

DRAFT

ENVIRONMENTAL ASSESSMENT

Powder River County Coyote Predation Control EA

3/10/23



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Environmental Assessment

The Montana Department of Fish, Wildlife and Parks (FWP) has prepared this Draft Environmental Assessment (EA) in accordance with the requirements of the Montana Environmental Policy Act (MEPA). The purpose of an EA is to identify, analyze, and disclose the impacts of a proposed state action. This document may disclose impacts that have no required mitigation measures, or over which FWP, more broadly, has no regulatory authority.

Local governments and other state agencies may have authority over different resources and activities under separate regulations. FWP actions will only be approved if the proposed action complies with applicable regulations. FWP has a separate obligation to comply with any federal, state, or local laws and to obtain any other permits, licenses, or approvals required for any part of the proposed action.

This EA was prepared for the following action:

PROJECT NAME: Coyote Predation Control	
LOCATION: Portions Powder River County	COUNTY: Powder River
PROPERTY OWNERSHIP: <input checked="" type="checkbox"/> FEDERAL <input checked="" type="checkbox"/> STATE <input type="checkbox"/> COUNTY <input checked="" type="checkbox"/> PRIVATE	
EA PREPARER: Brett Dorak	DATE ISSUED: 3/10/23

I. Compliance with the Montana Environmental Policy Act

Before a proposed *project* may be approved, environmental review must be conducted to identify and consider potential impacts of the proposed project on the human and physical environment affected by the project. The Montana Environmental Policy Act (MEPA) and its implementing rules and regulations require different levels of environmental review, depending on the proposed project, significance of potential impacts, and the review timeline. § 75-1-201, Montana Code Annotated (“MCA”), and the Administrative Rules of Montana (“ARM”) 12.2.430, General Requirements of the Environmental Review Process.

FWP must prepare an EA when:

- It is considering a “state-proposed project,” which is defined in § 75-1-220(8)(a) as:
 - (i) a project, program, or activity initiated and directly undertaken by a state agency;
 - (ii) ... a project or activity supported through a contract, grant, subsidy, loan, or other form of funding assistance from a state agency, either singly or in combination with one or more other state agencies; or
 - (iii) ... a project or activity authorized by a state agency acting in a land management capacity for a lease, easement, license, or other authorization to act.
- It is not clear without preparation of an EA whether the proposed project is a major one significantly affecting the quality of the human environment. ARM 12.2.430(3)(a));
- FWP has not otherwise implemented the interdisciplinary analysis and public review purposes listed in ARM 12.2.430(2) (a) and (d) through a similar planning and decision-making process (ARM 12.2.430(3)(b));
- Statutory requirements do not allow sufficient time for the FWP to prepare an EIS (ARM 12.2.430(3)(c));
- The project is not specifically excluded from MEPA review according to § 75-1-220(8)(b) or ARM 12.2.430(5); or
- As an alternative to preparing an EIS, prepare an EA whenever the project is one that might normally require an EIS, but effects which might otherwise be deemed significant appear to be mitigable below the level of significance through design, or enforceable controls or stipulations or both imposed by the agency or other government agencies. For an EA to suffice in this instance, the agency must determine that all the impacts of the proposed project have been accurately identified, that they will be mitigated below

the level of significance, and that no significant impact is likely to occur. The agency may not consider compensation for purposes of determining that impacts have been mitigated below the level of significance (ARM 12.2.430(4)).

Adoption or Tiering to Existing Environmental Assessment:

- According to the requirements of ARM 12.2.441(1), the agency shall adopt as part of a draft EA all or any part of the information, conclusions, comments, and responses to comments contained in an existing EA that has been previously or is being concurrently prepared pursuant to MEPA or the National Environmental Policy Act (NEPA) if the agency determines:
 - a) the existing EA covers an action paralleling or closely related to the action proposed by the agency or the applicant;
 - b) based on its own independent evaluation, the information contained in the existing EIS has been accurately presented; and
 - c) the information contained in the existing EA is applicable to the action currently being considered.
- In May, 2021, the United States Department of Agriculture’s Animal and Plant Health Inspection Service – Wildlife Services Agency (APHIS-WS) issued a Decision and Finding of No significant Impact for the Environmental Assessment, which are directly related to the proposed action.
- FWP determined the APHIS-WS Joint Final EA and associated Decision and FONSI accurately analyzed available strategies for limiting potential adverse impacts to deer populations from coyote predation using the Integrated Predator Damage Management or IPDM process.
- According to the requirements of ARM 12.2.441(2), a summary of the existing Environmental Assessment or EA, or the portion adopted, and a list of places where the full text is available must be circulated as a part of the current EA and treated as part of the EA for all purposes. A copy of the APHIS-WS Final Joint EA, the associated Decision, and Finding of No Significant Impact (FONSI) are available for review on FWP’s website at <https://fwp.mt.gov/public-notice>.

