Sustainable levels of hunting have not resulted in a noticeable reduction in elk conflicts. The concept of an elk seeing another elk shot in a field and the rest of the herd abandoning that field is not accurate. The elk typically will move off when the hunter walks up to the dead animal, but they almost always eventually return - sometimes within a few hours.

Elk have been known to go nocturnal as they learn they are safe at night. They retreat from the fields before legal shooting light in the morning, and returning to the conflict area after dark in the evening, making harvesting extremely difficult.

Landowners have observed that there is a cycle in the relationship between elk harvest and level of conflict. Typically, when there is a high level of conflict a large number of permits are issued, and many more elk are harvested than in previous years. Then there are concerns that the harvest level is unsustainably high, so the permits are dramatically cut back. Over the next few years harvest remains low, conflicts increase until there is enough pressure that the number of permits issued needs to be increased again. We are currently at the high conflict part of this cycle, so it is reasonable to expect more elk permits to be available in the near future.

There is debate as to whether or not this cycle is caused by the level of elk harvest, or if it is a coincidence and other environmental factors are more to blame for the varying rate of conflict - things like snow load, winter temperature, food availability can all play a role.

3.3 Landowner Permits

The idea of landowners being allowed to harvest an elk for meat on their property has been brought up numerous times. It would make many landowners much more tolerant of elk on their property if they were allowed an opportunity to hunt elk themselves. This creates an interesting scenario, because although hunting does not do much to lower actual conflict, if landowners see the benefit of elk, the perception of elk conflicts would go down. Most landowners are in favour of this as a tool, but it should not be viewed as a solution because some feel the damage done by the elk far exceeds the benefit of harvesting one. There is opposition to this idea as non-landowners feel it is an unfair advantage given to landowners. Current landowners point out that there is no law preventing anyone from buying land in the conflict area, and that landowners have been paying the price for elk on their property for years already. The number of landowner tags would be very contentious if we are staying with the maximum of 11 elk harvested a year. Even if 5 permits a year were issued to landowners, there were approximately 55 properties that collared elk were recorded on, and one elk every 11 years is unlikely to satisfy many landowners. Apart from that, permits are not an option for properties with unwilling neighbours within 1km, as explained below.

3.4 Problems with Hunting

Under the Yukon Wildlife Act, you need permission to hunt within 1km of a dwelling. This creates significant challenges for agricultural landowners experiencing elk conflict, particularly when neighbouring residents do not want hunting activity near their homes. In some cases, the 1 km buffer covers an entire agricultural property, making hunting impossible. The Yukon is the only jurisdiction in western Canada with such a large mandatory buffer zone. While there is ongoing discussion about revisiting this regulation, it remains a controversial topic, even among landowners who experience elk conflict. Any regulation change would, needless to say, take years.

Landowners must also provide direct permission to individual hunters, which introduces additional barriers. Some landowners have stopped granting permission as a form of protest, believing that conflict hunts are ineffective and that government needs to take stronger action. Others refuse permission due to negative past experiences, such as unsafe shooting practices, alcohol use, or general disrespect to the property and equipment. Some simply do not feel comfortable with

unfamiliar individuals carrying high-powered rifles on their land, especially with children and livestock around. Even when landowners are willing, they may only allow access at certain times, which can be difficult for hunters to coordinate. Although facilitating these permissions was part of the Coordinator's role, without knowing either party, I could do little beyond exchanging contact information. Unless accompanying the hunter, there was no way to ensure landowner requests were followed.

Alternative hunting methods is a topic that is often brought up, but it has two major problems. Firstly, the Wildlife Act does not distinguish between rifle, bow, muzzle loader, or shotgun hunting, so all the same rules would apply, including the 1km permission. There may be more of an appetite to change the Act for weapons with much shorter ranges, but it would be a government decision. The second issue is that if the same number of elk are harvested, the results would be the same, regardless of if the elk was shot with a bow or rifle.

As previously stated, hunting elk at the rate that is considered sustainable has not had an impact on reducing elk conflict to date, so there is no reason to think it would going forwards. Hunting should not be thought of as an elk conflict reduction tool. There is some evidence that a higher than sustainable harvest has had a positive effect on conflicts. That could well be thought of as using hunting as a mechanism for herd reduction, as opposed to hunting as a tool to reduce conflict in and of itself.

Overall, I concluded that there are very few hunting opportunities, the quality of these opportunities is debatable, and hunting is an ineffective conflict management tool if herd sustainability is the primary objective.

3.5 Euthanasia

Euthanasia has been the tool of last resort for COSB and my role as Coordinator. There were nine elk euthanized during this pilot program. Similar to hunting, the lethal removal of an elk did not have a lasting impact on reducing conflict in any of these situations, even when entrails were left onsite. In one case, the elk returned to the same field within 9 hours.

3.6 Wildlife Act Permits

One unique tool for this Steering Committee was the ability for landowners to get a Wildlife Act permit that would allow them to dispatch a conflict elk on their property. Seven such permits were issued during the pilot project, with zero elk being dispatched. Permit holders were not allowed to keep the meat but were legally responsible for it until it was turned over to COSB. This was the primary reason no landowners utilized their permit: it would be a lot of time and effort with no appreciable reward. As noted with hunting and euthanasia, removal of a single animal has shown to have no meaningful impact on the conflicts. Landowners believe if they do not get the meat and it won't reduce the conflicts, what is the point of going through the effort.

I believe all hunting, euthanasia, and Wildlife Act permits should be viewed the same. It is a person shooting an elk. The elk's behaviour is no different regardless of who pulled the trigger or the name of the permit giving them the authority to do so. The Yukon experience is the same as other jurisdictions in that dispatching small numbers of elk is not an effective tool for conflict mitigation. There is local knowledge that suggests when higher numbers of elk are shot, the conflicts are reduced, but that raises the question of sustainability of the herd.

Hunting, Wildlife Act Permits, and Euthanasia could be useful tools as a means for herd reduction or exclusion from an area, but at the current rate, they should not be thought of as effective.

4. Possible Solutions

4.1 Habitat Modification

This was looked at in depth in 2017 and the report written then is in the Appendix. It looked into diversionary feeding, fire, lure crops, and enhancement of native vegetation. Diversionary feeding is intentionally feeding elk, giving them a high value alternative to agricultural properties. This has been done in other jurisdictions for over 100 years, successfully reducing conflicts, but at the same time it has been shown to increase potential disease transmission, is resource intensive, has resulted in population growth in some areas, and raises ethical and sustainability questions about feeding wild animals. It was deemed the most likely to be effective in elk conflict reduction by the consultant in the report, but the working group said the cost and commitment "…is not justified at this time." Fire can reduce forest succession and make elk habitat more productive, but the group felt the risk of that solution was too high for the reward. Lure crops are when an area is planted to 'lure' the elk away from agricultural fields onto a designated field. This was not thought of as viable as the timing would be difficult and may send mixed messages as the elk would not know what fields were acceptable and what weren't.

4.2 Removal of Feral horses

A 2010 carrying capacity study for elk in the Takhini Valley identified that feral horses compete with elk for food in the elk core range. It suggested there is a 64% overlap in diet between elk and horses. Horses have a much less efficient digestive system, so they require more food per pound, and they have top incisors where wild ungulates do not. This allows the horses to graze lower to the ground, slowing regrowth.

The study claimed that with 22 feral horses present in the study area, the carrying capacity was 64 elk. The study area was entirely in the elk core range, where coincidentally, the elk population survey found 22 feral horses in 2025. If all the horses were removed, the study area could support 124 elk, almost double than with horses. Removal of the feral horses could be an aspect of a larger plan to make the core area more appealing to elk, thus keeping them there as opposed to in farmers' fields where conflicts occur.

4.3 Fencing

8’ game fencing is the only option that has consistently worked. However, as discussed above, there are numerous problems with it. It does seem reasonable to expect that hay storage be fenced, as it is a very high volume of attractant in a small space, so costs and other impacts are minimal. This would resolve some conflicts, but it does not address the issue of elk eating the hay that is placed outside of the containment area for the landowners’ animals to eat. To keep elk out of that area, the whole pasture would need to be fenced, which brings us back to all the other problems with fencing large areas.

Apart from the practical aspects, fencing is prohibitively expensive for a large number of landowners, even with subsidies. Costs vary from $18-$25 per linear foot, while funding will cover up to $10. The funding program only has the capacity to fund one or two major fencing projects a year, and those landowners must have access to significant capital themselves to cover the balance. This creates a whack-a-mole situation, where elk cause a problem on one property, that property gets fenced, so the elk move to another unfenced property, just shifting the conflict. This solves the problem for the financially strong farmer, but does nothing to help the bigger picture of elk conflict. For fencing to be a solution, all properties must be fenced. A rough estimate puts the cost of that between $15-$20 million.

Fencing is unpopular to some landowners for a few reasons. Some feel it is a waste of tax dollars and the resources would be better used elsewhere, even on their own property. Others do not like the esthetic, with some colorful analogies about being incarcerated on their own property. Game fencing is also a complete barrier to all animals larger that a rabbit, which negatively impacts natural movements. In some jurisdictions, wolves have learned to use these barriers to their advantage when hunting. Along the Alaska highway, game fencing traps the animals in the highway right of way, creating a potential traffic hazard.

Electric and 3D fencing have had limited success in the Yukon, which is consistent with studies from other jurisdictions. Being a psychological barrier, not a physical one, eventually the desire for the food reward overcomes the brief negative experience. Food scarcity, deep snow, extreme cold temperatures can all be factors that push an elk to breach a fence. Under low pressure scenarios, these types of fences have been effective, but the more fencing there is up, the less effective they become. For this reason, they should not be thought of as a long term, high effectiveness deterrent.

4.4 Compensation

Compensation for elk damage does nothing to solve elk conflicts, but it does ease the financial burden on farmers and is used in many jurisdictions. In the Yukon, compensation can be paid out for time spent harassing elk, fence damage, loss of stored feed, and crop loss in a field. However, many farmers have stated they are not farming to be compensated for, and it does not account for the psychological toll the elk take on the landowner. If elk damage a fence and livestock escape

and cause a motor vehicle accident, the landowner is legally responsible. Receiving compensation can also have a negative perception from non-agricultural producers.

