

Rocky Flats National Wildlife Refuge

Hunt Plan

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U.S. Fish and Wildlife Service

Rocky Flats National Wildlife Refuge

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I. Introduction

National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System (Refuge System), the establishing purpose(s) of an individual refuge, U.S. Fish and Wildlife Service (Service) policy, and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual.

The Refuge was established by the Rocky Flats National Wildlife Refuge Act of 2001 (Pub. L. No. 107–107, 115 Stat. 1012) (Refuge Act). The Refuge Act identified three significant qualities of the site:

- The majority of the site has generally remained undisturbed since its acquisition by the government.
- The site preserves valuable open space and striking vistas of the Front Range mountain backdrop.
- The site provides habitat for many wildlife species, including a number of threatened and endangered species, and is marked by the presence of rare xeric tallgrass prairie plant communities.

The Refuge Act also listed four purposes for the Rocky Flats National Wildlife Refuge (NWR):

- Restoring and preserving native ecosystems
- Providing habitat for, and population management of, native plants and migratory and resident wildlife
- Conserving threatened and endangered species
- Providing opportunities for compatible scientific research

The Refuge Act also provides direction to the Service for managing the Refuge to ensure that wildlife-dependent recreation and environmental education and interpretation are the priority public uses of the Refuge.

The mission of the National Wildlife Refuge System, as outlined by the National Wildlife Refuge System Administration Act, as amended by the National Wildlife Refuge System Improvement Act (16 United States Code [U.S.C.] §§ 668dd et seq.), is:

“... to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

The National Wildlife Refuge System Administration Act (16 U.S.C. § 668dd(a)(4)) mandates the Secretary of the Interior in administering the System to:

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the Refuge System;
- Ensure that the biological integrity, diversity, and environmental health of the Refuge System are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the Refuge System described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;
- Ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the states in which the units of the Refuge System are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the Refuge System and the purposes of each refuge;
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the Refuge System through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses; and
- Monitor the status and trends of fish, wildlife, and plants in each refuge.

The Service prioritizes providing wildlife-dependent recreation opportunities, including hunting and fishing, when these opportunities are compatible with the purposes for which the Refuge was established and the mission of the Refuge System.

Special hunts are conducted in the western Denver metropolitan area to manage elk herds at safe and sustainable levels. Refuge staff are coordinating with other special hunt managers in the area to gather feedback and guidance for developing a hunt at Rocky Flats NWR. These hunts help maintain healthy wildlife populations while offering the public additional recreational opportunities, particularly where hunting access on public lands is limited.

A. About the Refuge

Rocky Flats NWR is a 5,640-acre refuge located in Jefferson County, Colorado. Portions of the Refuge included a former nuclear defense facility that was operated by the U.S. Department of Energy (DOE). All weapons manufacturing was performed in a 600-acre area, which is still managed by DOE, located in the center of the Refuge. In 1992, the mission of the Rocky Flats site changed from weapons production to environmental cleanup and closure. Under the Refuge Act, the Rocky Flats Environmental Technology Site was to become Rocky Flats NWR following certification from the Environmental Protection Agency (EPA) that cleanup and

closure was completed. The final Record of Decision from EPA was signed in 2006, transferring much of the former Rocky Flats site to the Service for a National Wildlife Refuge (NWR).

The Rocky Flats NWR sits at the interface of the Great Plains and Rocky Mountains, east of the foothill escarpment in Jefferson County, Colorado. The elevation of the Refuge ranges from 5,500 feet in the southeastern corner to 6,250 feet on the western edge of the adjacent section 16 property. The western half of the site is characterized by the relatively flat Rocky Flats pediment, which gives way to several finger-like drainages that slope down to the rolling plains in the eastern portion of the site.

This area has seen substantial urbanization and other land conversion along the Front Range Urban Corridor. According to Nelson (Nelson, 2010), the Refuge likely serves as “a refugium for plants and animals that were once much more common.” The Refuge is home to more than 600 plant species, of which four are considered rare or imperiled by the Colorado Natural Heritage Program (CHNP) (Nelson, 2010). The Refuge also has a diverse mosaic of vegetation communities. The dominant natural vegetation in this ecoregion is short grass prairie, which today comprises only about 20% of its original area (Robison et al., 1995) due to land cover and land use changes associated with factors such as agriculture and urbanization. Wildlife that is dependent on prairie habitats is thus dependent on a substantially shrunken ecosystem.

B. Elk Biology and the Rocky Flats Subherd

Elk are versatile habitat generalists capable of utilizing a broad range of ecosystems throughout the year (Houston, 1982). As an ecotone species that evolved in cold, temperate climates, elk exhibit morphological and behavioral traits adapted to both open plains and forested environments. Although they prefer open areas (Geist, 1982), they also rely on dense coniferous forests for thermal cover and protection (Clark & Stromberg, 1987).

Dietarily, elk are classified as intermediate feeders — more flexible than strict browsers or grazers (Baker & Hobbs, 1985). Their forage choices are largely influenced by seasonal variation in plant availability and nutritional content (J. G. Cook, 1982; Jenkins & Wright, 1988; Merrill, 1994). During winter, elk primarily occupy open grasslands, favoring cured grasses when accessible, though they also consume woody browse (Murie, 2017). In forested areas, their winter diet shifts toward shrubs (Cole, 1969). In spring, elk transition to semi-open habitats, combining grasslands with some forest cover; in summer and autumn, they use a diverse array of grassland and forest types.

Grasses dominate the elk diet year-round, but summer is a particularly critical foraging period, as nutritional intake during this time supports reproductive demands and postnatal growth (Arman et al., 1974; Guinness et al., 1978; Moen, 1973; Pedersen & Harper, 1978; Robbins et al., 1981; Robbins & Moen, 1975; Thompson et al., 1973). Summer diets focus heavily on graminoids but may also include sedges, rushes, and willows (*Salix* spp) (Baker & Hobbs, 1982). In winter, elk diets vary by habitat type.

Throughout much of the 20th century, predators were not considered significant regulators of ungulate populations, largely due to their low abundance across many regions (Murie, 2017; Raedeke et al., 1982). However, the ecological role of predators has gained renewed attention, particularly through studies of restored carnivore populations. The reintroduction of wolves (*Canis lupus*) to Yellowstone National Park served as a prominent case study (Vucetich et al., 2005). Broadly, carnivore introductions are linked to prey population declines in roughly half of documented cases (Ebenhard, 1988). Moreover, increased predator species richness is associated with lower prey densities, highlighting the importance of diverse predator communities (Mech & Peterson, 2003).

In Yellowstone's Northern Range, the dynamics of elk populations before and after wolf reintroduction illustrate the interplay of predation, harvest, and environmental variability. Between 1932 and 1968, elk numbers declined from approximately 16,000 to 6,000 due to active population reduction and hunter harvests that removed more than 71,000 individuals. Once these removals ceased (1969–1975), elk abundance rebounded to around 17,000. From 1976 to 2004, antlerless elk harvests outside the park stabilized the population, with winterkill events (1989 and 1997) occasionally reducing calf survival. Wolves, reintroduced in 1995–1996, rapidly expanded in number and range. Although wolf predation eventually surpassed hunter harvest in numerical impact, its demographic effects were more limited — wolves primarily targeted calves and older females with lower reproductive value. Still, the elk population declined from an estimated 23,000 in 1995 to 12,000 by 2004 (Eberhardt et al., 2010).

In Colorado, wolves have recently been reintroduced but are expected to avoid the Front Range's urban corridor. In contrast, mountain lions (*Puma concolor*) and coyotes (*Canis latrans*) pose a more immediate predation factor to elk, especially in areas such as Rocky Flats NWR. Although deer comprise the majority of mountain lion diets (Ackerman et al., 1984; Logan & Sweanor, 2001; Spalding & Lesowski, 1971), elk (Hornocker, 1970; Murphy, 1998; Nowak et al., 2000; J. S. Williams et al., 1995), livestock and other large animals are also important food sources (Cunningham et al., 1999). For example, mountain lions accounted for 64% of adult elk mortality in Wind Cave National Park in 2007 (Sargeant et al., 2011). They also impose substantial calf mortality, directly affecting recruitment and overall population dynamics (Eacker et al., 2016; Ganz et al., 2024; White et al., 2010). Coyotes also prey on calves opportunistically but are often unable to because adult elk are large-bodied and, if nearby, capable of defending their young against these relatively small carnivores (Geist, 1982).

Therefore, hunting is the primary management tool used to control the size of the elk herds in the United States.

C. Disease Impact on Elk Populations

A range of infectious diseases can influence elk population dynamics by affecting survival, reproduction, and distribution. Notable examples include bovine viral diarrhea, epizootic hemorrhagic disease, parainfluenza-3, bovine tuberculosis (*Mycobacterium bovis*), septicemic

pasteurellosis, paratuberculosis, and anthrax. However, chronic wasting disease (CWD) remains the most significant concern for elk and deer populations along Colorado's Front Range.

CWD, a fatal prion disease belonging to the group of transmissible spongiform encephalopathies (TSEs), was first identified in captive mule deer in Colorado during the late 1960s (E. S. Williams & Young, 1980). In 2025, CWD was detected in free-ranging cervids in 36 U.S. states and five Canadian provinces (U.S. Geological Survey, 2025). The disease is a unique member of the TSEs or prion diseases, which naturally affect only a few species (E. S. Williams & Miller, 2002). Although the risk of transmission to humans remains unconfirmed, current evidence cannot entirely exclude the possibility (Escobar et al., 2020; Waddell et al., 2018).