In May 2021 APHIS-WS issued their Final Joint EA, associated Decision, and FONSI. FWP served as a participating agency in development of the Joint EA. FWP determined the Final Joint EA and associated FONSI cover an action directly related to the proposed action; the applicable information presented in the Final Joint EA and associated FONSI is accurate; and the information contained in the Final Joint EA and associated FONSI is directly applicable to the proposed action. Therefore, based on the applicable requirements of ARM 12.2.441(1), FWP “...shall adopt as part of a draft EA all or any part of the information, conclusions, comments, and responses to comments contained in [the] existing EA.”

MEPA is procedural; its intent is to ensure that impacts to the environment associated with a proposed project are fully considered and the public is informed of potential impacts resulting from the project.

II. Background and Description of Proposed Action

Name of Project: Coyote Predation Control

Background and Description of Proposed Project: Mule deer (*Odocoileus hemionus*) surveys in portions of Montana Fish, Wildlife and Parks (FWP) Administrative Region 7 in southeastern Montana have observed a decline in total numbers as well as a reduction in recruitment rates during the spring of 2021 and again in the spring of 2022 (Figures 1 – 3). This corresponds with severe drought conditions in the area as indicated by the maps produced through a partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration (Figures 4 & 5). Drought conditions have negative impacts on forage quality and quantity and habitat conditions, which impact mule deer survival rates. Drought conditions also impact other wildlife populations and could reduce other prey resources for coyotes (*Canis latrans*) that may result in additional cause-specific mortality of mule deer by coyotes. Impacts from these and other conditions have suppressed recruitment rates to such a level that they are below the restrictive package level, which has a threshold of <30 fawns: 100 adults. According to FWP's Adaptive Harvest Management Plan (2021) this low fawn to adult mule deer ratio has led to FWP decreasing antlerless hunting opportunity to help increase mule deer population levels.

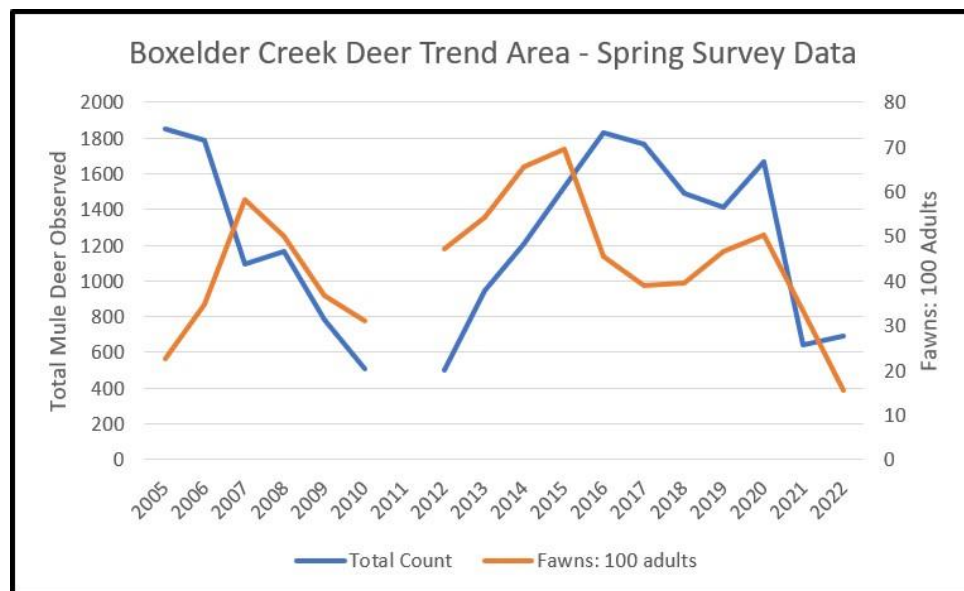


Figure 1. Aerial mule deer survey data gathered by Montana Fish, Wildlife and Parks in the Boxelder Creek deer trend area in Administrative Region 7 from 2006 through 2022.