4.5 Economics of Farming Around Elk

One example property in the Ibex Valley buffer zone with frequent elk conflicts would require 6,800 feet of fencing to keep elk out. At $25 per foot, it would cost $170,000. Current funding arrangements will pay up to $10 per foot, meaning taxpayers would contribute $68,000, and the landowner would need to provide $102,000. It is a 40 acre property, with about 30 acres that would be in production growing a forage crop. A yield of 1,000 to 3,000 pounds per acre of hay is to be expected without irrigation, so on 30 acres somewhere around 30,000 to 90,000 pounds would be grown. At $0.25 per pound, gross revenue would be between $7,500 and $22,500, averaging $15,000 a year. In the Yukon, roughly 50% of that goes to production expenses. If the landowner put all of their profits, $7,500 a year, towards paying off the fence, it would take over 13 years to cover the cost of the fence, while keeping no money in the process. However, this would stop the conflicts on the property.

If we take this same property and instead of game fencing, the landowner applies for compensation, the numbers are as follows. It has been established that elk damage to a hay field reduces yield by about 20% in the Yukon. Assuming the elk damage half the property, an average yield of 54,000 pounds would be produced, and the government would cover the cost of the remaining 6,000 pounds. It would cost taxpayers $1,500 a year, the farmers gross revenue would be unchanged, and they would have access to their profit. At this rate, it would take over 45 years of continued elk damage to equal the $68,000 paid for the fencing project. This does not account for inflation, damage to livestock fences, livestock injury or escape, mental strain, and other factors, but it could easily be argued that compensation is much more cost effective for the government and landowner than fencing. However, the conflicts would not stop, and it has been mentioned that farmers are not in the business of compensation, they want to grow crops.

This property is a long, narrow shape so it is not particularly efficient from a fencing standpoint, but it is also relatively small from an agricultural standpoint. Either way, it does provide an interesting, real world example.

There are 189 agriculturally zoned properties in the wider conflict area, with 25 of them game fenced, leaving 164 unfenced. Not all of these properties are in active production, but in order to get a development permit on those properties, they must prove they are primarily used for agriculture. There are also government grants incentivizing land utilization, so it is likely more properties will come into agricultural production.

4.6 Individualized Elk Deter Plans

This was deemed an important aspect of the Coordinator's role. The idea was to come up with a plan for each property, as every situation is unique. While this is true, unfortunately, the solution is always the same: 8' game fence or remove attractants. Fencing has been discussed above.

Removing attractants is one of the most commonly suggested solutions for reducing elk conflict, but in practice it is extremely difficult, costly, and often defeats the purpose of owning an agricultural property.

In many cases, the land itself is the attractant. Forage crops, hay fields, and pasture provide high-quality food that elk will continue to access regardless of deterrence efforts. The only practical way to remove this type of attractant is to till the field under, which is expensive, labour-intensive, widely considered poor farming practice, and only possibly with certain crops. The alternative—ceasing farming altogether—is not a viable option for most producers and results in significant economic loss.

Hay used to feed livestock is another major attractant. Game fencing a hay storage area is much less costly that fencing a field, but it still takes some initial capital. If storage is not fenced onsite it has to be moved to a secondary storage site, which dramatically increases fuel and logistical costs. Even if stored hay is inaccessible, this does not address elk consuming hay that is fed out to livestock in the field. This issue was reported on nine properties during the last two winters with no viable solutions available.

The only effective way to eliminate attractants is to remove the livestock themselves. This was successfully done on one property as a last resort, and elk conflict stopped immediately once the horses were moved. However, the landowner lost significant boarding revenue and was left with a property that no longer generated income.

The Steering Committee recognized that providing essentially the same deterrence plans—fencing and removing attractants—for every property was not an efficient use of time or resources. These were the only tools that consistently showed any effectiveness, and repeating them in individualized plans added no new value.

5. Potential Solutions

The area of elk conflicts in the Takhini Valley should be broken down into three distinct areas, each with their own unique situations.

<u>Mendenhall</u>

The Mendenhall area is relatively densely populated and has a mix of agricultural and country residential properties. Elk conflicts occur on both, when attractants are present. Some residents have small properties, but they keep horses and therefore have horse feed, which elk can get into. Fencing and compensation are the only options here, due to the close proximity of many dwellings to each other and being in the elk core range. I feel that secured hay storage should be the responsibility of the landowners, but for large fields, compensation is much more cost effective and practical.

Stoney Creek

There are two agricultural properties right in the middle of the elk core zone. One is completely game fenced. When the gates are open, the elk enter, but that is easily solved by closing the gates. The second is not fenced and the elk are consistently there year-round. Hunting is an option due to the lack of nearby dwellings. Given it is in the core zone, a large amount of hunting pressure is probably not desired as the elk are essentially where we want them. Elk calve there and many spend their time year round in the vicinity, if not actually on the property. A landowner tag may help ease the stress on the farmer and lower their perception of conflict. Otherwise fencing and compensation are the only options.

East of the Takhini River Bridge

This is where the vast majority of conflicts arise, and where a large portion of Yukon agriculture takes place. This has been designated a 'buffer zone' between the core area to the west, and the exclusion zone to the east. It has also been the subject of the various hunting approaches used. Landowners have pushed for an exclusion zone in this area, although the definitions of exclusion zone vary depending on who is asked. Given that the current number of elk, at 270, is beyond even the biologists' recommended sustainable level, I feel that the only practical solution for this area is a significant herd reduction through hunting, until elk no longer live in this conflict zone. This would be very cost efficient and provide many Yukoners with hunting opportunities, as was originally intended when the elk were introduced. There would likely be a huge initial influx in elk hunters, which could cause problems for landowners and COSB, but it would level out over time. A mandatory elk hunting course, similar to the one offered for bison when over the counter tags were first offered, could help. The harvest levels would be well over what is considered sustainable and would most likely significantly lower the overall elk population. There is an argument that if elk are dependent on farmland, then they are not a self-sustaining herd to start with. Mitigating measures could be taken in the core zone, such as removal of feral horses and/or diversionary feeding, which could help the population there by decreasing the need for elk to move away to the buffer zone to the east.

The elk population has rebounded numerous times after unsustainably high harvest levels in the past. They may find sanctuary in areas that hunting is not permitted due to a dwelling within 1km that does not give permission, or the no hunting corridor along the Takhini Hotsprings Road. They may also go nocturnal.

BC Jurisdictional Scan Discussion

In terms of new options, a jurisdictional scan of strategies for mitigating elk agriculture conflict was done in May of 2025, prepared for the BC Ministry of Environment by University of Alberta and King's University Department of Biology. It is very similar to this report in its findings and analysis, but it did have a few recommendations that were a little confusing.

1. "Aversive conditioning using drones", which is hazing with a drone. There is no reason to believe this would produce any different result than any other hazing technique. It suggests using shouts and sirens on the drones, which have repeatedly been proven ineffective already as a long-term strategy.

2. “Aversive conditioning that integrates sight, sound, and physical discomfort”. This is just combining three types of ineffective hazing in hopes that the combination will produce a different result. Physical discomfort means paintballs or other very short range, non-lethal projectiles. They are very difficult to administer, as the animals usually run off before being in range. Even if contact is made, the animals typically return, as in all other hazing techniques.
3. “’Hunting for Fear’ behavioural conditioning project” is a conflict hunt, which, as discussed above, has consistently produced ineffective results.
4. “Visual deterrent fencing using 3D turbo fladry and mylar fladry top lines”. This is essentially putting flagging tape or some other fluttery ribbon on livestock fences. In its own rationale, the report says “their deterrent effect tends to decline over time as animals habituate or find alternate crossing points”. This is consistent with attempts in the Yukon.

The study recommends a pilot project testing all 4 of these ideas, which I strongly disagree with. The findings in the same jurisdictional scan illustrate that none of the techniques are likely to work. There is no reason to think that further testing would produce different results, but it would incur significant costs.

Being cognisant of the guiding principle of maintaining a sustainable elk population, extirpation of the elk needs to be explored, based on my conversations with Yukoners, including members of the hunting community. While most people would answer the question of ‘do you want elk around’ positively, many are not considering at what expense. Farmers have complained about financial and psychological burdens of having elk around, and large amounts of government resources go into these animals. In 2024/25 fiscal year, $259,770 were spent on fencing projects and $25,537 on crop and infrastructure damage compensation by the government. The elk coordinator position was advertised as $175,000 over two years. It is difficult to put a dollar figure on the time that biologists, conservation officers, and agriculture branch employees have put into elk on the public side, as well as YAA and YFGA. However, it is not unreasonable to guess that well over $450,000 a year has gone into elk management in the last 2 years. After learning about this and the very limited hunting opportunities, some people began to wonder if it is all worth it. The 2016 elk management plan talks about viewing opportunities as valuable. Elk are typically seen near the Alaska highway, which can cause a traffic hazard. First Nation participants on the 2016 working group also emphasized that spending resources on elk divert resources away from moose and caribou. Many Yukoners questions why we put so much money and effort into a non-native species.

With a suggested maximum harvest of 11 elk per year, the amount of hunting pressure taken off moose and caribou is not noticeable when compared to the approximately 500 moose and caribou harvested a year. Introduced bison, with around 250 harvested a year, provide far more alternative hunting opportunities to native species than elk do, and are much less resource intensive and controversial. It could be argued that bison more than fill the role that elk were intended to play, so what do the elk provide that justifies their cost.

What it boils down to is that the government needs to decide if they want to support Yukon agriculture, or whether maintaining a sustainable elk herd is more important. There are agricultural landowners waiting for this decision before deciding how, or in some cases if, they will utilize their land. Right now a sustainable elk herd is being prioritized. Farmers have to game fence their fields,

or nothing can be done. Those who cannot afford it, or are against game fence, are left with no options. There seems to be effectively no middle ground.

A clear policy direction is needed. If the Government intends to prioritize agriculture, then a corresponding reduction in the elk population will be necessary, and the extent and location of that reduction must be defined. Without such a fundamental decision, discussions and meetings will continue without leading to meaningful action. Considerable research has already been conducted; it is now time for a definitive policy decision.

6. Other Observation

It became clear over the year of my employment that it is very difficult to justify the Coordinator position as a full-time role. The position was originally designed for 37.5 hours per week over 46 weeks per year. After my initial period of research, outreach, and familiarization with the issues, the amount of meaningful work dropped off sharply. To avoid wasting project resources, I billed only for hours actually worked, which averaged approximately 14 hours per week over the course of the year.

From mid-November to mid-March, elk conflicts did occur, and as Coordinator, I attended these incidents. However, being given the same tools and authorities that Conservation Officers already had, that were ineffective in years prior, it is not surprising that the outcomes were largely the same. With the exception of one case where all attractants were removed, all other efforts to mitigate conflict were unsuccessful. Even during the conflict season, meaningful work did not come close to the prescribed 37.5 hours per week. I could have spent more time hazing and euthanizing elk, but as discussed earlier, neither has been shown to be ultimately effective. I chose not to do the same thing over and over again, expecting a different result, and in doing such, it saved the project considerable money.