CWD is characterized by behavioral changes and progressive loss of body condition that are products of an invariably fatal neurodegenerative process (Miller et al., 2000; Spraker et al., 1997; E. S. Williams & Young, 1980, 1982). Transmission occurs both directly, through contact between animals, and indirectly, via environmental contamination with infectious prions (E. S. Williams & Miller, 2002).

Prions can persist in soils for years, contributing to ongoing transmission and complicating control efforts (E. S. Williams et al., 2002). Management strategies such as early intervention, targeted removal of infected individuals, and environmental monitoring may slow disease progression and prion accumulation (DeVivo et al., 2017; Edmunds et al., 2016; Potapov et al., 2016). Additionally, intensive harvest-based management has shown promise in reducing CWD prevalence in white-tailed deer populations in Illinois (Mateus-Pinilla et al., 2013) and Wisconsin (Cooney & Holsman, 2010).

In December 2017, a bull elk exhibiting clinical signs consistent with CWD was euthanized at Rocky Flats NWR. Preliminary testing by the Colorado State University Diagnostic Laboratory identified the animal as a "suspect" case based on a positive enzyme-linked immunosorbent assay (ELISA) screening result. Since then, additional elk have been euthanized under similar circumstances, including two bulls confirmed positive for CWD in 2022.

Although CWD prevalence among mule deer along Colorado's Front Range have been considered both high and increasing (Colorado Parks and Wildlife, 2018; Wolfe et al., 2004), elk in Data Analysis Unit (DAU) 38 — which includes Rocky Flats NWR — have shown comparatively low prevalence levels, with estimate infection rates for harvest data under 5% (Colorado Parks and Wildlife, 2022). In 2023, all sampled individuals from the Rocky Flats Subherd tested negative for CWD. However, in 2025, follow-up sampling revealed a significant shift: Roughly 11% of the 80 tested elk were CWD-positive, indicating a concerning rise in infection rates in the local population.

D. Human Health Implications

Proper handling and preparation of wild game significantly reduces the risk of disease transmission (Diaz et al. 2020; Ramanzin et al. 2010). CWD has been documented in elk in the central Front Range of Colorado, including at Rocky Flats NWR. To date, no human prion

disease cases have been conclusively linked to prior CWD exposure; however, the absence of cases does not eliminate the possibility of future occurrences (National Academies of Sciences Engineering and Medicine 2025; O’Keeffe et al. 2025). Colorado does not require mandatory CWD testing for elk, but hunters may voluntarily submit animals to Colorado Parks and Wildlife (CPW) for testing.

Due to the unique history of the former Rocky Flats site, extensive testing of soil (Sattleberg, 2006; U.S. Department of Energy, 2022) and ungulates (Lucas et al., 2025; Todd & Sattelberg, 2005) has been conducted to ensure contaminants present no additional exposure risk to consumers.

- Deer Testing: Tissue samples, including meat, of deer harvested at Rocky Flats in 2002 were analyzed for contaminants. The results indicate no significant uptake of contaminants by deer or other wildlife species at the site (Todd & Sattelberg, 2005).
- Elk Testing: In 2023, elk tissues, including meat, were analyzed for radionuclides. No radionuclides were detected in any elk samples (GEL Laboratories, LLC, 2023).
- PFAS Analysis: In 2023, tissues from elk at Rocky Flats and several control locations were analyzed for per- and polyfluoroalkyl substances (PFAS). Neither perfluorooctanoic acid (PFOA) nor perfluorooctane sulfonate (PFOS) was detected in muscle tissue from any location. PFOS was detected in 100% of the liver tissues from elk at the Rocky Flats and control sites. Concentrations were low and consistent with levels found in other wildlife species in the U.S. with known PFAS contamination (LaSharr et al., 2025; Lucas et al., 2025). Colorado has no PFAS guidelines for wildlife. Internal organs are not required to be harvested or prepared as edible meat, although hunters are not prohibited from doing so (Colorado Parks and Wildlife, 2024).

There are no restrictions on consuming fish and wildlife taken from the former Rocky Flats site or surrounding areas (U.S. Department of Energy et al., 2006). However, in the absence of regulatory standards for PFAS in wildlife, the Service recommends that hunters avoid consuming elk liver harvested from areas with PFAS contamination. Additionally, the Service encourages hunters to submit heads or retropharyngeal lymph nodes for CWD testing.

E. The Clear Creek Herd and Rocky Flats Subherd

The Clear Creek elk herd (DAU E-38) ranges across Clear Creek, Jefferson, Boulder, and Gilpin counties (Huyer, 2005). The DAU encompasses 896 square miles and includes game management units (GMUs) 29 and 38 (see Figure 1). Post-hunt estimates in 2024 place the elk population at approximately 1,600 animals. Nearly 60% of the DAU is private land; the remaining 40% consists of federal, state, city, and county properties.

The Refuge is located within GMU 38 and represents 1.1% (10 mi²) of the DAU. The DAU serves as a more comprehensive management area encompassing the year-round range of the Clear Creek Herd. GMUs, which are smaller units within the DAU, are primarily used for hunting

regulations and mapping. The Rocky Flats subherd refers to a distinct group of elk in the Clear Creek Herd that exhibits unique spatial patterns in distribution and movement.

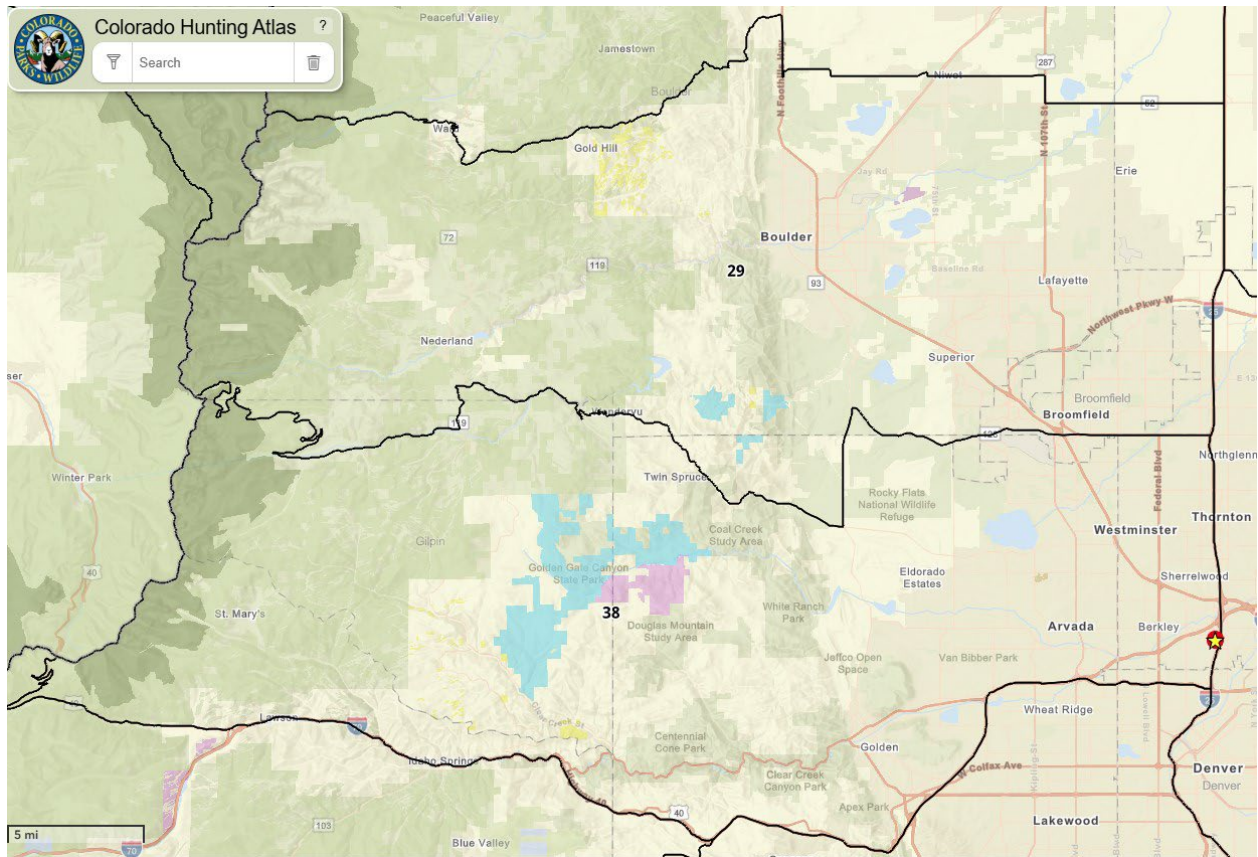


Figure 1. The land boundaries of GMUs 38 and 29, which together make up DAU E-38 (Colorado Parks and Wildlife, 2025b)

In 2019, a five-year project was started to assess and better understand the distribution of elk along the central Front Range of Colorado, including the Clear Creek herd. The central Front Range is a corridor of the Rocky Mountains that contains highly urban and rural areas. This interface creates the opportunity for large elk herds to find refugia in local parks and open spaces in and adjacent to urban areas. This project deployed 40 GPS collars on female elk in various subherds within the larger central Front Range elk population with the goal of informing management strategies (e.g., hunting) at the local and herd levels (Kraft et al., 2020). Five of the 40 collars were deployed on Rocky Flats elk. It was found that the Rocky Flats herd primarily traversed an area between the Refuge site and Boulder Open Space to the north (see Figure 2). Most of the Clear Creek herd located on the west side of Highway 93 and the Rocky Flats subherd on the east side of Highway 93 were not seen to mix. This data showed that this Rocky Flats herd stays in a very isolated area.