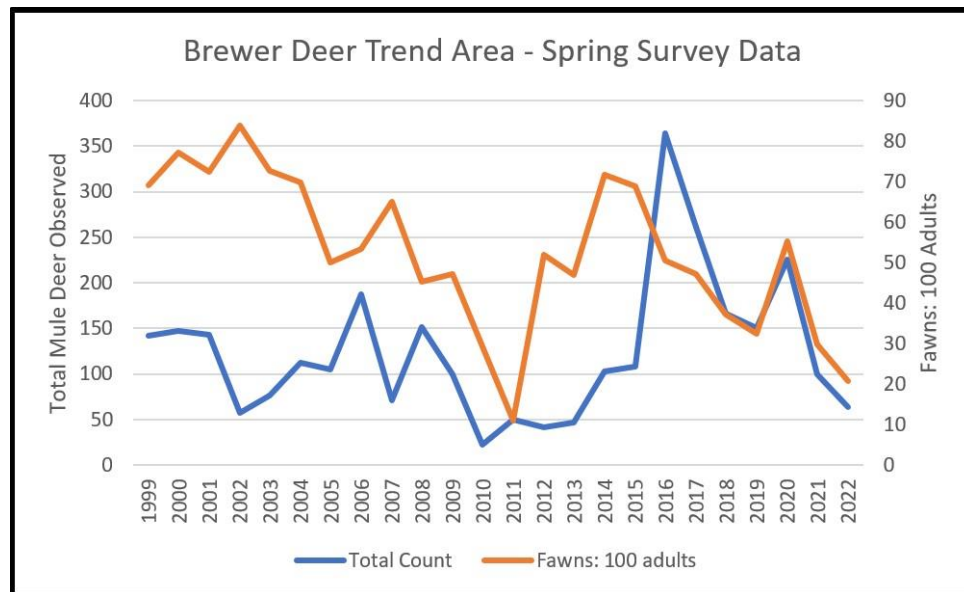


Figure 2. Aerial mule deer survey data gathered by Montana Fish, Wildlife and Parks in the Brewer deer trend area in Administrative Region 7 from 1999 through 2022.

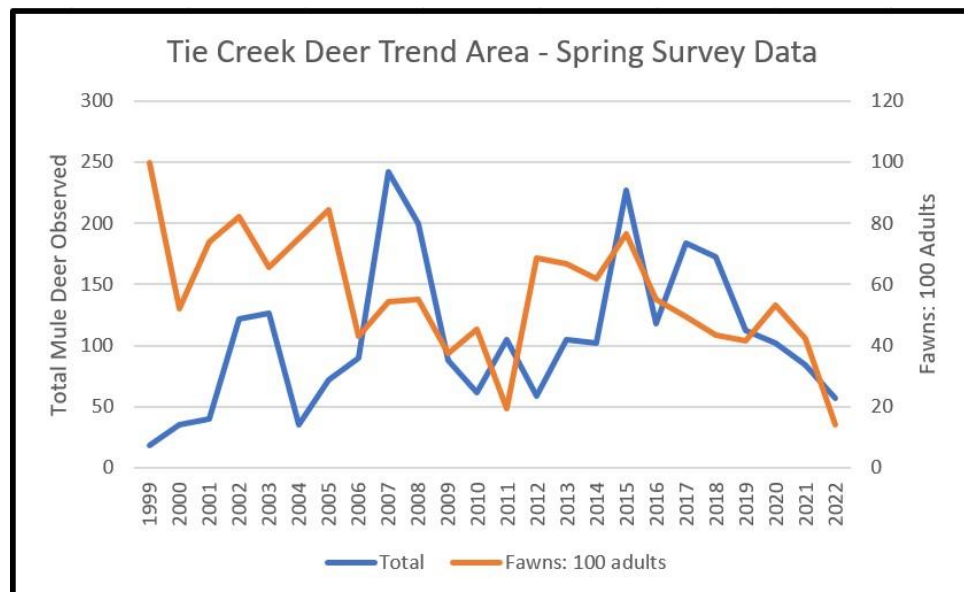


Figure 3. Aerial mule deer survey data gathered by Montana Fish, Wildlife and Parks in the Tie Creek deer trend area in Administrative Region 7 from 1999 through 2022.