Some farmers expressed appreciation for my involvement, noting that it made them feel less helpless during conflict events. While this emotional support is meaningful, the overall on-the-ground impact of the position did not seem to justify maintaining it as a full-time role.

If the position had a more defined mandate tied to a specific, actionable goal—such as coordinating game fencing for all affected properties, implementing an exclusion zone, or developing a diversionary feeding program—it could add real value. In its current form, however, without a concrete objective or new tools to implement, the role does not seem worthwhile, as it does not reduce elk conflicts.

Sources:

An Evaluation of Habitat Enhancement Options for the Takhini Valley Elk Herd; Morrison 2017

Takhini Valley Elk-Agriculture Regional Risk Assessment: Summary of Results; Ferris 2018

Implementation Report: Actions to acknowledge and address concerns about conflicts between elk and agriculture; Elk Ag Working group 2019

Habitat use and ecologically sustainable carrying capacity for elk (Cervus elaphus) in the Takhini Valley, Yukon; Chambers, 2010

Elk-Agriculture Management Pilot:

Recommendation to Deputy Ministers for Elk-Agriculture Limited Exclusion Zone

Last updated: August 25, 2023

Note: *This is a living document and will be reviewed to adjust as needed during the implementation of the pilot program.*

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Introduction and Background

Following work completed by the Elk-Agriculture Focus Group in Fall/Winter 2022/23, the Elk-Agriculture Steering Committee was established in May 2023. The Steering Committee began work to put forward a recommendation for an additional limited exclusion zone. The intent of the additional limited exclusion zone is to apply a consistent, timely and intensive deterrent effect where most elk-agriculture interactions occur.

At present, the 2016 Elk Management plan defines three management zones in and surrounding the Takhini Valley. They include a core zone, an area historically used by the majority of elk in both herds. In this area, hunting of elk has been prohibited and agriculture developments directed towards planned agriculture areas. There is also a buffer zone, located east, west and south of the core. This area is used by elk, especially in the winter, but it is used less frequently than the core. Within the buffer zone are a large number of agricultural dispositions where the majority of elk-agriculture conflicts occur. Seasonally, elk hunting is allowed in the buffer zone, though restrictions apply. Outside the core and buffer zones exists the exclusion zone, which includes the remainder of the Yukon. The exclusion zone was designed to limit elk range expansion. If an elk should wander into this zone, a hunter can remove it, regardless of the animal's sex or the season. The hunter only needs to acquire a permit.

Recommendation for Elk-Agriculture Limited Exclusion Zone

The Steering Committee recommends the implementation of a pilot 2-year Elk-Agriculture Limited Exclusion Zone in the Takhini and Ibex Valley (see Appendix A for map). The Elk-Agriculture Limited Exclusion Zone will have the effect of an intensive deterrence zone to limit elk-caused damage to agricultural properties. The defining features of the Elk-Agriculture Limited Exclusion Zone are:

1. Immediate and coordinated response to elk on agricultural properties via a team approach;
2. Development of individualized deterrence plans on agricultural properties; and
3. Data collection and reporting back to Steering Committee on effects of deterrence efforts.

The Elk-Agriculture Limited Exclusion Zone is distinct from the 2016 Elk Management Plan exclusion zone in that this pilot project is a 2-year implementation project to prove the viability of an approach to deter elk from agricultural properties.

The approach will involve a team (Table 1) that will apply a proactive or reactive actions in a timely or quick manner to deter elk. Principal among the team approach will be the landowners and Coordinator. The Coordinator will engage with landowners to develop an individualized (property/farm specific) deterrence plan, which can occur on a proactive or reactive basis. Working with the Coordinator, the landowner will be empowered to implement a suite of options ranging from hazing to the onsite issuance of permits to dispatch problem elk. Successful implementation of the Elk-Agriculture Limited Exclusion Zone will require a consistent team effort.

The specific deterrence measures will only apply in the Elk-Agriculture Limited Exclusion Zone (Map) and will be implemented by members of the team as relevant (Table 1). All activities implemented within the Elk-Agriculture Limited Exclusion Zone will not compromise the guiding principles of safety for all stakeholders and will be implemented with respect to applicable regulations.

Table 1: Deterrence team members and roles/authorities

Deterrence team member	Role and responsibilities	Authority/available deterrence measures
Coordinator	-operate as the central resource and point of contact for landowners and hunters -reports to Steering Committee -engage with every landowner to develop property-specific deterrence options, which may include the issuance of *Wildlife* Act permits -promote the uptake of deterrence options -develop and utilize a reference map with permissions within the 1 km zone around residences -communicates regularly with Conservation Officers -access and add data to the Department of Environment's Human-Wildlife Conflict App to document, record and submit all elk conflict interactions.	-issuance of *Wildlife* Act permits (i.e. kill permit or hazing permit) -implementation of innovative deterrence methods -provide information on fencing options and facilitate installation for interested landowners -issuance of *Wildlife* Act permits to landowners -publication access to the Department of Environment's Human-Wildlife Conflict App

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Landowners*	-strong landowner participation is required for successful implementation -become familiar with the pilot and goals with support from Coordinator as needed -work with Coordinator to develop and implement property-specific deterrence options as part of the deterrence plan -facilitate communications and permissions for hunting	-*Wildlife Act* permits -installation of game fencing
Hunters	-become familiar with the pilot and goals -work with Coordinator and landowner as appropriate to support and implement deterrence options	-PHA or *Wildlife Act* permits
Conservation Officers	-provide operational and technical support to Coordinator -issue *Wildlife Act* Permits -respond to elk complaints and take action as required	-issuance of *Wildlife Act* permits -support the Coordinator in the assessment and issuance of permits -provide operational and technical advice on mitigation techniques and euthanization of wildlife
Two-Year Elk Pilot Program Steering Committee	-oversee, direct and provide support to Coordinator -provide general oversight of the implementation of deterrence measures to limit damage to agricultural properties -coordinate public communications related to the pilot -regularly communicate as a Steering Committee up to senior management on status of pilot implementation	N/A

*For the purposes of the implementation of the Elk-Agriculture Limited Exclusion Zone, "Landowner" includes but is not limited to: actively producing agricultural properties, small-scale non-commercial farming, and other residents and landowners in the agricultural zone.

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Note: In order to facilitate the accurate intake and resolution of elk interactions in the Elk-Agriculture Limited Exclusion Zone, all calls will route through Environment's Delta 1 24/7 TIPP line dispatch center and the Coordinator will be included in the notification protocols.

Additional implementation details:

- Permit conditions: Permit conditions related to the timely biological submission and government ownership of the wildlife will be retained in the Elk-Agriculture Limited Exclusion Zone.
- Issuance of Wildlife Act Permits: In addition to the Conservation Officer Services Branch, the Coordinator will have authority to establish the necessity of permit issuance on a case-by-case basis. Operational and technical support will be provided to the Coordinator by Conservation Officer Services Branch. The issuance of Wildlife Act Permits in this context would not include additional implementation criteria.
- Eastern Buffer Zone: Because of its proximity to the Elk-Agriculture Limited Exclusion Zone, a deterrence effect in eastern buffer zone is also anticipated. The liberalized conflict hunt can be focused in the eastern buffer zone to augment the influence of the Elk-Agriculture Limited Exclusion Zone.
- Use of Fencing: The Coordinator will communicate fencing options with landowners and facilitate the installation of exclusion fencing for interested landowners.

Additional background for recommendation:

Elk population, behaviour, health, and habitat considerations: In enacting an Elk-Agriculture Limited Exclusion Zone, a principal consideration comes from Goal 1 of the 2016 Elk Management Plan which states: "Ensure the Takhini and Braeburn herd remain healthy and self sustaining." To this end, we will be closely watching the number of elk that are being dispatched and will also be conducting better monitoring (collaring program) to ensure the herd remains at a sustainable level.

In preparation for the heightened monitoring, we have pre-deployed collars on individuals of the herd, giving us real time movement information. This will allow us to track their movements, determine their land usage and identify critical habitat and movement corridors. We will also be able to determine their responsiveness to our deterrence measures.

Agriculture property owner considerations: Property owner participation is essential for the success of the pilot Elk-Agriculture Limited Exclusion Zone. The pilot program has been developed to prioritize landowner participation, and to empower the landowner by allowing for direct involvement in implementing actions through a deterrence plan. Key factors for success of the Elk-Agriculture Limited Exclusion Zone pilot include the building of strong relationships among members of the deterrence team, and good documentation of both successes and challenges in order to understand the effects of deterrence actions on elk herd behaviours, and adapt deterrence efforts as needed.

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The Coordinator will also work with landowners to implement other mitigation efforts to limit elk damage to property, such as the installation of exclusion fencing, hazing, and protection of other infrastructure.

Property owners who participate will also provide advice and information for hunting activities.

Hunting and permitting considerations (including safety): There are currently four permit hunt authorizations and eight wildlife adaptive elk permits for hunting the Takhini elk herd. The season opens September 1 and closes March 31, 2024. The *Wildlife Act* and Regulations authorize hunting methods and regulates public safety and private property by requiring occupant permission to hunt within one kilometre of a residence. The Elk-Agriculture Limited Exclusion Zone will provide for general *Wildlife Act* permits that authorize the removal of elk within the one kilometre if required.

First Nations: The affected First Nations will be informed of progress towards the implementation of an Elk-Agriculture Limited Exclusion Zone by the Steering Committee. Representatives from the three First Nations (Champagne and Aishihik First Nations, Kwanlin Dün and Ta'an Kwäch'än Council) participated in the Focus Group initially, but then declined further participation due to capacity limitations, requesting that they be kept informed of the Focus Group's progress. Upon formation of the Steering Committee, a representative of Ta'an Kwäch'än Council has participated in Steering Committee meetings and correspondence.

Monitoring / Measuring / Evaluating: The Coordinator will be responsible for documenting, recording and submitting all elk conflict interactions using the Department of Environment's Human-Wildlife Conflict App. This data will be used in conjunction with collaring data to understand elk distribution and effects of the deterrence options.

Timelines: Upon approval of the recommendation, the Steering Committee will:

- Hire the Coordinator, who will be housed at the Yukon Fish and Game Association and supported by the Steering Committee.
- Develop and release joint communications strategy.
- Implement pilot project activities.

Regulatory Considerations: All applicable legislation and regulations will be followed during the implementation of the pilot project.

Communications: Engaging and communication with all stakeholders and public is especially important for this program to build relationships to address this elk-agriculture concerns in a collaborative manner. The Steering Committee is developing a Communications Strategy to be able to engage with all effected and interested stakeholders and public.