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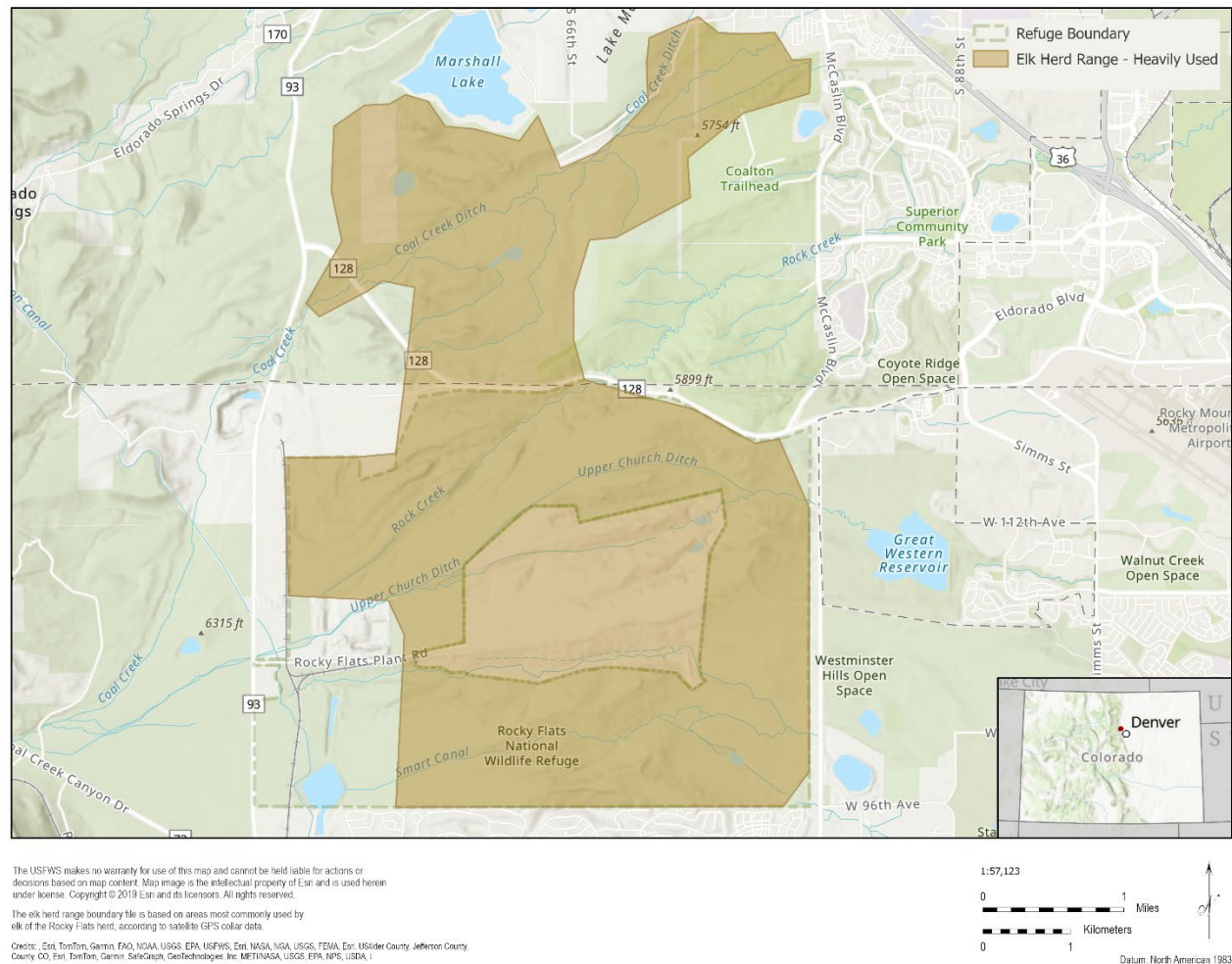


Figure 2. Area most heavily used by elk in the Rocky Flats Subherd. Commonly used land areas include the Refuge and the Boulder Open Space to the north.

A 2024 post-hunt season survey, conducted by CPW and the Service, reported 405 elk on the Refuge (see Figure 3), representing 25% of the Clear Creek herd. According to pasture condition assessment guidelines developed by Colorado State University and the U.S. Department of Agriculture (J. Cook et al., 2017), a healthy elk population for the Refuge should range between 200 and 250 animals. CPW's recommended population for the DAU is 1,200 elk (Huyer, 2005). The Clear Creek herd and the Rocky Flats subherd have surpassed the carrying capacity thresholds. This significant increase raises concerns about the proper habitat and wildlife management needed to maintain a balanced ecosystem.

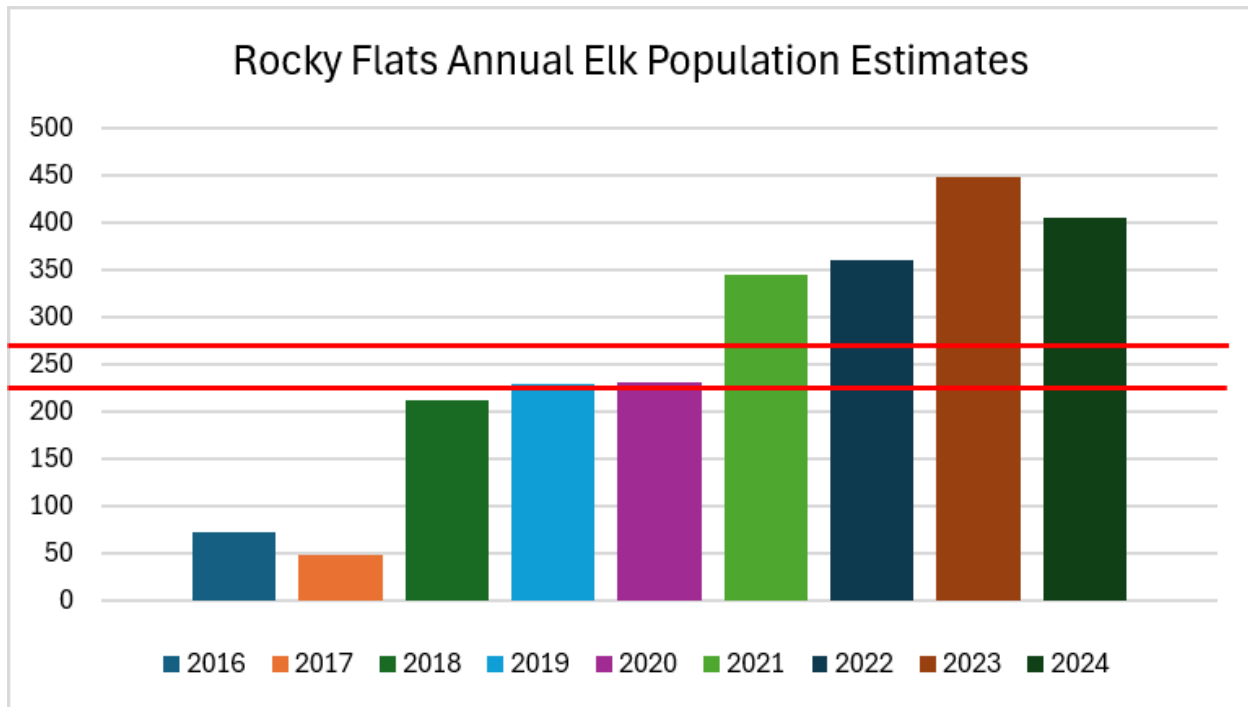


Figure 3. Rocky Flats Subherd annual population estimate with carrying capacity threshold depicted by the red lines. Carrying capacity of this herd is between 200 and 250 elk.

Without a regulated harvest, the Rocky Flats Subherd is projected to reach 767 animals by 2026 and 5,015 in 2030. This exponential growth, combined with the herd’s movement patterns, will cause ongoing damage to sensitive plant communities in the Refuge. High densities of cervids in one location typically leads to depletion of vegetative resources, poorer body condition, and increased disease transmission. Reducing herd density through hunting would improve overall herd health and reduce disease transmission rates. Furthermore, harvesting elk would benefit vegetation, reduce soil erosion, and improve water quality — protecting rare ecosystems and enhancing habitat for other species as well as cervids. A smaller population would also decrease the likelihood of wildlife-related traffic incidents and residential property damage.

II. Statement of Objectives

The objectives of a hunting program on Rocky Flats NWR are:

- To conserve, restore, and sustain biological diversity of the native flora and fauna of the mountain/prairie interface and aid in reducing invasive vegetation
- To improve herd health and body condition, and decrease disease prevalence by reducing over-population of elk on the landscape
- To provide wildlife-dependent public recreation as mandated by and according to Service law and policy, and increase opportunities for hunters, especially for youth and families

- To protect human health and safety by reducing vehicle collisions with elk and limiting infrastructure damage caused by large elk populations

Hunting is consistent with the Refuge's [Comprehensive Conservation Plan](#) (CCP) goals and objectives to use public hunting to manage elk populations and reach population targets.

III. Description of Hunting Program

A. Areas to Be Opened to Hunting

The hunting unit on Rocky Flats NWR will consist of approximately 3,127 acres of Refuge land. A 500-foot, no-hunting buffer will be established around all DOE lands. The size of this buffer is based on the estimated maximum distance projectiles may travel during the hunt. These DOE lands include the Rocky Flats Legacy Management site in the center of the Refuge and the National Research Energy Laboratory facility in the northwest corner of the Refuge.