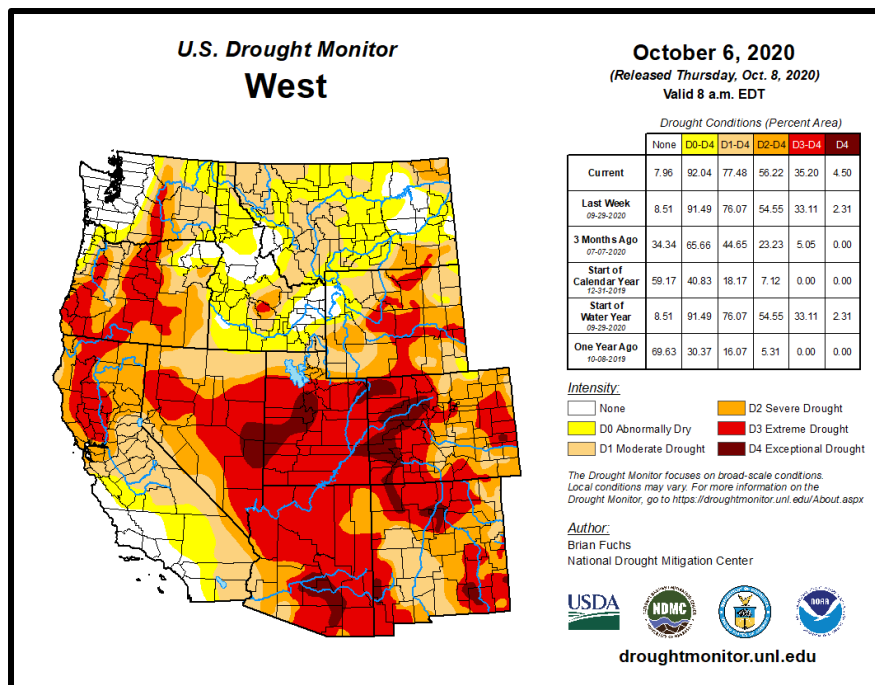


Figure 4. The U.S. Drought Monitor - Western Geographic Region map produced through a partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration for October 6, 2020.

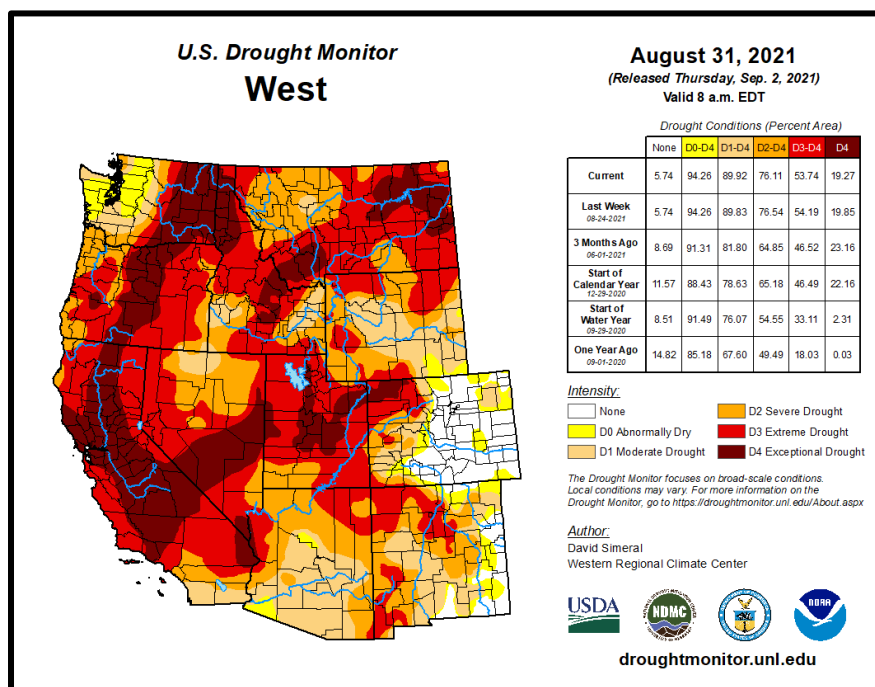


Figure 5. The U.S. Drought Monitor - Western Geographic Region map produced through a partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration for August 31, 2021.

When mule deer populations drop well below their carrying capacity on the landscape and recruitment rates are at low levels then cause-specific mortality events can become additive, defined as a death that does not cause a reduction in other forms of mortality and instead increases the overall mortality rate. These mortalities differ from those that are observed when population levels are higher and near carrying capacity and are considered compensatory, which means when a specific mortality causes a reduction in other forms of mortality and the overall mortality rate is either less than it would be if it was additive or there is no change in the population's mortality rate. Most mortality events in an ungulate population occur in the younger age classes, particularly in fawns after parturition or during winter months. Ballard et al. (2001) recommends that if predator control is to be implemented that it would be most effective just prior to and during mule deer parturition and be focused on a finite scale (<259 mi²) to have the best chances at being effective.