Appendix A: Map of Elk-Agriculture Limited Exclusion Zone

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Elk-Agriculture Coordinator Final Report

Submitted to Elk-Agriculture 2-Year Pilot Steering Committee – April 2026

Submitted by: Neil Cosco

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1. General Overview

Elk were reintroduced to the Yukon in the 1950's to relieve hunting pressure on native species, moose and caribou, by giving Yukoners another big game animal to harvest. Since then, elk have found their way onto agricultural properties and have damaged fences, stored hay, and crops. Elk Management Plans were created in 1990, 2008, and 2016. As the elk population grew and landowner issues persisted, the 2008 plan: Goal 5, Objective 3, Action 1 called for establishing a working group to develop a plan to manage elk-agriculture conflicts. The 2016 plan also called for an Elk-Ag Working group. This was subsequently formed, followed by a pilot project from 2020-2022, the findings of which were reviewed by a focus group. That group recommended a Steering Committee, which was struck in 2024 and led to this report.

The 2016 Elk Management Plan states that a self-sustaining elk herd is the first goal. The plan does not specify exactly what number of elk that would constitute, but YG biologists have stated that between 200 and 250 elk is desirable if we want to have continued hunting opportunities. Currently there are an estimated 270 elk in the Takhini herd. The plan further states that an expected growth rate would be 0 to 3% if the population is 200 animals, -0.5% to 2.5% with 180 animals, and -1% to 2% if there are less than 160 animals. It also says that at 100 to 120 elk, a new management plan would be needed, as there are concerns that the population would not naturally sustain itself at that number. Landowners spoken to in the current project generally feel that 200-250 is too many and that this large number is the root cause of the elk conflicts. They point to the original elk management plan from 1990, which calls for a population "goal of 100, which is defined by winter carrying capacity, genetic availability and mortality", in the Takhini Valley. This disparity of perspectives creates the fundamental question of what is a sustainable population and how do we maintain it, while reducing the elk conflict. This report explains the options available, the feasibility of each, and the lack of a middle ground between agriculture and the current elk population.

2. Coordinator Position

The focus group in 2022 recommended that a Coordinator be hired by the Steering Committee to implement the goals and recommendations from the 2020-2022 pilot project.

2.1 Role of the Coordinator

In my role as Coordinator, I spoke with 22 landowners, 22 resident hunters and joined YFGA and YAA board meetings to help answer questions. There were 67 site visits to 13 properties and six elk were euthanized. On one property we set up a temporary electric fence around hay storage, but the elk never returned to test it. On another property we set up a variation of 3D electric fence around a field. To our surprise, the fence was never breached. It is unclear if the elk tested it, as there was a large amount of continuing conflict on other properties in the area. The euthanized elk were donated to various groups by COSB.

There was a specific list of responsibilities laid out in the focus group document for the Coordinator position:

"Building trust, positivity and collaboration by maintaining effective communications among farmers, hunters, and governments"

This was somewhat challenging as many of the stakeholders are untrusting of government, and despite my position being at arm's length, I was still viewed as a government employee. Having pre-existing relationships with a large number of the farmers and hunters, I was able to communicate effectively with most, although many felt that the role was mostly symbolic, intended to maintain communication, but lacked the capacity to offer new approaches or provide substantive solutions to the issues raised. This is elaborated upon further in this report.

"Coordination of hunters – helping direct hunting to areas where elk need to be deterred or redirected from agriculture properties"

My predecessor put seven hunters in contact with landowners, which resulted in one elk being harvested. I put seven hunters in contact with three landowners experiencing conflict. One elk was harvested, but it was by a landowner's son on their own property, so the outcome was not really the result of my involvement. This is a challenging task, as it is ultimately up to the landowner and hunter to come to an agreement, and landowners sometimes have concerns with activities of people they don't know on their properties. Hunter effort and ability is another factor that is hard to quantify but may have a significant impact. Without being on site with the hunter, I cannot take responsibility for what anyone will do.

"Fostering a team approach among the individual farmer, hunters, and conservation officers when devising an appropriate response to an elk encroachment"

The Steering Committee itself has representation from all three groups, so coordination is theoretically already there. In my own discussions with stakeholders, I found that they all felt that potential responses to elk encroachment are limited and ineffective, for reasons that are discussed later in this report.

"The development and maintenance of a reference map (hardcopy and digital) for participating properties and key areas"

Based on my discussions with landowners, site visits, collar data and my own observations, anywhere in the Takhini Valley that is not game fenced is a key area.

"Leading educational awareness for landowners and hunters on items of protocol, mitigations, and related assessments"

I found that most landowners and hunters were reasonably well aware of what is out there in all regards. In my interactions with all of them we discussed options, as laid out later in this report.

"Reporting on progress, challenges, success and general updates"

Monthly updates were provided to the Steering Committee until May, when there was less activity, and therefore no need for updates. In this report, which is presented to the Steering Committee, I

identify and discuss the various options for elk management, their challenges and successes, and I detail and discuss findings of various studies on the issue, both within and outside of the Yukon. It will serve as a major overall update.

"Liaising with Conservation Officer Services Branch, Yukon Fish and Game Association, Yukon Agricultural Association, Department of Energy, Mines and Resources, Department of Environment, Yukon First Nations and animal specialists accordingly to support implementation of the two-year pilot program."

I had regular communication with COSB, YFGA, YAA, EMR, and Environment at scheduled meetings, email, and phone conversations. I attended a YAA and YFGA meeting to help clarify some things with regards to elk. Emails were sent to Kwanlin Dun, Champagne Aishihik, and Ta'an Kwachan, however no responses were received.

There was a very high turnover rate within the Steering Committee, with only the chair being there for the full two-year duration. Both YAA and YFGA had a change in Executive Directors, both senior YG Biologist and Conservation Officers retired, and the original Elk Coordinator resigned, leading to my hire, so continuity of communication was often interrupted.

2.2 Effectiveness of the Coordinator Position

<u>Elk Conflict Deterrence</u>
Some farmers appreciated the increase in responsiveness I provided, but most were overall unsatisfied. The main reason for this is that I had the same tools at my disposal as COSB, which have been shown to be ineffective to date.

Collar data indicate that elk have entered approximately 55 properties since being collared, though this should be considered a minimum, as non-collared elk may have accessed additional locations. The perspectives of all landowners are not fully known, so not every instance should be assumed to be a conflict. Based on my discussions with landowners, most do not view the presence of elk on their properties positively, particularly when there are more than 15 or so animals. However, my understanding is that the number of reported elk-related complaints is considerably lower than the number of actual incidents.

Landowners explained that, over the years, reporting elk conflicts typically results in a Conservation Officer, or now the Elk Coordinator, responding, discussing fencing options, possibly hazing the elk, and then departing. The elk often return shortly afterward, leading to very temporary relief. Because this pattern has not produced satisfactory outcomes, many landowners no longer see value in reporting incidents.

For my part as Coordinator, after a complaint was received, I would arrive on site and be shown the damage attributed to the elk. I would then explain that the only immediate options are:
1. provide information on fencing,
2. haze the elk off the property, or
3. euthanize the elk

Most landowners knew that funding for game fencing was available. The absence of fencing on their properties generally reflected a lack of interest in adopting this measure, for reasons discussed later in this report. Landowners who were unfamiliar with the program were informed accordingly. In some cases, landowners did not wish to have an elk dispatched because the circumstances did not justify such an action, or it was not safe to proceed. When elk were present, they were either hazed or just documented. It was well known that the hazing provided very short term relief, so some landowners opted not to have the elk hazed, knowing it would not last very long, and was likely to cause more damage to their property.

While the use of hunters is technically a fourth option, it is not an immediate one as it requires coordination, permissions, and other considerations discussed elsewhere in this report.

Several agricultural properties experienced significant elk conflict this winter. One property had approximately 30 elk feeding in the field and later in their stored livestock feed for more than four months. Multiple deterrence attempts—by both hunters and myself—failed to change elk behaviour and merely resulted in additional fence damage. The landowner continues to experience ongoing losses as of April 3 and still has no reasonable, effective tools to protect their feed or fields.

Another property saw roughly 100 elk feeding among their horses. One horse received a gash on its cheek, likely from an elk antler, and several horses escaped through fences the elk had knocked down, ending up on the road. To reduce conflict, the landowner was forced to feed twice as much hay as planned to prevent fighting between elk and horses until the horses could be relocated. The 39 horses were moved to another property, and once the feed source was removed, elk conflict stopped immediately. This relocation was one of my few successes in reducing conflict. However, the landowner experienced significant financial and psychological stress while the elk were present, and continued financial strain having to board the horses on another property, while not being able to use his own land. As anticipated, within a week of the horses being removed, the elk shifted to another agricultural property, creating new conflict there.

<u>Coordinating and Liaising</u>

In terms of coordinating all stakeholders, one issue that became clear is the differing objectives with regards to elk management between the Department of Environment and the Agricultural Branch. This has led to conflicting information and difficulty trying to come to solutions.

The Department of Environment has suggested a few farming methods that will reduce elk conflict. These are to stop swath grazing and grazing standing crops. Both of these strategies involve leaving what is considered an attractant in a field, which is much harder to secure than if it were baled and stored in a designated place. If a field grazing technique is used, the landowner is not eligible for compensation for losses due to elk. The feeling is that by removing the primary attractant, conflicts would be reduced. Another idea along the same vein, but more intense, is to till the stubble into the ground after the crop is harvested. This leaves no edible residue, only dirt, so it is of no interest to elk. This is only practical on annual crops such as oats. For perennial crops, like grass or hay, that make up most of Yukon agriculture, it is not a viable option.

By contrast, there is a growing interest in the Agricultural industry towards regenerative and sustainable farming practices and reduction in greenhouse gas emissions. Swath grazing and grazing standing crops are very practical examples of those. They eliminate baling, transporting for storage, transporting to feed, and manure spreading, by letting the livestock do this on their own. This saves producers significant time and fuel expenses. There are also programs promoting no-till and reduced-till farming practices. Less tillage of the land can improve soil health, water retention, biodiversity, crop yield and it reduces erosion, labour and fuel costs.

Mediating between these diametrically opposed views of the two departments is beyond my capability.

In terms of my input to the Steering Committee, this report details the arguments for and against various options and why they are or are not effective. This may provide some guidance into determining policies and solutions in the future.

Application of Range Scale Deterrence

Conditioning elk to avoid agricultural properties was a primary recommendation for the Steering Committee and Coordinator position, but was out of the scope of both. It implies that quicker responses to on farm elk interactions would help condition elk away. This is not supported by past attempts in the Yukon, or any research I have found from other jurisdictions using the tools currently available. Sections 3 and 4 of this report discuss various options for deterrence and their pros and cons and illustrate that a range scale deterrence method would require a major political decision.