An additional 500-foot buffer will be placed along the western boundary of the Refuge adjacent to a storage yard area and active aggregate mine. Section 16 of the Refuge, an area with active grazing permits, will be closed to all hunting activity.

See attached Maps:

- *Map A – Rocky Flats NWR (with proposed Hunting Unit)*

B. Species to Be Taken, Hunting Periods, Hunting Access

1. Big Game Hunting

The Service will host the elk hunt at Rocky Flats NWR in partnership with CPW. Authorized methods of take will include slug guns, muzzleloaders, straight-wall rifles, and archery equipment. Hunters will be selected through a lottery administered by CPW, and all hunts will occur during established state hunting seasons.

The bag limit will be one elk per hunter. The hunt will primarily target cow elk to achieve population management objectives, but a limited number of either-sex tags may be issued if necessary for herd management. Prior to the hunt application season, the Service will determine the number of tags allocated and the maximum number of hunters permitted on the Refuge at any given time (see Appendix A).

C. Hunter Permit Requirements

Hunters must comply with all applicable Rocky Flats NWR regulations and must obtain all necessary state licenses, tags, or permits (see "Hunter Permit Application and/or Registration Procedures"). Anyone born on or after January 1, 1949 must have a hunter education card to hunt in Colorado (see Appendix B).

D. Consultation and Coordination With the State and Tribes

The Service recognizes the importance of engaging with our state agency partners as we align hunting seasons, species, methods of take, and bag limits with state regulations. The Refuge reviewed the operations and regulations from neighboring state wildlife management areas and special hunts to ensure consistency where possible. Over the past year, the Refuge held monthly meetings with CPW to develop this Hunt Plan. Additional meetings with CPW district wildlife managers and biologists were conducted to assess herd needs and identify best practices.

The Refuge will continue to consult and coordinate with CPW on specific aspects of the Hunt Plan to ensure alignment with state objectives.

The Service recognizes our federal trust responsibility as described in Executive Orders, Secretarial Orders, Director's Orders, and Service policy. In March 2026, the Service proactively mailed and emailed invitations to all Federally Recognized Tribes potentially affected by proposals to expand hunting opportunities at the Refuge. These invitations emphasized our commitment to meaningful government-to-government consultation and welcomed Tribal comments, concerns, and suggestions regarding the potential expansion of activities. The Service values and respects Tribal sovereignty, cultural knowledge, and perspectives, and remains open and available to engage in dialogue at any time. On April 1, 2026, we received a letter from the Jicarilla Apache Nation accepting the opportunity to consult and proposing a Native American youth hunt. We continue to engage with the Jicarilla Apache Nation on this consultation request and proposal and may update this Hunt Plan as a result.

We will continue to honor our federal trust responsibility by reaching out to Tribes, providing opportunities for input, and incorporating Tribal feedback into our decision-making process.

E. Law Enforcement

Enforcing regulations associated with the management of a national wildlife refuge is the responsibility of commissioned Federal Wildlife Officers. These officers are supported as needed by the Service's Special Agents, CPW District Wildlife Officers, and local law enforcement agencies, including Colorado State Patrol, and the Sheriff's Office in Boulder and Jefferson Counties.

The following methods are used to control and enforce hunting regulations:

- Refuge and hunt area boundaries will be clearly posted;
- The Refuge will provide a brochure that shows hunt areas;
- Hunt areas will be available in mapping software applications such as OnX and Avenza;
- Rocky Flats NWR and CPW law enforcement staff will check all hunters for compliance with federal and state laws;

- All hunters will attend a mandatory annual orientation meeting prior to hunting on the Refuge; and
- The number of hunters on the Refuge at any given time will be regulated by the Service and CPW.

F. Funding and Staffing Requirements

The estimated annual cost to administer the Rocky Flats NWR hunting program is approximately \$30,000. This figure includes expenses related to staff salaries, equipment, law enforcement, hunting-specific brochures, data collection, and analysis of biological information. Staff responsibilities include brochure development, responding to inquiries, creating and installing signs, conducting mandatory orientation sessions, and performing law enforcement patrols.

It is anticipated that available funding will remain sufficient to continue the hunting program in the future.

IV. Conduct of the Hunting Program

A. Hunter Permit Application, Selection, and/or Registration Procedures (if applicable)

This hunting program will be conducted in collaboration with CPW. Individuals interested in hunting elk on the Refuge must apply for an elk hunting permit/tag through the lottery system administered by CPW. The Service will determine the total number of tags available each year. CPW will manage the lottery system and distribution of these tags.

The maximum number of hunters permitted on the Refuge at any given time will be established by the Service based on data from the previous year and current elk population estimates.

Other key components of the hunt include:

- **Hunt Period:** Each hunter will be assigned a set period of time (e.g., a designated week) within the hunting season to conduct their hunt.
- **Mandatory Annual Orientation:** Prior to their scheduled hunt, all hunters must attend an orientation session to review Refuge-specific rules, policies, and expectations. Attendance is a condition of the hunt tag. Failure to attend will result in disqualification.
- **Rest Days:** The Refuge will designate “rest” days throughout the hunting season to allow wildlife to adjust without hunting pressure. At least one rest day will be scheduled between hunt periods.
- **Buffer Zones:** A 500-foot no-hunting buffer will be maintained around lands managed by the DOE.
- **Retrieval Protocol:** If an injured animal crosses onto DOE property, the hunter must immediately contact CPW and the Service. An authorized representative from CPW or

the Service will coordinate with the DOE to access to the site, retrieve the animal, and return the carcass to Service lands for processing by the hunter.

Information and forms on hunts can be downloaded from the Rocky Flats NWR website: <https://www.fws.gov/refuge/rocky-flats>.

B. Refuge-Specific Hunting Regulations

Refuge-specific regulations can be found in 50 Code of Federal Regulations (CFR) 32.25(g). These regulations may be modified as conditions change or if Refuge expansion continues/occurs.

C. Relevant State Regulations

In addition to legal take methods for elk (see Appendix D), the following state regulations apply to hunters obtaining tags for the Refuge:

- **State-Issued Permit:** Hunters must possess a Refuge-specific permit (state-issued) to hunt elk.
- **Hunter Safety Training:** Hunters must have a hunter education certification and card number before applying for draws or purchasing hunting licenses if they were born after January 1, 1949. Individuals over age 50 or active-duty U.S. military and veterans can obtain a hunter education certificate by testing out of hunter education. An apprentice certificate can be obtained for hunters who are at least 10 years of age; these individuals must be accompanied by a mentor.
- **Types of Licenses:** A set number of licenses is allotted to each GMU. Hunters can apply for big game draws or lotteries to get one of the limited licenses available for the Refuge.

In coordination with CPW, hunters are expected to use lead-free ammunition to reduce the risk that lead poses to bald eagles, golden eagles, and other scavenging wildlife that use the Refuge. More information can be found in Appendix C.

D. Other Refuge Rules and Regulations for Hunting

All hunters must attend a mandatory orientation session prior to hunting on the Refuge. This orientation will provide an overview of the Refuge, including hunting procedures, safety requirements, site-specific regulations, and expectations for the hunt. At this orientation, hunters will provide a signed acknowledgement of the topics covered. The orientation will be conducted in partnership with CPW and the DOE.

In addition, prohibited activities will be posted in the brochure:

Prohibited Activities:

- Hunting any species not specifically listed

- Discharge of a firearm or archery equipment for reasons other than approved uses
- Discharge of a firearm or archery equipment toward roads, people, or infrastructure
- The use of rimfire or centerfire rifles and all handguns for hunting, except for rifles designed to fire straight-wall cartridges
- Possessing weapons that do not qualify as legal hunting equipment and ammunition allowed for these hunts*
- Leaving tree stands, ground blinds, trail cameras, other electronic equipment, or personal property overnight
- Using any tree stand that implements bolts, nails, screws, wires, or screw-in steps
- Using flagging, trail markers, paint, reflective tacks, or other types of markers
- Baiting
- Pre-season scouting conducted from areas other than public trails and parking areas
- Use of dogs
- Searching for, collecting, taking, and possessing artifacts, fossils, objects, and animal parts, including shed antlers
- Using motorized vehicles including all-terrain vehicles, utility terrain vehicles, off-road vehicles, off-highway vehicles, amphibious vehicles, snowmobiles, dirt bikes, and other road vehicles
- Using or possessing alcoholic beverages
- Using or possessing a controlled substance or any drug paraphernalia
- Camping and open fires
- Using aircraft (drones) — including launching on, landing on, and flying over Refuge lands
- Littering

*Persons possessing, transporting, or carrying firearms on National Wildlife Refuge System lands must comply with all provisions of state and local law. Persons may only use (discharge) firearms in accordance with Refuge regulations (50 CFR § 27.42) and specific Refuge regulations in 50 CFR Part 32. Title 18, U.S.C., Section 930 prohibits possession of firearms and dangerous weapons in federal facilities.

V. Public Engagement

A. Outreach for Announcing and Publicizing the Hunting Program

The proposed hunts will be publicized through multiple channels, including Service social media platforms, public-facing websites, and hunting brochures, as well as updates to the CPW hunting brochure. In addition, Service staff will attend public meetings organized by surrounding counties, municipalities, and neighborhoods to provide information and address questions on the hunting program.