FWP is proposing to provide Powder River County with \$26,400 to assist with their predator control efforts specific to coyotes during the spring of 2023. Powder River County currently has a predator board and actively utilizes control measures to mitigate predator damage. The proposed activity would allow the county to use the funds to temporarily increase aerial shooting of coyotes utilizing fixed-wing aircraft and trapping efforts to reduce the coyote population at a spatially finite scale. FWP will draft and sign a Memorandum of Understanding or MOU with Powder River County that defines the sideboards of the coyote control measures that may have the most beneficial impact on mule deer fawn survival. The spatial scale for the county to focus their efforts is identified by FWP taking three deer trend areas (DTAs, Figure 6) that had low mule deer total counts and recruitment rates observed during the 2021 and 2022 spring surveys and extending those DTA boundaries by 12.5 miles (Figure 7), which is the average dispersal distance observed by mule deer in the Boxelder area (Carnes 2009). The location where these polygons overlap identifies the primary area of focus at the spatial scale recommended by Ballard et al. (2001) and is intended to provide an area that could positively impact mule deer fawn survival rates for those three DTAs and will be assessed in future mule deer survey efforts by FWP.

Timing for the coyote removal efforts will be defined as April 15th through June 15th to account for the estimated parturition date for mule deer in the area (Jensen 1988, Skelly 2018), which is the recommend timing for when predator control may be the most effective (Ballard et al. 2001). Through their predator board, Powder River County already has established contracts with a pilot to conduct aerial shooting of coyotes as well as contracts with trappers to trap predators and currently utilizes those activities during the outlined period. Additionally, Powder River County already has signed agreements with private landowners to inform where they can conduct predator control efforts and where they cannot and have all applicable permits to conduct their coyote removal activities. With the already established contracts with predator control specialists and private land permissions in place, FWP will provide additional financial resources to temporarily increase the county's efforts instead of FWP attempting to initiate the program without the support of Powder River County.

FWP's experience with this type of action in other counties with a similar mule deer-coyote population imbalance scenario demonstrates the potential effectiveness of the proposed action. Therefore, the proposed action, with consideration for other similar actions conducted in other affected counties, contributes to FWP's prior and ongoing efforts to increase low mule deer populations in regions of the state where the predator-prey relationship is out of balance.