Increase Farm Specific Options for Nuisance Elk

From my research and conversations for this project, I found that there have been no new developments in elk mitigation strategies in the last twenty years. All known options have already been tried. Sections 3 and 4 discuss other possibilities.

My response to specific recommendations of the Steering Committee on this issue are:

“Directing hunters to target areas where elk are using agriculture properties” This refers to conflict hunts, which have been used in some form or another since 2013 in the Yukon. They have not produced effective results in terms of lowering elk conflict if elk are harvested at a sustainable level. As mentioned earlier, herd sustainability is a primary goal of the elk management plan. For elk hunting to be an effective tool to reduce conflict, there needs to be a policy shift, as discussed later in this report.

“Engaging directly with landowners to encourage appropriate responses to elk on their properties”. I discussed with landowners the fact that fencing is the best option, but that it takes time and money. I have suggested to some that they allow hunters permission to hunt, but this is more to give a hunter an opportunity than to expect the conflicts to be resolved. Depending on scheduling, this also may not be a timely response. Hazing and dispatching are the other options, with neither producing long lasting results, according to various studies and first-hand experience, discussed

later. Generally, the landowners failed to see the benefit of any of the responses, similar to their experiences with COSB in prior years.

“Ensuring resources are made available to respond quickly to elk-agriculture interactions with a wide range of deterrents” In terms of the current deterrent options, fencing and hunters are usually slow responses. Dispatching and hazing can be onsite quickly, but it is well known that they are not long-term effective tools, as illustrated later in this report.

“Implementing a process and procedures that help coordinate and communicate how agriculture property owners, the Coordinator and COSB are able to respond.” I established relationships with all groups, and found that all are aware of the current limited response options and their lack of effectiveness.

“COSB issue Authorized Kill Permits to farmers, dispatch elk, or oversee extreme hazing for appropriate response to each situation.” These have been implemented, however research and my discussion with farmers indicate that the kill permits, dispatching elk, and extreme hazing are not long-term effective strategies to limit elk conflict, for reasons discussed later in this report.

The Steering Committee was supposed to have input on the Permit Hunt Authorization, but that was severely impeded as the committee didn’t receive that data from the representative on the Committee from the Department of Environment until months after all the decisions were already made. This was a major procedural oversight, but the end result is still unlikely to have a significant impact on conflicts as the permits are regulated by what the Department deems sustainable, as discussed later.

“Steering Committee will examine alternative hunting methods for future hunting seasons.” Hunting at permit levels that are currently considered to be sustainable by Environment is not enough to affect elk behaviour. Alternative hunting methods may be more appealing to landowners to allow hunting on their property, but it does not change the current regulations, such as the 1km permission requirement from a dwelling, discussed below.

<u>Streamline Hunting Activities</u>

As mentioned, if the harvest level is to stay within what the Department of Environment says is sustainable, hunting is ineffective as either a short term or long-term elk deterrence tool. While the names have changed over the years, Wildlife Act permits, Permit Hunt Authorizations, and Conflict Hunt Permits, when at sustainable levels, have produced no results. Streamlining any hunting would do little to affect conflicts without a fundamental change in thinking/policy regarding harvest levels and elk populations.

<u>Support Fencing Options</u>

Studies in other jurisdictions and Yukon projects have shown that 8’ game fencing is the only highly effective option for keeping elk out of agricultural properties. However, it has many significant negative aspects. It is very expensive, it just moves the problem from one property to another without addressing the root cause, it can cause traffic issues trapping elk between fences and the highway, and it impacts the movements of all animals larger than a rabbit. For these reasons, some landowners are not interested in game fencing.

3D electric fencing was trialed on two Yukon properties before the Steering Committee was formed, with some success, but both properties have taken it down and replaced it with 8' wire fence due to elk breaching it. They stated that 3D is less effective and more maintenance. This is consistent with other jurisdictions' findings. Electric fencing is a psychological barrier, not physical, so eventually there is enough external pressure (cold weather, food scarcity, deep snow) that the elk breach the fence. Electric fence can be used as a deterrent, but should not be thought of as a solution.

8' game fencing all of the agricultural properties is the only way to maintain the elk population at its current level and not have conflicts. Estimations are that this would cost $15-20 Million, and likely be met with resistance from some landowners, environmental groups, and those concerned with government spending. There were conflicting opinions amongst biologists on the committee as to whether or not the elk population would be able to maintain its current level if all agricultural properties were inaccessible to elk.

3. Specific Conflict Mitigation Strategies in More Detail

3.1 Hazing/Harassment

Hazing or harassing of elk is a long standing and most obvious form of conflict mitigation. In essence, you create a negative pressure on the elk when they are in or entering a conflict. There have been many different styles and techniques used. Bear bangers, motion activated sirens or propane scare cannons on fence lines, guardian dogs, wolf silhouettes, wolf urine, paintball guns, simulated hunting, pursuit on snow machines, and shouting have all been used in the Yukon, none of which produced long term positive results. Even a property with a dog mushing business on site had elk conflicts within 100 meters of their dog yard. The 2019 Elk Ag Working Group Report stated the same results. The elk will initially modify their behaviour because of the hazing, but sooner or later they realize there is not a real threat and return to the conflict area. The more the elk are exposed to hazing, the less effective it becomes. I have seen the elk return within a few hours after very aggressive hazing.

Hazing begs the question of where do we expect the elk to go? Along the Alaska Highway it is of immediate concern due to potential traffic collisions. Elsewhere, the elk are chased off a very attractive food source where they can either go to another unfenced farm with good feed or go into the brush and eat lower quality natural feed.

Studies suggest it can be more effective when used in conjunction with other measures, especially hunting and habitat improvement, but on its own, hazing is of little value.

3.2 Hunting

The primary reason elk were introduced to the Yukon in the 1950's was to give a new big game opportunity to hunters in an attempt to take the pressure off native species like moose and caribou.

Hunting elk began in 2009. Harvest levels in the Takhini Valley have ranged from 3 to 35 elk a year, with an average of 13.4. YG biologists have stated that for a population between 200 and 250 animals, a maximum harvest of 11 animals is sustainable. Harvest success averages around 44% year to year so 25 elk permits could be issued a year with a reasonable expectation of 11 elk being harvested on average. 2022 had 11 permits issued with 1 elk harvested, 2023 and 2024 had 13 issued a year, and 7 harvested. Approximately 1200 people apply for an elk permit each year so the odds are very low that an applicant will be drawn. At the current rate of permits issued, it will take almost 100 years for everyone that applied in 2024 to get drawn for a permit, assuming no new applicants. Even if the permits are raised to 24 a year, which would still be considered sustainable, it would take nearly 50 years for everyone to get a draw so the hunting opportunities are extremely small and not particularly attractive to hunters.

There have been essentially two types of permits issued over the last 15 years of elk hunting. One is an 'any bull' permit, which is focused on giving Yukoners a hunting opportunity as the elk were originally intended. The other has had a few different names, but its primary objective is to have hunters help with elk conflict by harvesting one in a conflict situation.

The 'any bull' permits are very sought after because they have the least restrictions, similar to a moose or caribou tag. Any bull is legal within the prescribed zone: no antler point requirement, specified location, or shorter season. After the first 2 years of the elk hunt, there have been between 0 and 4 of these permits issued a year. With 1200 applicants, the vast majority will never draw this permit in their lifetime, meaning they will never get the intended hunting experience.

The other permits have had a variety of names over the years, but in essence they are all the same from a conflict management perspective. A hunter is issued a permit with the primary goal of dispatching a conflict elk, not any elk, with the hunter keeping the meat. Some have had sex restrictions, antler point restrictions, and 2 week seasons to allow many hunters opportunities and more sustained pressure. Permits have ranged from 0 to 70 issued a year, with 9 being issued in each of the last 2 years. Some hunters do not view this as a true hunting experience as it typically involves shooting an elk in a field after a call from a landowner. While they appreciate the meat they get, it does lack many aspects hunters typically desire, like connection to nature or mental and physical challenge. Many view it as a meat collection rather than a hunt. For this reason, some hunters only apply for the 'any bull' permit, and not the conflict hunt.

Sustainable levels of hunting have not resulted in a noticeable reduction in elk conflicts. The concept of an elk seeing another elk shot in a field and the rest of the herd abandoning that field is not accurate. The elk typically will move off when the hunter walks up to the dead animal, but they almost always eventually return - sometimes within a few hours.

Elk have been known to go nocturnal as they learn they are safe at night. They retreat from the fields before legal shooting light in the morning, and returning to the conflict area after dark in the evening, making harvesting extremely difficult.

Landowners have observed that there is a cycle in the relationship between elk harvest and level of conflict. Typically, when there is a high level of conflict a large number of permits are issued, and many more elk are harvested than in previous years. Then there are concerns that the harvest level is unsustainably high, so the permits are dramatically cut back. Over the next few years harvest remains low, conflicts increase until there is enough pressure that the number of permits issued needs to be increased again. We are currently at the high conflict part of this cycle, so it is reasonable to expect more elk permits to be available in the near future.

There is debate as to whether or not this cycle is caused by the level of elk harvest, or if it is a coincidence and other environmental factors are more to blame for the varying rate of conflict - things like snow load, winter temperature, food availability can all play a role.

3.3 Landowner Permits

The idea of landowners being allowed to harvest an elk for meat on their property has been brought up numerous times. It would make many landowners much more tolerant of elk on their property if they were allowed an opportunity to hunt elk themselves. This creates an interesting scenario, because although hunting does not do much to lower actual conflict, if landowners see the benefit of elk, the perception of elk conflicts would go down. Most landowners are in favour of this as a tool, but it should not be viewed as a solution because some feel the damage done by the elk far exceeds the benefit of harvesting one. There is opposition to this idea as non-landowners feel it is an unfair advantage given to landowners. Current landowners point out that there is no law preventing anyone from buying land in the conflict area, and that landowners have been paying the price for elk on their property for years already. The number of landowner tags would be very contentious if we are staying with the maximum of 11 elk harvested a year. Even if 5 permits a year were issued to landowners, there were approximately 55 properties that collared elk were recorded on, and one elk every 11 years is unlikely to satisfy many landowners. Apart from that, permits are not an option for properties with unwilling neighbours within 1km, as explained below.

3.4 Problems with Hunting

Under the Yukon Wildlife Act, you need permission to hunt within 1km of a dwelling. This creates significant challenges for agricultural landowners experiencing elk conflict, particularly when neighbouring residents do not want hunting activity near their homes. In some cases, the 1 km buffer covers an entire agricultural property, making hunting impossible. The Yukon is the only jurisdiction in western Canada with such a large mandatory buffer zone. While there is ongoing discussion about revisiting this regulation, it remains a controversial topic, even among landowners who experience elk conflict. Any regulation change would, needless to say, take years.