B. Anticipated Public Reaction to the Hunting Program

Public reaction to the proposed hunt is anticipated to be positive. Informative discussions with open space committees representing Jefferson, Boulder, and Broomfield counties, as well as the Candelas neighborhood, have been met with favorable feedback. Colorado is widely regarded as a premier elk hunting location, with 101,943 elk tags issued during the 2025 season (Colorado Parks and Wildlife, 2025a).

Coloradans have seen successful elk reintroduction and sustainable population management through regulated hunting (see Appendix E). This has fostered a strong conservation ethic among residents who value wildlife management while acknowledging the role of hunting in landscapes void of large predators. As a result, more than 50% of elk tags drawn in 2025 were allocated to Colorado residents.

Opening Rocky Flats NWR to elk hunting would provide additional recreational opportunities near Colorado's most populous counties and continue the Service's legacy of quality game management, habitat stewardship, and wildlife-dependent recreation.

C. How Hunters Will Be Informed of Relevant Rules and Regulations

General information regarding hunting and other wildlife-dependent public uses can be obtained at the Colorado Front Range NWR Complex headquarters at 6550 Gateway Rd, Commerce City, CO 80022 or by calling 303-289-0232. Dates, forms, hunting unit directions, maps, applications, and permit requirements about the hunt will be available on the station website at <https://www.fws.gov/refuge/rocky-flats> and at the Refuge Complex Visitor Center.

VI. Compatibility Determination

Hunting and all associated program activities proposed in this hunt plan are compatible with the purposes of the Refuge. See the associated 2026 Big Game Hunting Compatibility Determination.

VII. Minor Amendment to the Comprehensive Conservation Plan

The [CCP](#) for Rocky Flats NWR, Final Environmental Impact Statement, and Compatibility Determination for Hunting allow for elk hunting on the Refuge. Although elk hunting was determined to be a compatible use, no formal hunt plan was developed at that time, and elk

hunting was not incorporated into 50 CFR. The CCP identified elk hunting as a potential future management tool. Implementation of this hunt plan will not require amendments to the goals or objectives of the CCP.

Hunting is one of the “Big 6” priority wildlife-dependent recreational uses on national wildlife refuges. Opening an elk hunt at Rocky Flats NWR will provide the public with an additional recreational opportunity while addressing significant herd management concerns. The elk herd on the Refuge has nearly doubled and now exceeds carrying capacity by 100%. Opening the Refuge to elk hunting, as outlined in the CCP, will enhance wildlife-dependent recreation on these uniquely urban public lands and support long-term conservation of wildlife and habitat for generations to come.

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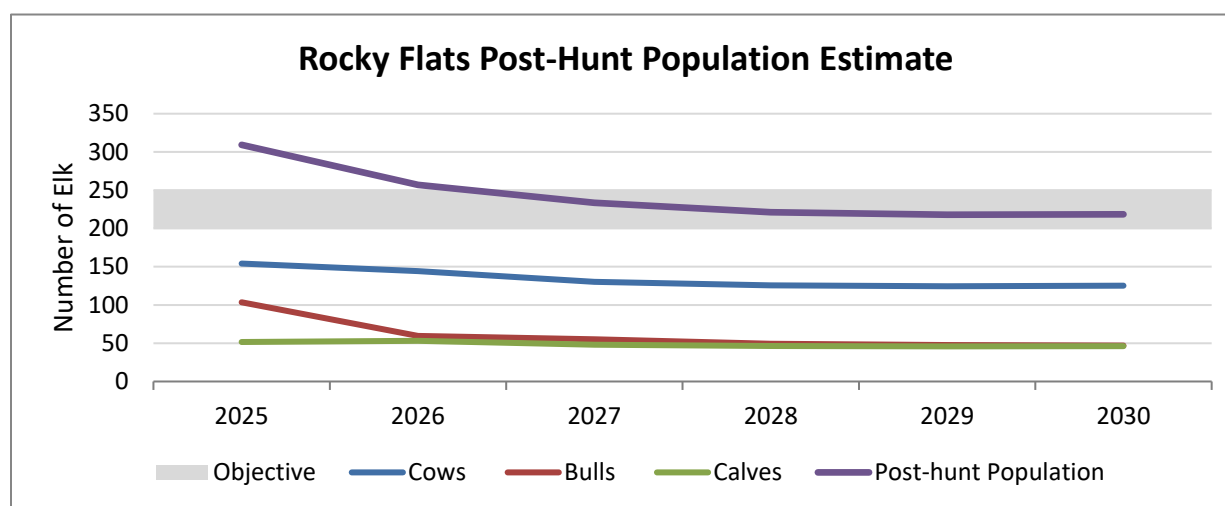
Appendix A — Projected Post-Hunt Population of Elk at the Rocky Flats NWR (2025–2030)

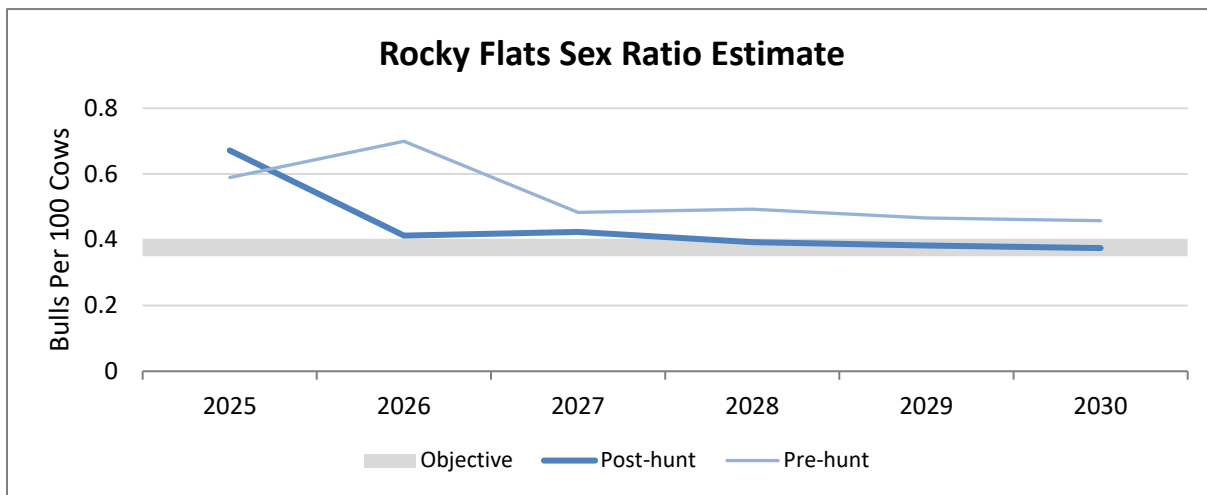
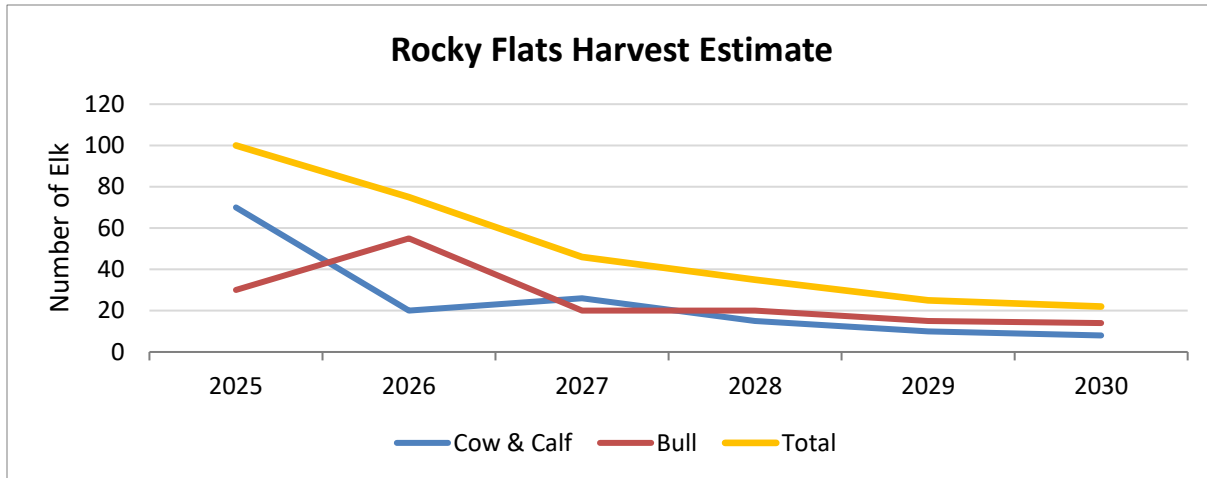
To help the Service determine the appropriate type and number of elk hunting tags, CPW developed a model specific to the Rocky Flats subherd. This model incorporates key variables for survival and recruitment and evaluates the effects of harvest and hunting-related dispersal on the Refuge.

CPW's management goal for the larger Clear Creek Herd (DAU-38) is a sex ratio of 35 to 40 bulls per 100 cows. Accordingly, the Service will target a 70/30 cow-to-bull ratio for the Refuge.

Based on culling and hunter harvest, the model indicates that an appropriate herd size can be achieved by the end of 2027, with target sex ratios reached by the end of 2028. The model will be updated annually.