Region 7 Mule Deer Trend Areas with Low Fawn Recruitment Rates

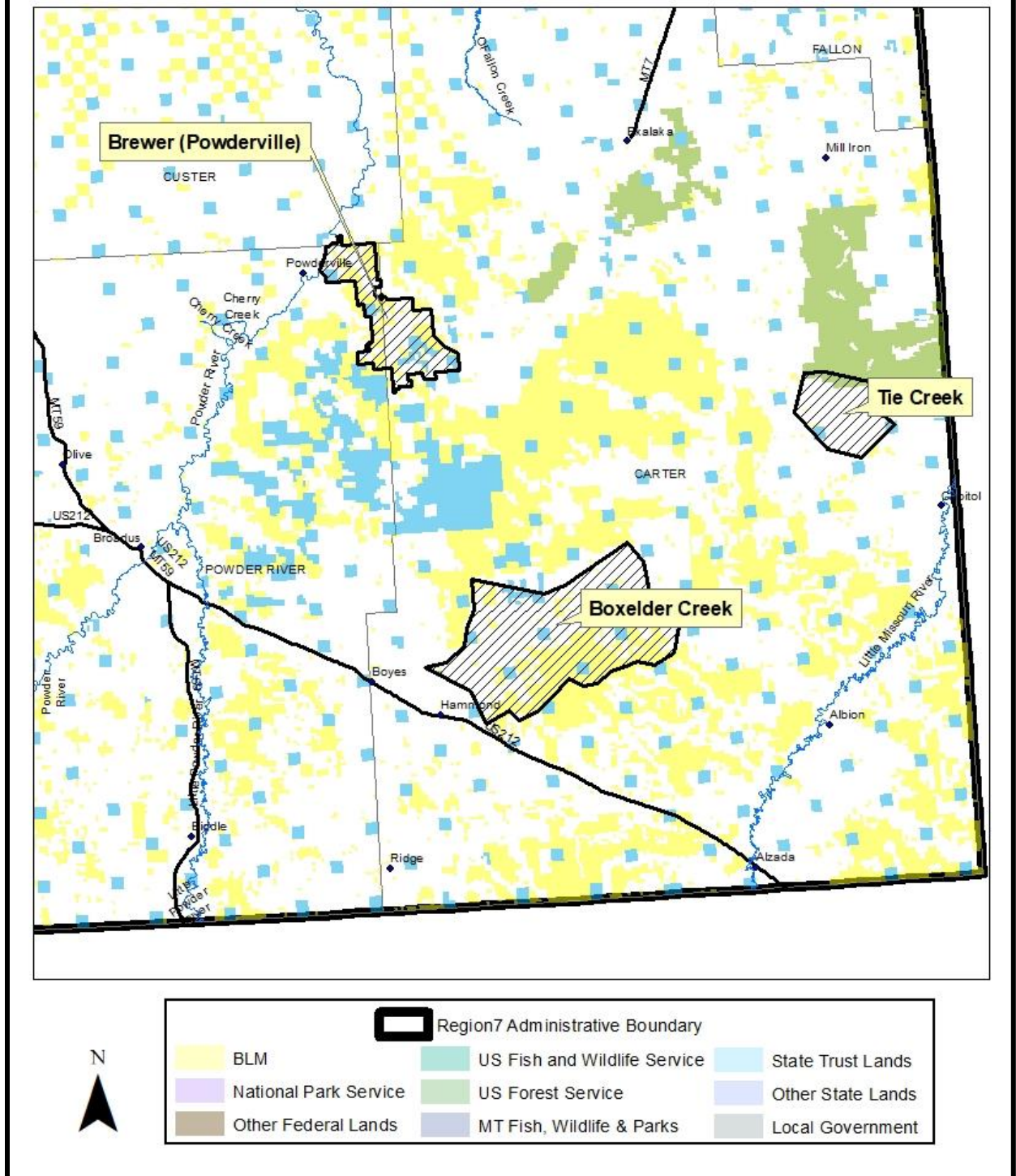


Figure 6. Three deer trend areas within Montana Fish, Wildlife and Parks (FWP) Administrative Region 7 in southeast Montana where observed total mule deer numbers and recruitment rates during spring surveys in 2021 and 2022 were below the restrictive package outline in FWP's Adaptive Harvest Management Plan.

The APHIS-WS joint Final EA analyzed the Integrated Predator Damage Management (IPDM) alternative with direct connections that are relatable to the proposed activities in this EA. In their EA, as part of the IPDM alternative, APHIS-WS analyzed actions that included: impacts on predator species populations, effects on threatened and endangered species, predator damage and management methods and techniques used, lethal take of predators by method, lethal take by land class, population impact analysis of coyote take in Montana, how wildlife professionals and others consider ethics and humaneness in predator damage management, how predator population and social dynamics affect ecosystem structure and function, as well as issues that are not considered for comparative analysis and why they were dismissed. In the “No Action” Alternative 1, APHIS-WS identified aerial shooting as species-specific, useful for immediate relief, and the most effective control method for coyotes in terrain that is relatively flat, which is appropriate for Powder River County. APHIS-WS also identified that the use of traps in combination with aerial shooting during spring, when coyote predation intensifies, can be utilized to improve management of predators, including coyotes. FWP served as a participating agency in the development of the Joint EA and in May 2021 APHIS-WS issued a Decision and FONSI. FWP determined the APHIS-WS Final Joint EA and associated FONSI covered an action directly related to the proposed action. Therefore, based on the applicable requirements of ARM 12.2.441(1), FWP “...shall adopt as part of a draft EA all or any part of the information, conclusions, comments, and responses to comments contained in [the] existing EA.”