Landowners must also provide direct permission to individual hunters, which introduces additional barriers. Some landowners have stopped granting permission as a form of protest, believing that conflict hunts are ineffective and that government needs to take stronger action. Others refuse permission due to negative past experiences, such as unsafe shooting practices, alcohol use, or general disrespect to the property and equipment. Some simply do not feel comfortable with

unfamiliar individuals carrying high-powered rifles on their land, especially with children and livestock around. Even when landowners are willing, they may only allow access at certain times, which can be difficult for hunters to coordinate. Although facilitating these permissions was part of the Coordinator's role, without knowing either party, I could do little beyond exchanging contact information. Unless accompanying the hunter, there was no way to ensure landowner requests were followed.

Alternative hunting methods is a topic that is often brought up, but it has two major problems. Firstly, the Wildlife Act does not distinguish between rifle, bow, muzzle loader, or shotgun hunting, so all the same rules would apply, including the 1km permission. There may be more of an appetite to change the Act for weapons with much shorter ranges, but it would be a government decision. The second issue is that if the same number of elk are harvested, the results would be the same, regardless of if the elk was shot with a bow or rifle.

As previously stated, hunting elk at the rate that is considered sustainable has not had an impact on reducing elk conflict to date, so there is no reason to think it would going forwards. Hunting should not be thought of as an elk conflict reduction tool. There is some evidence that a higher than sustainable harvest has had a positive effect on conflicts. That could well be thought of as using hunting as a mechanism for herd reduction, as opposed to hunting as a tool to reduce conflict in and of itself.

Overall, I concluded that there are very few hunting opportunities, the quality of these opportunities is debatable, and hunting is an ineffective conflict management tool if herd sustainability is the primary objective.

3.5 Euthanasia

Euthanasia has been the tool of last resort for COSB and my role as Coordinator. There were nine elk euthanized during this pilot program. Similar to hunting, the lethal removal of an elk did not have a lasting impact on reducing conflict in any of these situations, even when entrails were left onsite. In one case, the elk returned to the same field within 9 hours.

3.6 Wildlife Act Permits

One unique tool for this Steering Committee was the ability for landowners to get a Wildlife Act permit that would allow them to dispatch a conflict elk on their property. Seven such permits were issued during the pilot project, with zero elk being dispatched. Permit holders were not allowed to keep the meat but were legally responsible for it until it was turned over to COSB. This was the primary reason no landowners utilized their permit: it would be a lot of time and effort with no appreciable reward. As noted with hunting and euthanasia, removal of a single animal has shown to have no meaningful impact on the conflicts. Landowners believe if they do not get the meat and it won't reduce the conflicts, what is the point of going through the effort.

I believe all hunting, euthanasia, and Wildlife Act permits should be viewed the same. It is a person shooting an elk. The elk's behaviour is no different regardless of who pulled the trigger or the name of the permit giving them the authority to do so. The Yukon experience is the same as other jurisdictions in that dispatching small numbers of elk is not an effective tool for conflict mitigation. There is local knowledge that suggests when higher numbers of elk are shot, the conflicts are reduced, but that raises the question of sustainability of the herd.

Hunting, Wildlife Act Permits, and Euthanasia could be useful tools as a means for herd reduction or exclusion from an area, but at the current rate, they should not be thought of as effective.

4. Possible Solutions

4.1 Habitat Modification

This was looked at in depth in 2017 and the report written then is in the Appendix. It looked into diversionary feeding, fire, lure crops, and enhancement of native vegetation. Diversionary feeding is intentionally feeding elk, giving them a high value alternative to agricultural properties. This has been done in other jurisdictions for over 100 years, successfully reducing conflicts, but at the same time it has been shown to increase potential disease transmission, is resource intensive, has resulted in population growth in some areas, and raises ethical and sustainability questions about feeding wild animals. It was deemed the most likely to be effective in elk conflict reduction by the consultant in the report, but the working group said the cost and commitment "…is not justified at this time." Fire can reduce forest succession and make elk habitat more productive, but the group felt the risk of that solution was too high for the reward. Lure crops are when an area is planted to 'lure' the elk away from agricultural fields onto a designated field. This was not thought of as viable as the timing would be difficult and may send mixed messages as the elk would not know what fields were acceptable and what weren't.

4.2 Removal of Feral horses

A 2010 carrying capacity study for elk in the Takhini Valley identified that feral horses compete with elk for food in the elk core range. It suggested there is a 64% overlap in diet between elk and horses. Horses have a much less efficient digestive system, so they require more food per pound, and they have top incisors where wild ungulates do not. This allows the horses to graze lower to the ground, slowing regrowth.

The study claimed that with 22 feral horses present in the study area, the carrying capacity was 64 elk. The study area was entirely in the elk core range, where coincidentally, the elk population survey found 22 feral horses in 2025. If all the horses were removed, the study area could support 124 elk, almost double than with horses. Removal of the feral horses could be an aspect of a larger plan to make the core area more appealing to elk, thus keeping them there as opposed to in farmers' fields where conflicts occur.

4.3 Fencing

8’ game fencing is the only option that has consistently worked. However, as discussed above, there are numerous problems with it. It does seem reasonable to expect that hay storage be fenced, as it is a very high volume of attractant in a small space, so costs and other impacts are minimal. This would resolve some conflicts, but it does not address the issue of elk eating the hay that is placed outside of the containment area for the landowners’ animals to eat. To keep elk out of that area, the whole pasture would need to be fenced, which brings us back to all the other problems with fencing large areas.

Apart from the practical aspects, fencing is prohibitively expensive for a large number of landowners, even with subsidies. Costs vary from $18-$25 per linear foot, while funding will cover up to $10. The funding program only has the capacity to fund one or two major fencing projects a year, and those landowners must have access to significant capital themselves to cover the balance. This creates a whack-a-mole situation, where elk cause a problem on one property, that property gets fenced, so the elk move to another unfenced property, just shifting the conflict. This solves the problem for the financially strong farmer, but does nothing to help the bigger picture of elk conflict. For fencing to be a solution, all properties must be fenced. A rough estimate puts the cost of that between $15-$20 million.

Fencing is unpopular to some landowners for a few reasons. Some feel it is a waste of tax dollars and the resources would be better used elsewhere, even on their own property. Others do not like the esthetic, with some colorful analogies about being incarcerated on their own property. Game fencing is also a complete barrier to all animals larger that a rabbit, which negatively impacts natural movements. In some jurisdictions, wolves have learned to use these barriers to their advantage when hunting. Along the Alaska highway, game fencing traps the animals in the highway right of way, creating a potential traffic hazard.

Electric and 3D fencing have had limited success in the Yukon, which is consistent with studies from other jurisdictions. Being a psychological barrier, not a physical one, eventually the desire for the food reward overcomes the brief negative experience. Food scarcity, deep snow, extreme cold temperatures can all be factors that push an elk to breach a fence. Under low pressure scenarios, these types of fences have been effective, but the more fencing there is up, the less effective they become. For this reason, they should not be thought of as a long term, high effectiveness deterrent.

4.4 Compensation

Compensation for elk damage does nothing to solve elk conflicts, but it does ease the financial burden on farmers and is used in many jurisdictions. In the Yukon, compensation can be paid out for time spent harassing elk, fence damage, loss of stored feed, and crop loss in a field. However, many farmers have stated they are not farming to be compensated for, and it does not account for the psychological toll the elk take on the landowner. If elk damage a fence and livestock escape

and cause a motor vehicle accident, the landowner is legally responsible. Receiving compensation can also have a negative perception from non-agricultural producers.

4.5 Economics of Farming Around Elk

One example property in the Ibex Valley buffer zone with frequent elk conflicts would require 6,800 feet of fencing to keep elk out. At $25 per foot, it would cost $170,000. Current funding arrangements will pay up to $10 per foot, meaning taxpayers would contribute $68,000, and the landowner would need to provide $102,000. It is a 40 acre property, with about 30 acres that would be in production growing a forage crop. A yield of 1,000 to 3,000 pounds per acre of hay is to be expected without irrigation, so on 30 acres somewhere around 30,000 to 90,000 pounds would be grown. At $0.25 per pound, gross revenue would be between $7,500 and $22,500, averaging $15,000 a year. In the Yukon, roughly 50% of that goes to production expenses. If the landowner put all of their profits, $7,500 a year, towards paying off the fence, it would take over 13 years to cover the cost of the fence, while keeping no money in the process. However, this would stop the conflicts on the property.

If we take this same property and instead of game fencing, the landowner applies for compensation, the numbers are as follows. It has been established that elk damage to a hay field reduces yield by about 20% in the Yukon. Assuming the elk damage half the property, an average yield of 54,000 pounds would be produced, and the government would cover the cost of the remaining 6,000 pounds. It would cost taxpayers $1,500 a year, the farmers gross revenue would be unchanged, and they would have access to their profit. At this rate, it would take over 45 years of continued elk damage to equal the $68,000 paid for the fencing project. This does not account for inflation, damage to livestock fences, livestock injury or escape, mental strain, and other factors, but it could easily be argued that compensation is much more cost effective for the government and landowner than fencing. However, the conflicts would not stop, and it has been mentioned that farmers are not in the business of compensation, they want to grow crops.

This property is a long, narrow shape so it is not particularly efficient from a fencing standpoint, but it is also relatively small from an agricultural standpoint. Either way, it does provide an interesting, real world example.

There are 189 agriculturally zoned properties in the wider conflict area, with 25 of them game fenced, leaving 164 unfenced. Not all of these properties are in active production, but in order to get a development permit on those properties, they must prove they are primarily used for agriculture. There are also government grants incentivizing land utilization, so it is likely more properties will come into agricultural production.

4.6 Individualized Elk Deter Plans

This was deemed an important aspect of the Coordinator's role. The idea was to come up with a plan for each property, as every situation is unique. While this is true, unfortunately, the solution is always the same: 8' game fence or remove attractants. Fencing has been discussed above.

Removing attractants is one of the most commonly suggested solutions for reducing elk conflict, but in practice it is extremely difficult, costly, and often defeats the purpose of owning an agricultural property.

In many cases, the land itself is the attractant. Forage crops, hay fields, and pasture provide high-quality food that elk will continue to access regardless of deterrence efforts. The only practical way to remove this type of attractant is to till the field under, which is expensive, labour-intensive, widely considered poor farming practice, and only possibly with certain crops. The alternative—ceasing farming altogether—is not a viable option for most producers and results in significant economic loss.