	Pre-hunt Population	Pre-hunt Population	Pre-hunt Population	Pre-hunt Population	Harvest	Harvest	Harvest	Harvest	Post-hunt Population	Post-hunt Population	Post-hunt Population	Post-hunt Population
	Cows	Bulls	Calves	Total	Cow	Bulls	Calves	Total	Cows	Bulls	Calves	Total
2025	232	137	53	422	70	30	0	100	154	104	52	309
2026	169	118	54	341	20	55	0	75	144	59	53	257
2027	160	77	53	290	20	25	1	46	136	50	50	236
2028	150	67	50	267	15	17	0	32	131	48	48	228
2029	145	65	50	260	10	14	0	24	131	49	48	227
2030	145	65	50	260	8	14	0	22	132	49	49	229





Appendix B — State of Colorado Hunter Education Requirements

Anyone born on or after January 1, 1949 is required to have a hunter education card to hunt in Colorado. CPW honors hunter education cards from other states, provinces, and countries.

Core Curriculum Components

The traditional course is multiple days and includes classroom instruction and live-fire exercises. A hybrid course is now available that allows for online modules followed by in-person, hands-on instruction.

Safety:

- Comprehensive firearm safety, including handling, loading, and unloading inert firearms

Ethics and Responsibility:

- Promoting ethical hunting conduct, respect for wildlife, and responsible behavior in the field

Laws and Regulations:

- Understanding state-specific hunting laws, regulations, license requirements, and draw processes

Wildlife Management and Identification:

- Learning about different species, their characteristics, and the principles of wildlife management

Outdoor Survival:

- Skills for surviving in the outdoors, including understanding altitude sickness

Game Care:

- Proper procedures for field dressing and taking care of harvested game

Weapon Handling:

- Instruction in safe weapon handling for different types of firearms and bows

Appendix C — Potential Effects of Lead Ammunition on Local Wildlife Species

The Rocky Flats NWR provides habitat for bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*). These species are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668–668d). Populations of both bald and golden eagles are declining locally due to habitat loss (Boulder County Nature Association, 2012). The nearest active bald eagle nest is less than one mile from the Refuge near Standley Lake. Another active nest along Coal Creek about 1.5 miles north. Bald eagles from the Boulder, Golden, and Superior areas have also been documented in the Refuge (Bove et al., 2024). Golden eagles nest in all canyons adjacent to the Refuge (Lederer, 2010), including active nests in Eldorado Canyon, located approximately 2.2 miles west. Bald and golden eagles have been observed scavenging elk carrion on the Refuge see Figures C-1 and C-2).

The potential for a raptor to be exposed to lead ammunition is a function of multiple factors, including its diet, foraging strategy, and the frequency with which lead will be encountered in the environment (Golden et al. 2016). Raptors, particularly eagles and scavengers, are susceptible to lead poisoning when they ingest lead fragments or pellets in the tissues of animals killed or wounded by lead ammunition (Haig et al. 2014; Church et al. 2006; Hunt et al. 2006; Pauli and Buskirk 2007; Herring et al. 2016). Raptors that scavenge on carcasses or offal piles on refuge lands could be exposed to spent ammunition in the tissues of hunter-killed big game. Numerous federal and state regulations, including the 1991 nationwide ban on lead shot for waterfowl hunting, restrict lead use in ammunition. More recently, the Service and state agencies have adopted best management practices encouraging hunters to voluntarily reduce their use of lead ammunition to lower wildlife ingestion of lead (Warnke, 2025).

Lead-based projectiles often fragment upon impact, creating hundreds of small particles that contaminate carcasses and gut piles, which then serve as carrion for scavengers (Hunt et al., 2006, Knopper et al., 2006, Pauli & Buskirk, 2007, Stephens et al., 2009). Lead poisoning can weaken raptors by reducing their strength and coordination, leading to muscle and weight loss, reducing motor skill function and making them lethargic, which can make them more susceptible to disease, vehicle strikes or power line accidents and increases mortality rates by leaving them unable to hunt (Kramer and Redig 1997; O'Halloran et al. 1998; Kelly and Kelly 2005; Golden et al. 2016). Ecke et al. (2017) concluded that sublethal lead exposure in golden eagles might impair flight performance and thus increase the risk of mortality from other causes. Yet, other eagle studies could not find evidence that subclinical lead concentrations are linked to “increased risk of trauma” (Isomursu et al. 2018) or “other causes of mortality” (Franson and Russell 2014).

Effects of lead can have distinct impacts on different life stages of raptors and may also differ seasonally. Nestlings of raptors have impaired survival and growth when parents bring food that is embedded with lead fragments (Hoffman 1985a, 1985b; Pattee 1984). Raptor populations have higher blood lead levels during the hunting season compared to the following

spring, but seasonally high levels do not necessarily cause decreased fitness or survival (Bedrosian et al. 2012; Craighead and Bedrosian 2008; Craighead and Bedrosian 2009; Kelly and Johnson 2011). None of four eagles sampled with blood levels consistent with clinical poisoning (>5 parts per million) exhibited physical impairment upon capture and all survived at least one year following capture (Watson and Davies 2015). Lead has a short half-life (e.g., estimated at ~ 14 days for condors; Fry et al. 2009), and concentrations in soft tissues decline over time (Golden et al. 2016). Reduction in lead in the blood of spring migrant golden eagles since the last century is encouraging and may be a function of bans of lead shot and programs promoting a voluntary switch from lead to copper ammunition for big game (Harmata and Restani 2013).

Population-level estimates of lead exposure and impacts on raptors are available from a number of studies. A study of bald eagles and golden eagles in the Raptor Rehabilitation Program at the College of Veterinary Medicine at Washington State University from 1991 to 2008 found that 48% of bald eagles and 62% of golden eagles tested had blood lead levels considered toxic by current standards (Stauber 2010). Of the bald and golden eagles with toxic lead levels, 91% of bald eagles and 58% of golden eagles were admitted to the rehabilitation facility after the end of the general deer and elk hunting seasons in December (Stauber 2010). The proportion of eagle individuals with blood lead levels of clinical exposure is significantly less in the wild population (Domenech and Langer 2009; Harmata and Restani 2013; Langner et al. 2015; Harmata 2011; Kelly et al. 2011) than in those admitted to raptor rehabilitation programs and recovery centers (Stauber et al. 2010; Warner et al. 2014, Cruz-Martinez et al. 2012, Kramer and Redig 1997). Sampling free-flying individuals is more representative of lead levels in the eagle population than sampling those found debilitated, moribund, or dead (Harmata and Restani 2013). Though recent modeling has indicated that lead poisoning suppresses population growth in these species (Slabe et al. 2022), NatureServe (<https://explorer.natureserve.org>) lists golden eagles and bald eagles as nationally secure populations.

Anderson et al. (2000) estimated that banning lead ammunition for waterfowl hunting reduced lead-related mortality in mallard ducks (*Anas platyrhynchos*) in the Mississippi Flyway by 64%. In California, a statewide non-lead ammunition mandate for hunting significantly reduced lead exposure in condors and other raptors: Prevalence of elevated lead levels (>10 micrograms per deciliter [mg/dL]) dropped 58%, from 76% pre-ban to 32% post-ban. Among resident eagles, prevalence fell from 83% to 0% (Kelly et al., 2011).

Many other species on the Refuge are at risk from residual lead. A comprehensive review found that more than 130 species were affected by lead ammunition (Tranel and Kimmel 2009), but food chain biomagnification, except for direct ingestion of lead shot, is negligible (Eisler 1988). The primary concerns related to lead ammunition and tackle used by hunters and anglers in the Refuge environment are:

- Spent lead ammunition available to raptors (especially eagles and scavengers) and mammalian predators when they feed on the tissues of animals killed or wounded by lead ammunition

- Waterfowl mistakenly swallowing lead fishing gear or lead fragments when foraging for grit and pebbles to fill their gizzard
- Upland birds mistakenly swallowing lead shot when foraging for grit and pebbles to fill their gizzard

For example, Craighead and Bedrosian (2008) found that 47% of common ravens (*Corvus corax*) tested during hunting season had elevated blood lead levels ($\geq 10 \mu\text{g/dL}$), compared to 2% in the non-hunting season. For mammals such as black bears (*Ursus americanus*), mountain lions, and coyotes, reported blood lead levels and effects are less consistent, but the results are not immaterial (Legagneux, 2014; Johnson et al., 2013; Burco et al., 2012; Rogers et al., 2012; Rattner et al., 2008). Exposure to spent shot in wetlands is much less of an ecological concern because of the 1991 ban on lead shot for waterfowl hunting and this rigorous testing (Samuel et al. 1992; Anderson et al. 2000; Samuel and Bowers 2000; Lewis et al. 2021)



Figure C-1. Two golden eagles feed on an elk carcass on Rocky Flats (March 2023).



Figure C-2. A bald eagle and numerous corvids (black-billed magpies and common ravens) feed on an elk carcass on Rocky Flats (March 2024).

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Appendix D — State of Colorado Legal Methods of Take for Elk

State of Colorado regulations for hunting elk are found in § 2 CCR (Colorado Code of Regulations) 406-2, Chapter W-2 Big Game, Article IX — Elk. This section includes lawful methods of take for elk. Different weapons may be used during different seasons (see table below).

Rimfire or centerfire rifles and handguns are not permitted for hunting on the Refuge, except for rifles designed to fire straight-wall cartridges. Shotguns and muzzleloaders (.50 caliber or larger) are permitted for hunting on the Refuge. Handheld bows and crossbows are permitted for hunting on the Refuge.