Affected Area / Location of Proposed Project

- Legal Description
 - See location map below (Figure 7).
- Location Map

Region 7 Coyote Removal Locations

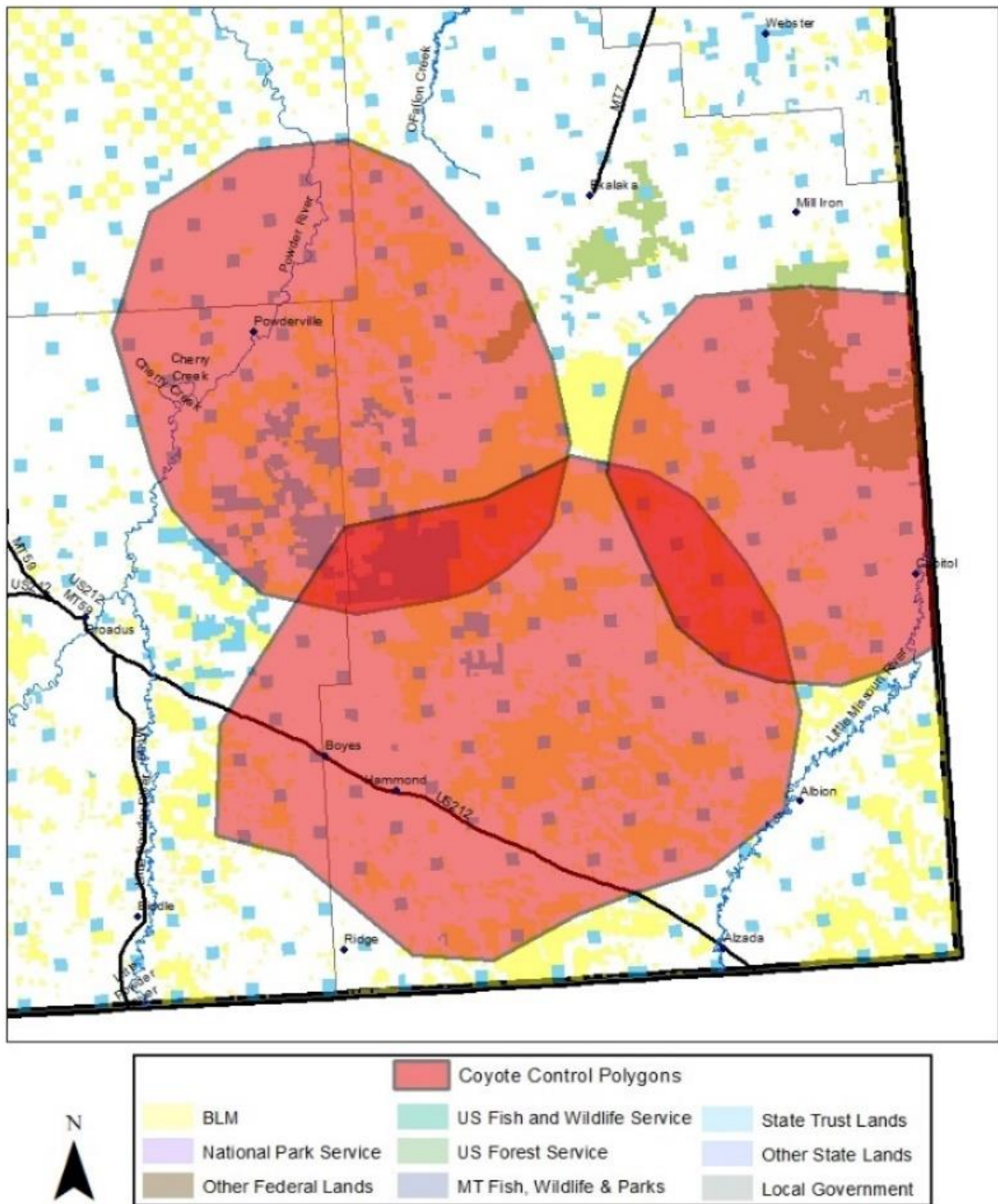


Figure 7. Polygons that have been extrapolated out by 12.5 miles from the boundaries of the three deer trends areas with an observed reduction in mule deer total counts and recruitment rates during the spring seasons of 2021 and 2022 in Montana Fish, Wildlife and Parks Administrative Region 7 in southeast Montana.

III. Purpose and Need

The EA must include a description of the purpose and need or benefits of the proposed project. ARM 12.2.432(3)(b). Benefits of the proposed project refer to benefits to the resource, public, department, state, and/or other.

Project Purpose and Benefits:

Mule deer populations in portions of FWP's Administrative Region 7 in southeast Montana are well below long-term averages as monitored by the spring surveillance flights in 2021 and 2022. This is not surprising given recent years' impactful weather that has variously included summer drought and extreme winter cold and snow. Coyotes in these same areas, while not formally surveyed, are believed to be at high levels. This relative scarcity and abundance of mule deer and coyotes, respectively, enhances potential for predation by coyotes to negatively impact mule deer survival and recruitment. Limiting the number of coyotes located in the affected area during spring fawning season could lessen potential mule deer fawn mortality via predation. Previous monitoring efforts by FWP have identified positive short-term local prey population responses to targeted coyote removal. In this context, FWP intends to partner with Powder River County and their predator board to intensify targeted aerial and ground control efforts to reduce coyote numbers just prior to and during fawning in areas identified by FWP as having low mule deer numbers, recruitment, or both. In removing coyotes, the intended result would be positive mule deer population and recruitment response, albeit short-term and subordinate to the long-term and uncontrollable influences of weather.

If FWP prepared a cost/benefit analysis before completion of the EA, the EA must contain the cost/benefit analysis or a reference to it. ARM 12.2.432(3)(b).

	Yes*	No
Was a cost/benefit analysis prepared for the proposed project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

* If yes, a copy of the cost/benefit analysis prepared for the proposed project is included in Attachment A to this Draft EA

IV. Other Agency Regulatory Responsibilities

FWP must list any federal, state, and/or local agencies that have overlapping or additional jurisdiction, or environmental review responsibility for the proposed project, as well as permits, licenses, and other required authorizations. ARM 12.2.432(3)(c).