Hay used to feed livestock is another major attractant. Game fencing a hay storage area is much less costly that fencing a field, but it still takes some initial capital. If storage is not fenced onsite it has to be moved to a secondary storage site, which dramatically increases fuel and logistical costs. Even if stored hay is inaccessible, this does not address elk consuming hay that is fed out to livestock in the field. This issue was reported on nine properties during the last two winters with no viable solutions available.

The only effective way to eliminate attractants is to remove the livestock themselves. This was successfully done on one property as a last resort, and elk conflict stopped immediately once the horses were moved. However, the landowner lost significant boarding revenue and was left with a property that no longer generated income.

The Steering Committee recognized that providing essentially the same deterrence plans—fencing and removing attractants—for every property was not an efficient use of time or resources. These were the only tools that consistently showed any effectiveness, and repeating them in individualized plans added no new value.

5. Potential Solutions

The area of elk conflicts in the Takhini Valley should be broken down into three distinct areas, each with their own unique situations.

<u>Mendenhall</u>

The Mendenhall area is relatively densely populated and has a mix of agricultural and country residential properties. Elk conflicts occur on both, when attractants are present. Some residents have small properties, but they keep horses and therefore have horse feed, which elk can get into. Fencing and compensation are the only options here, due to the close proximity of many dwellings to each other and being in the elk core range. I feel that secured hay storage should be the responsibility of the landowners, but for large fields, compensation is much more cost effective and practical.

Stoney Creek

There are two agricultural properties right in the middle of the elk core zone. One is completely game fenced. When the gates are open, the elk enter, but that is easily solved by closing the gates. The second is not fenced and the elk are consistently there year-round. Hunting is an option due to the lack of nearby dwellings. Given it is in the core zone, a large amount of hunting pressure is probably not desired as the elk are essentially where we want them. Elk calve there and many spend their time year round in the vicinity, if not actually on the property. A landowner tag may help ease the stress on the farmer and lower their perception of conflict. Otherwise fencing and compensation are the only options.

East of the Takhini River Bridge

This is where the vast majority of conflicts arise, and where a large portion of Yukon agriculture takes place. This has been designated a 'buffer zone' between the core area to the west, and the exclusion zone to the east. It has also been the subject of the various hunting approaches used. Landowners have pushed for an exclusion zone in this area, although the definitions of exclusion zone vary depending on who is asked. Given that the current number of elk, at 270, is beyond even the biologists' recommended sustainable level, I feel that the only practical solution for this area is a significant herd reduction through hunting, until elk no longer live in this conflict zone. This would be very cost efficient and provide many Yukoners with hunting opportunities, as was originally intended when the elk were introduced. There would likely be a huge initial influx in elk hunters, which could cause problems for landowners and COSB, but it would level out over time. A mandatory elk hunting course, similar to the one offered for bison when over the counter tags were first offered, could help. The harvest levels would be well over what is considered sustainable and would most likely significantly lower the overall elk population. There is an argument that if elk are dependent on farmland, then they are not a self-sustaining herd to start with. Mitigating measures could be taken in the core zone, such as removal of feral horses and/or diversionary feeding, which could help the population there by decreasing the need for elk to move away to the buffer zone to the east.

The elk population has rebounded numerous times after unsustainably high harvest levels in the past. They may find sanctuary in areas that hunting is not permitted due to a dwelling within 1km that does not give permission, or the no hunting corridor along the Takhini Hotsprings Road. They may also go nocturnal.

BC Jurisdictional Scan Discussion

In terms of new options, a jurisdictional scan of strategies for mitigating elk agriculture conflict was done in May of 2025, prepared for the BC Ministry of Environment by University of Alberta and King's University Department of Biology. It is very similar to this report in its findings and analysis, but it did have a few recommendations that were a little confusing.

1. "Aversive conditioning using drones", which is hazing with a drone. There is no reason to believe this would produce any different result than any other hazing technique. It suggests using shouts and sirens on the drones, which have repeatedly been proven ineffective already as a long-term strategy.

2. “Aversive conditioning that integrates sight, sound, and physical discomfort”. This is just combining three types of ineffective hazing in hopes that the combination will produce a different result. Physical discomfort means paintballs or other very short range, non-lethal projectiles. They are very difficult to administer, as the animals usually run off before being in range. Even if contact is made, the animals typically return, as in all other hazing techniques.
3. “’Hunting for Fear’ behavioural conditioning project” is a conflict hunt, which, as discussed above, has consistently produced ineffective results.
4. “Visual deterrent fencing using 3D turbo fladry and mylar fladry top lines”. This is essentially putting flagging tape or some other fluttery ribbon on livestock fences. In its own rationale, the report says “their deterrent effect tends to decline over time as animals habituate or find alternate crossing points”. This is consistent with attempts in the Yukon.

The study recommends a pilot project testing all 4 of these ideas, which I strongly disagree with. The findings in the same jurisdictional scan illustrate that none of the techniques are likely to work. There is no reason to think that further testing would produce different results, but it would incur significant costs.

Being cognisant of the guiding principle of maintaining a sustainable elk population, extirpation of the elk needs to be explored, based on my conversations with Yukoners, including members of the hunting community. While most people would answer the question of ‘do you want elk around’ positively, many are not considering at what expense. Farmers have complained about financial and psychological burdens of having elk around, and large amounts of government resources go into these animals. In 2024/25 fiscal year, $259,770 were spent on fencing projects and $25,537 on crop and infrastructure damage compensation by the government. The elk coordinator position was advertised as $175,000 over two years. It is difficult to put a dollar figure on the time that biologists, conservation officers, and agriculture branch employees have put into elk on the public side, as well as YAA and YFGA. However, it is not unreasonable to guess that well over $450,000 a year has gone into elk management in the last 2 years. After learning about this and the very limited hunting opportunities, some people began to wonder if it is all worth it. The 2016 elk management plan talks about viewing opportunities as valuable. Elk are typically seen near the Alaska highway, which can cause a traffic hazard. First Nation participants on the 2016 working group also emphasized that spending resources on elk divert resources away from moose and caribou. Many Yukoners questions why we put so much money and effort into a non-native species.

With a suggested maximum harvest of 11 elk per year, the amount of hunting pressure taken off moose and caribou is not noticeable when compared to the approximately 500 moose and caribou harvested a year. Introduced bison, with around 250 harvested a year, provide far more alternative hunting opportunities to native species than elk do, and are much less resource intensive and controversial. It could be argued that bison more than fill the role that elk were intended to play, so what do the elk provide that justifies their cost.

What it boils down to is that the government needs to decide if they want to support Yukon agriculture, or whether maintaining a sustainable elk herd is more important. There are agricultural landowners waiting for this decision before deciding how, or in some cases if, they will utilize their land. Right now a sustainable elk herd is being prioritized. Farmers have to game fence their fields,

or nothing can be done. Those who cannot afford it, or are against game fence, are left with no options. There seems to be effectively no middle ground.

A clear policy direction is needed. If the Government intends to prioritize agriculture, then a corresponding reduction in the elk population will be necessary, and the extent and location of that reduction must be defined. Without such a fundamental decision, discussions and meetings will continue without leading to meaningful action. Considerable research has already been conducted; it is now time for a definitive policy decision.

6. Other Observation

It became clear over the year of my employment that it is very difficult to justify the Coordinator position as a full-time role. The position was originally designed for 37.5 hours per week over 46 weeks per year. After my initial period of research, outreach, and familiarization with the issues, the amount of meaningful work dropped off sharply. To avoid wasting project resources, I billed only for hours actually worked, which averaged approximately 14 hours per week over the course of the year.

From mid-November to mid-March, elk conflicts did occur, and as Coordinator, I attended these incidents. However, being given the same tools and authorities that Conservation Officers already had, that were ineffective in years prior, it is not surprising that the outcomes were largely the same. With the exception of one case where all attractants were removed, all other efforts to mitigate conflict were unsuccessful. Even during the conflict season, meaningful work did not come close to the prescribed 37.5 hours per week. I could have spent more time hazing and euthanizing elk, but as discussed earlier, neither has been shown to be ultimately effective. I chose not to do the same thing over and over again, expecting a different result, and in doing such, it saved the project considerable money.

Some farmers expressed appreciation for my involvement, noting that it made them feel less helpless during conflict events. While this emotional support is meaningful, the overall on-the-ground impact of the position did not seem to justify maintaining it as a full-time role.

If the position had a more defined mandate tied to a specific, actionable goal—such as coordinating game fencing for all affected properties, implementing an exclusion zone, or developing a diversionary feeding program—it could add real value. In its current form, however, without a concrete objective or new tools to implement, the role does not seem worthwhile, as it does not reduce elk conflicts.

Sources:

An Evaluation of Habitat Enhancement Options for the Takhini Valley Elk Herd; Morrison 2017

Takhini Valley Elk-Agriculture Regional Risk Assessment: Summary of Results; Ferris 2018

Implementation Report: Actions to acknowledge and address concerns about conflicts between elk and agriculture; Elk Ag Working group 2019

Habitat use and ecologically sustainable carrying capacity for elk (Cervus elaphus) in the Takhini Valley, Yukon; Chambers, 2010

Elk-Agriculture Management Pilot:

Recommendation to Deputy Ministers for Elk-Agriculture Limited Exclusion Zone

Last updated: August 25, 2023

Note: *This is a living document and will be reviewed to adjust as needed during the implementation of the pilot program.*

Living Document

Introduction and Background

Following work completed by the Elk-Agriculture Focus Group in Fall/Winter 2022/23, the Elk-Agriculture Steering Committee was established in May 2023. The Steering Committee began work to put forward a recommendation for an additional limited exclusion zone. The intent of the additional limited exclusion zone is to apply a consistent, timely and intensive deterrent effect where most elk-agriculture interactions occur.

At present, the 2016 Elk Management plan defines three management zones in and surrounding the Takhini Valley. They include a core zone, an area historically used by the majority of elk in both herds. In this area, hunting of elk has been prohibited and agriculture developments directed towards planned agriculture areas. There is also a buffer zone, located east, west and south of the core. This area is used by elk, especially in the winter, but it is used less frequently than the core. Within the buffer zone are a large number of agricultural dispositions where the majority of elk-agriculture conflicts occur. Seasonally, elk hunting is allowed in the buffer zone, though restrictions apply. Outside the core and buffer zones exists the exclusion zone, which includes the remainder of the Yukon. The exclusion zone was designed to limit elk range expansion. If an elk should wander into this zone, a hunter can remove it, regardless of the animal's sex or the season. The hunter only needs to acquire a permit.