SEASON	METHOD: CENTERFIRE RIFLE, SHOTGUN, HANDGUN	METHOD: MUZZLELOADERS .40 TO .49 CALIBER	METHOD: MUZZLELOADERS .50 CALIBER OR LARGER	METHOD: HANDHELD BOWS	METHOD: CROSSBOW
ARCHERY	NO	NO	NO	YES	NO
MUZZLELOADER	NO	NO	YES	NO	NO
RIFLE	YES	NO	YES	YES	YES

*Note that for the rifle and associated methods seasons, “associated methods” are shotguns, handguns, muzzleloaders that are a minimum of .50 caliber for elk, handheld bows, and crossbows.

Muzzleloading Rifles and Smoothbore Muskets

- Only legal muzzleloaders are allowed in muzzleloading seasons.
- In-line muzzleloaders are legal.
- Must be a single barrel that fires a single round ball or conical projectile.
- To hunt elk or moose, conical bullets must be a minimum of .50 caliber, and round-ball bullets must be a minimum of .54 caliber.
- If greater than .50 caliber, bullets must weigh a minimum of 210 grains.
- Shotshell primers and B.O.R. Lock MZ System bullets are legal.
- Pelletized powder systems are prohibited during muzzleloading seasons.
- Cannot be loaded from the breech during muzzleloading seasons.
- Only open or iron sights are allowed in muzzleloading seasons. Fiber optics and fluorescent paint incorporated into or on open or iron sights are legal. Scopes or any

sighting devices using artificial light, batteries, and electronic gear are prohibited during muzzleloading seasons.

- j. Sabots are prohibited during muzzleloading seasons. Cloth patches are not sabots.
- k. Smokeless powder is prohibited in muzzleloading seasons. Black powder and black-powder substitutes are legal.
- l. Electronic or battery-powered devices cannot be incorporated into or attached to muzzleloaders during muzzleloading seasons.

Shotguns

- a. Shotguns must be minimum 20 gauge and fire a single slug. Use of buckshot is illegal for hunting big game.
- b. A shotgun barrel must be a minimum of 18 inches long. Minimum overall length must be 26 inches.

Handheld Bows

A handheld bow is a long bow, recurve bow, or compound bow on which the string is not drawn mechanically or held mechanically under tension. String or mechanical releases are legal if they are hand-drawn or handheld with no other attachments or connections to the bow (except the bowstring).

- a. Handheld bows, including compound bows, must use arrows with a broadhead having a minimum of 7/8-inch outside diameter (width) and a minimum of two steel cutting edges. Each cutting edge must be in the same plane for the entire length of the cutting surface.
- b. Only legal, handheld bows are allowed during archery seasons.
- c. Minimum draw weight is 35 pounds. No let-off maximum is required.
- d. No part of a bow's riser (handle) or track, trough, channel, arrow rest, or other device (excluding cables and bowstring) that attaches to the riser can contact, support, and/or guide the arrow from a point rearward of the bow's brace height behind the undrawn string.
- e. Bows can propel only a single arrow at a time. No mechanisms for automatically loading arrows are allowed.
- f. Scopes and electronic or battery-powered devices cannot be incorporated into or attached to a bow or arrow, except for lighted nocks on arrows. Recording devices such as cameras or video recorders attached to bows may be used if they do not cast light toward the target or aid in range finding, sighting, or shooting the bow.
- g. Hydraulic or pneumatic technology cannot be used to derive or store energy to propel arrows. Explosive arrows are prohibited.

Crossbows

- a. Draw weight must be a minimum of 125 pounds.
- b. Draw length must be a minimum of 14 inches from the front of the bow to the nocking point of the drawstring.
- c. A positive mechanical safety device is required.
- d. Bolts must be a minimum of 16 inches long, have a broadhead that is a minimum of 7/8 inch wide and with a minimum of two steel cutting edges. Each cutting edge must be in the same plane for the entire length of the cutting surface.
- e. Crossbows are illegal during archery seasons.

Centerfire Rifles

NOTE: Only rifles designed for straight-wall ammunition may be used for hunting on the Refuge.

- a. Rifles must be a minimum of .24 caliber (6 mm).
- b. Rifles must have a minimum 16-inch barrel and be at least 26 inches long.
- c. If semiautomatic, the capacity of the magazine and chamber combined cannot exceed six rounds.
- d. Rifles must use expanding bullets that weigh a minimum of 70 grains for deer, pronghorn, and bear, and 85 grains for elk and moose, and must have an impact energy (at 100 yards) of 1,000 foot-pounds as rated by the manufacturer.
- e. It is illegal to hunt game birds, small-game mammals, or furbearers with a centerfire rifle larger than .23 caliber during regular rifle deer and elk seasons west of I-25, without an unfilled deer or elk license for the season. A small-game, furbearer or unfilled big-game license is required.

NOTE: SMART RIFLES are prohibited, including any firearm equipped with a target tracking system, electronically controlled, assisted or computer-linked trigger, or ballistics computer. Any firearm equipped with a scope containing a computer processor is considered to be a smart rifle.

NOTE: FULLY AUTOMATIC RIFLES are prohibited.

Appendix E — Nearby Special Hunts

The Clear Creek elk herd occupies the foothills between Golden and Boulder. Several subherds reside almost entirely on public lands. Population management has included traditional hunting within GMUs 20, 29, and 38, issuance of private landowner tags, and periodic culling by agency staff. Additionally, some municipalities have implemented limited elk hunting programs.

Traditional Hunting

Opportunities for (or “access” to) elk hunting is limited in GMUs 29 and 38. This is the primary issue responsible for increasing elk populations in this area. Traditional elk hunting seasons begin in early September with an archery season and extend to muzzleloader and rifle seasons. Elk hunting typically concludes by late November.

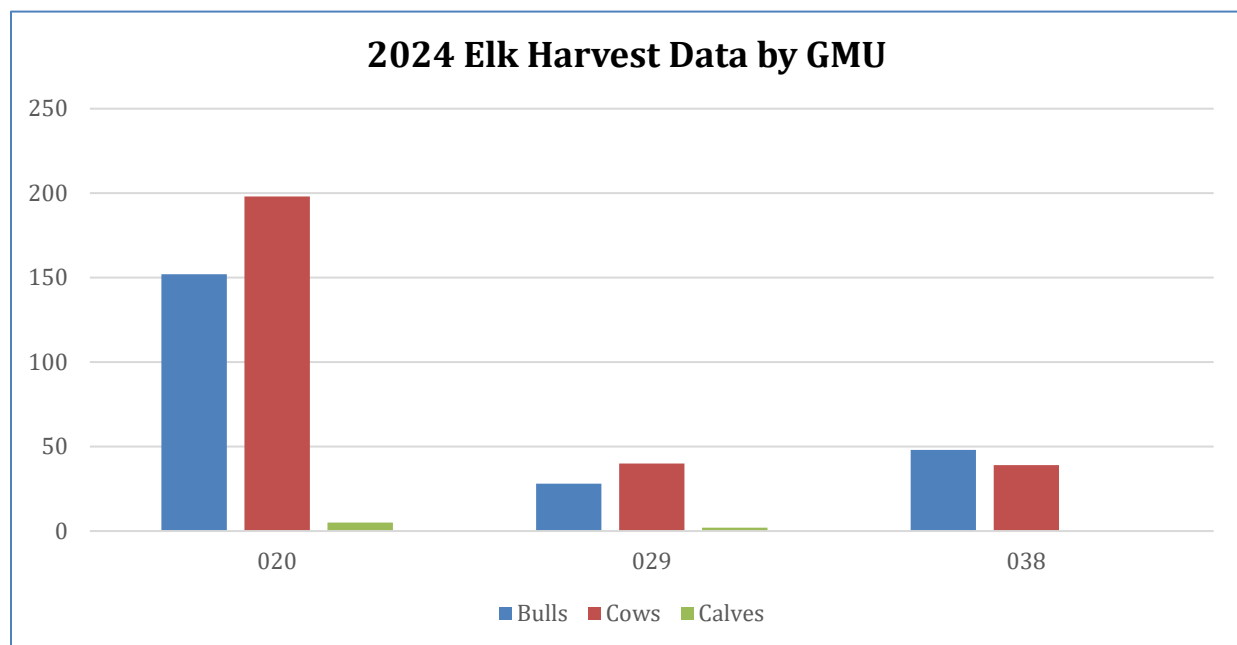


Figure E-1. Elk harvest numbers from GMUs 020, 029, and 038 in 2024

Boulder County – Rabbit Mountain (~500 acres)

The elk population on Rabbit Mountain grew rapidly. Prior to 2010, elk were only occasional visitors; by 2015, the population exceeded 350 animals. Hunting was introduced on the property in 2017, and hunting pressure successfully met wildlife and habitat management

goals. However, some elk dispersed to other areas, causing crop damage for landowners. Although elk hunting is still authorized, it is no longer necessary and was not permitted in 2025.

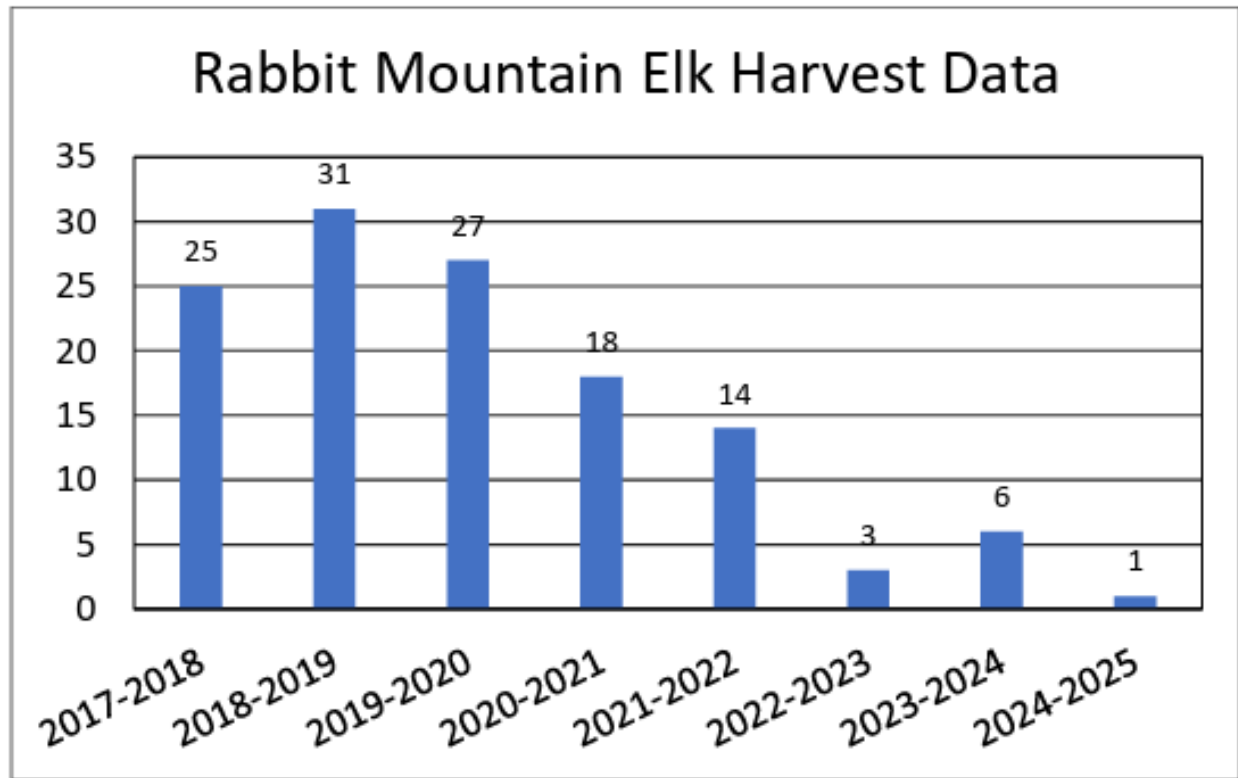


Figure E-2. Elk harvest data from Rabbit Mountain from 2017–2025

Boulder County – Red Hill (~825 acres)

The elk population on Red Hill has remained relatively stable, ranging from 80 to 100 animals prior to hunting. Elk hunting began in 2020, but the population still exceeds wildlife and habitat management goals. Some animals have shifted to nearby Table Mountain — where hunting is prohibited — and other adjacent lands, causing significant property damage for neighboring landowners. In 2025, elk hunting will be reduced and allowed only on lands east of U.S. 36.

Elk hunting occurs annually from mid-August to early November on designated days. Limited tags are issued, and hunters must complete a shooting proficiency test and orientation. Approved methods of take include shotgun slugs and muzzleloaders. All ammunition must be non-lead.

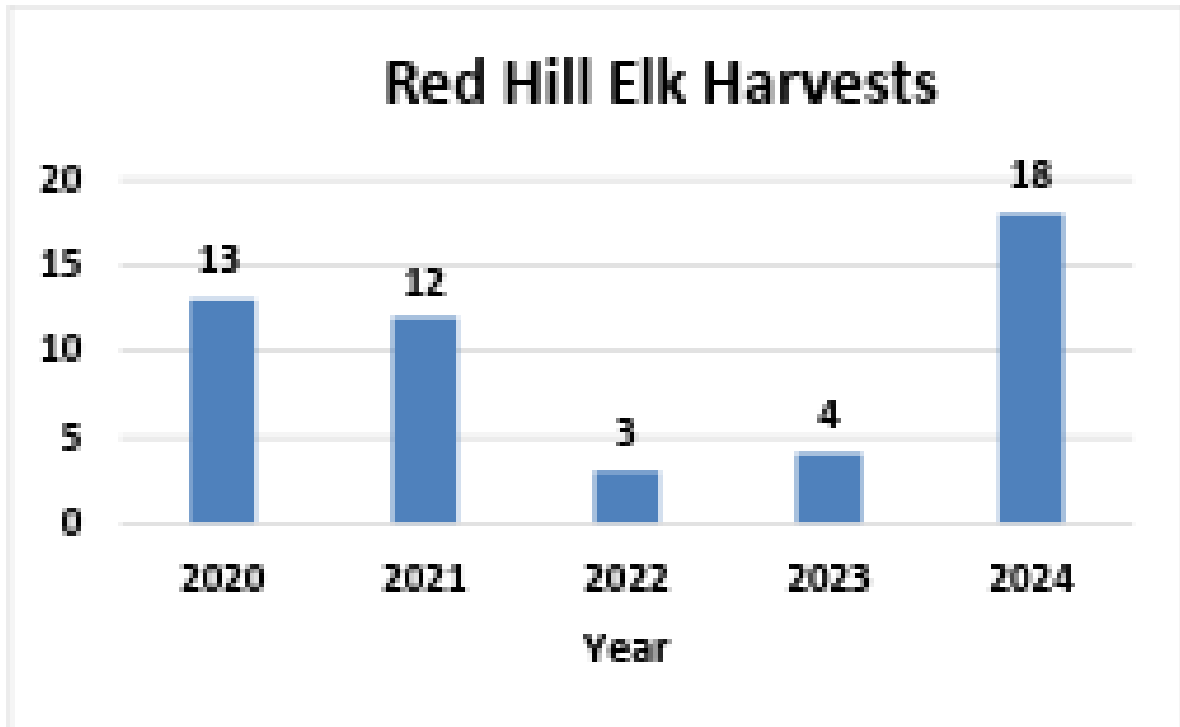


Figure E-3. Elk harvest data from Red Hill from 2020–2024

Jefferson County – Centennial Cone (3,672 acres)

Deer and elk hunting has occurred on the Centennial Cone property since Jefferson County Open Space opened the park in 2001. Elk hunting takes place annually on approximately 3,000 acres in the park’s interior, which is surrounded by a large loop trail. During this period, the park is closed to all visitors except hunters and their companions.

Late Season GMU 38, L2 Rifle licenses are issued by CPW through its Limited Draw. CPW provides hunter information to Jefferson County, which then distributes essential materials such as access cards, gate combinations, hunting zone maps, Rest Day calendars, regulations,

and a link to the online orientation. To achieve herd movement and population goals, CPW issued 50 cow elk tags for the 2025-2026 season, granting access to Centennial Cone.

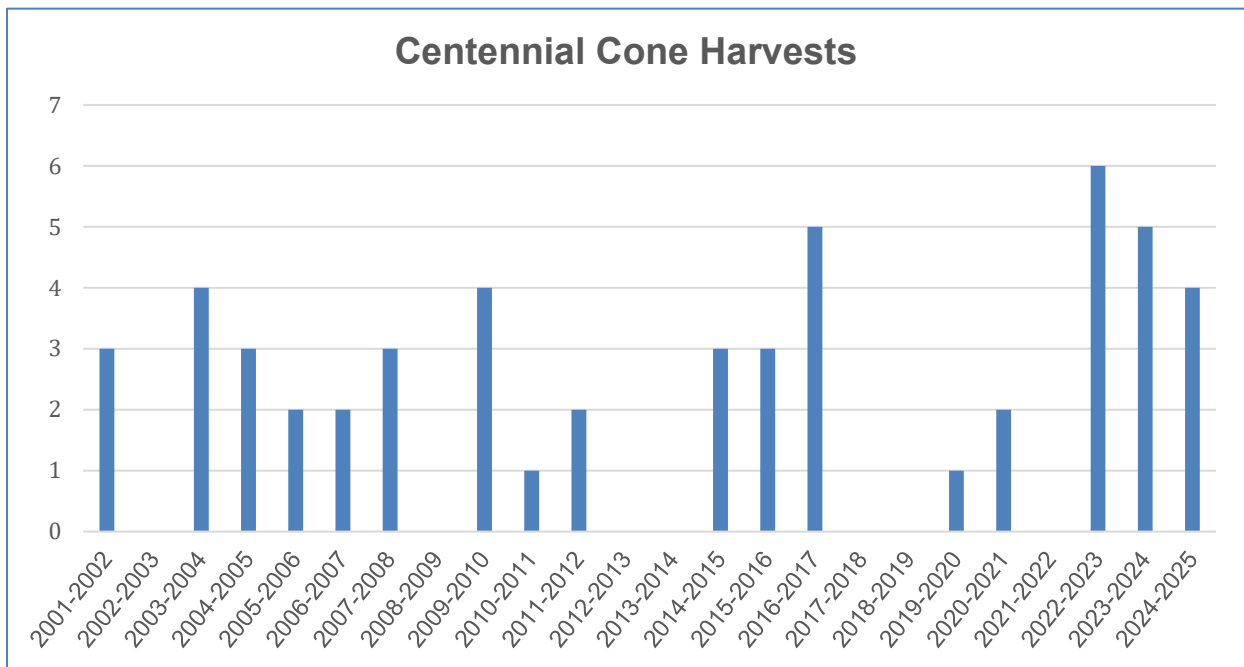


Figure E-4. Elk harvest data from Centennial Cone from 2001–2025

Map A — Rocky Flats NWR (With Proposed Hunting Unit)