Recommendation for Elk-Agriculture Limited Exclusion Zone

The Steering Committee recommends the implementation of a pilot 2-year Elk-Agriculture Limited Exclusion Zone in the Takhini and Ibex Valley (see Appendix A for map). The Elk-Agriculture Limited Exclusion Zone will have the effect of an intensive deterrence zone to limit elk-caused damage to agricultural properties. The defining features of the Elk-Agriculture Limited Exclusion Zone are:

1. Immediate and coordinated response to elk on agricultural properties via a team approach;
2. Development of individualized deterrence plans on agricultural properties; and
3. Data collection and reporting back to Steering Committee on effects of deterrence efforts.

The Elk-Agriculture Limited Exclusion Zone is distinct from the 2016 Elk Management Plan exclusion zone in that this pilot project is a 2-year implementation project to prove the viability of an approach to deter elk from agricultural properties.

The approach will involve a team (Table 1) that will apply a proactive or reactive actions in a timely or quick manner to deter elk. Principal among the team approach will be the landowners and Coordinator. The Coordinator will engage with landowners to develop an individualized (property/farm specific) deterrence plan, which can occur on a proactive or reactive basis. Working with the Coordinator, the landowner will be empowered to implement a suite of options ranging from hazing to the onsite issuance of permits to dispatch problem elk. Successful implementation of the Elk-Agriculture Limited Exclusion Zone will require a consistent team effort.

The specific deterrence measures will only apply in the Elk-Agriculture Limited Exclusion Zone (Map) and will be implemented by members of the team as relevant (Table 1). All activities implemented within the Elk-Agriculture Limited Exclusion Zone will not compromise the guiding principles of safety for all stakeholders and will be implemented with respect to applicable regulations.

Table 1: Deterrence team members and roles/authorities

Deterrence team member	Role and responsibilities	Authority/available deterrence measures
Coordinator	-operate as the central resource and point of contact for landowners and hunters -reports to Steering Committee -engage with every landowner to develop property-specific deterrence options, which may include the issuance of *Wildlife* Act permits -promote the uptake of deterrence options -develop and utilize a reference map with permissions within the 1 km zone around residences -communicates regularly with Conservation Officers -access and add data to the Department of Environment's Human-Wildlife Conflict App to document, record and submit all elk conflict interactions.	-issuance of *Wildlife* Act permits (i.e. kill permit or hazing permit) -implementation of innovative deterrence methods -provide information on fencing options and facilitate installation for interested landowners -issuance of *Wildlife* Act permits to landowners -publication access to the Department of Environment's Human-Wildlife Conflict App

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Landowners*	-strong landowner participation is required for successful implementation -become familiar with the pilot and goals with support from Coordinator as needed -work with Coordinator to develop and implement property-specific deterrence options as part of the deterrence plan -facilitate communications and permissions for hunting	-*Wildlife Act* permits -installation of game fencing
Hunters	-become familiar with the pilot and goals -work with Coordinator and landowner as appropriate to support and implement deterrence options	-PHA or *Wildlife Act* permits
Conservation Officers	-provide operational and technical support to Coordinator -issue *Wildlife Act* Permits -respond to elk complaints and take action as required	-issuance of *Wildlife Act* permits -support the Coordinator in the assessment and issuance of permits -provide operational and technical advice on mitigation techniques and euthanization of wildlife
Two-Year Elk Pilot Program Steering Committee	-oversee, direct and provide support to Coordinator -provide general oversight of the implementation of deterrence measures to limit damage to agricultural properties -coordinate public communications related to the pilot -regularly communicate as a Steering Committee up to senior management on status of pilot implementation	N/A

*For the purposes of the implementation of the Elk-Agriculture Limited Exclusion Zone, "Landowner" includes but is not limited to: actively producing agricultural properties, small-scale non-commercial farming, and other residents and landowners in the agricultural zone.

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Note: In order to facilitate the accurate intake and resolution of elk interactions in the Elk-Agriculture Limited Exclusion Zone, all calls will route through Environment's Delta 1 24/7 TIPP line dispatch center and the Coordinator will be included in the notification protocols.

Additional implementation details:

- Permit conditions: Permit conditions related to the timely biological submission and government ownership of the wildlife will be retained in the Elk-Agriculture Limited Exclusion Zone.
- Issuance of Wildlife Act Permits: In addition to the Conservation Officer Services Branch, the Coordinator will have authority to establish the necessity of permit issuance on a case-by-case basis. Operational and technical support will be provided to the Coordinator by Conservation Officer Services Branch. The issuance of Wildlife Act Permits in this context would not include additional implementation criteria.
- Eastern Buffer Zone: Because of its proximity to the Elk-Agriculture Limited Exclusion Zone, a deterrence effect in eastern buffer zone is also anticipated. The liberalized conflict hunt can be focused in the eastern buffer zone to augment the influence of the Elk-Agriculture Limited Exclusion Zone.
- Use of Fencing: The Coordinator will communicate fencing options with landowners and facilitate the installation of exclusion fencing for interested landowners.

Additional background for recommendation:

Elk population, behaviour, health, and habitat considerations: In enacting an Elk-Agriculture Limited Exclusion Zone, a principal consideration comes from Goal 1 of the 2016 Elk Management Plan which states: "Ensure the Takhini and Braeburn herd remain healthy and self sustaining." To this end, we will be closely watching the number of elk that are being dispatched and will also be conducting better monitoring (collaring program) to ensure the herd remains at a sustainable level.

In preparation for the heightened monitoring, we have pre-deployed collars on individuals of the herd, giving us real time movement information. This will allow us to track their movements, determine their land usage and identify critical habitat and movement corridors. We will also be able to determine their responsiveness to our deterrence measures.

Agriculture property owner considerations: Property owner participation is essential for the success of the pilot Elk-Agriculture Limited Exclusion Zone. The pilot program has been developed to prioritize landowner participation, and to empower the landowner by allowing for direct involvement in implementing actions through a deterrence plan. Key factors for success of the Elk-Agriculture Limited Exclusion Zone pilot include the building of strong relationships among members of the deterrence team, and good documentation of both successes and challenges in order to understand the effects of deterrence actions on elk herd behaviours, and adapt deterrence efforts as needed.

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The Coordinator will also work with landowners to implement other mitigation efforts to limit elk damage to property, such as the installation of exclusion fencing, hazing, and protection of other infrastructure.

Property owners who participate will also provide advice and information for hunting activities.

Hunting and permitting considerations (including safety): There are currently four permit hunt authorizations and eight wildlife adaptive elk permits for hunting the Takhini elk herd. The season opens September 1 and closes March 31, 2024. The *Wildlife Act* and Regulations authorize hunting methods and regulates public safety and private property by requiring occupant permission to hunt within one kilometre of a residence. The Elk-Agriculture Limited Exclusion Zone will provide for general *Wildlife Act* permits that authorize the removal of elk within the one kilometre if required.

First Nations: The affected First Nations will be informed of progress towards the implementation of an Elk-Agriculture Limited Exclusion Zone by the Steering Committee. Representatives from the three First Nations (Champagne and Aishihik First Nations, Kwanlin Dün and Ta'an Kwäch'än Council) participated in the Focus Group initially, but then declined further participation due to capacity limitations, requesting that they be kept informed of the Focus Group's progress. Upon formation of the Steering Committee, a representative of Ta'an Kwäch'än Council has participated in Steering Committee meetings and correspondence.

Monitoring / Measuring / Evaluating: The Coordinator will be responsible for documenting, recording and submitting all elk conflict interactions using the Department of Environment's Human-Wildlife Conflict App. This data will be used in conjunction with collaring data to understand elk distribution and effects of the deterrence options.

Timelines: Upon approval of the recommendation, the Steering Committee will:

- Hire the Coordinator, who will be housed at the Yukon Fish and Game Association and supported by the Steering Committee.
- Develop and release joint communications strategy.
- Implement pilot project activities.

Regulatory Considerations: All applicable legislation and regulations will be followed during the implementation of the pilot project.

Communications: Engaging and communication with all stakeholders and public is especially important for this program to build relationships to address this elk-agriculture concerns in a collaborative manner. The Steering Committee is developing a Communications Strategy to be able to engage with all effected and interested stakeholders and public.

Appendix A: Map of Elk-Agriculture Limited Exclusion Zone

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Two-Year Elk-Agriculture Pilot Proposed Management Area

DRAFT

- Proposed Management Area
- Game Fenced Agriculture Lots
- Agriculture Lots to be Fenced
- Settlement Land (surveyed)

Agricultural Land Applications

- Agricultural
- Grazing

Agricultural Land Dispositions

- Agricultural
- Grazing

- Agricultural Planned Land Application Review
- Agricultural Derived Survey Lots*
- Agricultural Derived Survey Lots* within Proposed Management Area

Elk Management Areas

- Braeburn Elk
- Buffer, Takhini Elk
- Core

CAFN R-46B
LOT 1041 QUAD 105D/13
83214 CLSR YT

TKC R-11B
LOT 1048 QUAD 105D/13
90051 CLSR YT

TKC R-4B
LOT 1046 QUAD 105D/13
90051 CLSR YT

TKC R-9A
LOT 1418 QUAD 105D/14
90050 CLSR YT

LOT 1035 QUAD 105E/03
90049 CLSR YT

TKC R-2A

TKC R-22B
LOT 1000 QUAD 105E/02
102125 CLSR YT

TKC R-1A
LOT 1000 QUAD 105D/15
91858 CLSR YT

TKC R-26B
LOT 1429 QUAD 105D/14
90011 CLSR YT

CAFN R-1B
LOT 1029 QUAD 115A/16
86738 CLSR YT

CAFN R-15A
LOT 1000 QUAD 115A/10
83643 CLSR YT

KDFN R-81B
LOT 1001 QUAD 105D/12
99872 CLSR YT

KDFN R-12A
LOT 1000 QUAD 105D/12
99872 CLSR YT

KDFN R-80A
LOT 1021 QUAD 115A/09
10313 CLSR YT

CAFN R-29B
LOT 1015 QUAD 115A/09
83644 CLSR YT

KDFN R-4A
LOT 1254 QUAD 105D/11
99879 CLSR YT

Alaska Highway
Klondike Highway
Thirty-seven Mile Creek
Harrison Creek
Harrison Lake
Little River
Stony Creek
Mile Creek
Jackfish Bay
LAKE LABERGE
Laberge
Scout Lake
Cub L
Ibex River
Pond Creek
Takhini River
Arkell
Jackson Creek
Louise Lake
Franklin L
Whitehorse Rapids
Schwatka Lake
Porter Ck
Nordenskiold River
Yukon River

0 2.5 5 10 15 20 Kilometres

N

Note: This sketch is for information purposes only. Located within the Traditional Territories of KDFN,TKC and CAFN.
*This information may contain cartographic errors or omissions. The Yukon Government does not guarantee the quality, accuracy, completeness or timeliness of any of the information provided.