A list of other required local, state, and federal approvals, such as permits, certificates, and/or licenses from affected agencies is included in **Table 2** below. **Table 2** provides a summary of state requirements but does not necessarily represent a complete and comprehensive list of all permits, certificates, or approvals needed. Rather, **Table 2** lists the primary state agencies with regulatory responsibilities, the applicable regulation(s) and the purpose of the regulation(s). Agency decision-making is governed by state and federal laws, including statutes, rules, and regulations, that form the legal basis for the conditions the proposed project must meet to obtain necessary permits, certificates, licenses, or other approvals. Further, these laws set forth the conditions under which each agency could deny the necessary approvals.

Table 2: Federal, State, and/or Local Regulatory Responsibilities

Agency	Type of Authorization (permit, license, stipulation, other)	Purpose
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Montana Department of Livestock	Aerial Hunting Permit	Authorizes the use of aerial gunning for the purpose of aiding and assisting in the protection of livestock from depredation.
Powder River County and the Powder River County Predator Board	Agreements between private landowners and Powder River County	Authorize Powder River County and their Predator Board to actively conduct predator control efforts on private property and associated leases.

V. List of Mitigations, Stipulations

Mitigations, stipulations, and other *enforceable* controls required by FWP, or another agency, may be relied upon to limit potential impacts associated with a proposed Project. **Table 3** below lists and evaluates enforceable conditions FWP may rely on to limit potential impacts associated with the proposed Project. ARM 12.2.432(3)(g).

Table 3: Listing and Evaluation of Enforceable Mitigations Limiting Impacts

<i>Are enforceable controls limiting potential impacts of the proposed action? If not, no further evaluation is needed.</i>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<i>If yes, are these controls being relied upon to limit impacts below the level of significance? If yes, list the enforceable control(s) below</i>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Enforceable Control	Responsible Agency	Authority (Rule, Permit, Stipulation, Other)	Effect of Enforceable Control on Proposed Project
The time period in which the activity of coyote control is allowed with the increased funding provided by FWP to the county.	Montana Fish, Wildlife and Parks	MOU	The MOU will enforce that additional coyote control conducted with the increased funding provided by FWP will only take place between April 15 th and June 15 th , 2023. Additionally, the proposed actions will take place in the proposed locations within the polygons outlined in Figure 7 of Powder River County.

VI. Alternatives Considered

In addition to the proposed Project, and as required by MEPA, FWP analyzes the "no-action" alternative in this EA. Under the "no-action" alternative, the proposed project would not occur.

Under the "No Action" alternative, the proposed project would not occur. Therefore, no additional impacts to the physical environment or human population in the analysis area would occur. The "No Action" alternative forms the baseline from which the potential impacts of the proposed Project can be measured.

	Yes*	No
Were any additional alternatives considered and dismissed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

* If yes, a list and description of the other alternatives considered, but not carried forward for detailed review, is included below

VII. Terms Used to Describe Potential Impacts on the Physical Environment and Human Population

The impacts analysis identifies and evaluates **direct**, **secondary**, and **cumulative impacts**.

- **Direct impacts** are those that occur at the same time and place as the action that triggers the effect.
- **Secondary impacts** “are further impacts to the human environment that may be stimulated or induced by or otherwise result from a direct impact of the action.” ARM 12.2.429(18).
- **Cumulative impacts** “means the collective impacts on the human environment of the proposed action when considered in conjunction with other past and present actions related to the proposed action by location or generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures.” ARM 12.2.429(7).

Where impacts are expected to occur, the impact analysis estimates the **extent**, **duration**, **frequency**, and **severity** of the impact. The duration of an impact is quantified as follows:

- **Short-Term:** impacts that would not last longer than the proposed project.
- **Long-Term:** impacts that would remain or occur following the proposed project.

The severity of an impact is measured using the following:

- **No Impact:** there would be no change from current conditions.
- **Negligible:** an adverse or beneficial effect would occur but would be at the lowest levels of detection.
- **Minor:** the effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- **Moderate:** the effect would be easily identifiable and would change the function or integrity of the resource.
- **Major:** the effect would irretrievably alter the resource.

Some impacts may require mitigation. As defined in ARM 12.2.429, mitigation means:

- Avoiding an impact by not taking a certain action or parts of a project;
- Minimizing impacts by limiting the degree or magnitude of a project and its implementation;
- Rectifying an impact by repairing, rehabilitating, or restoring the affected environment; or
- Reducing or eliminating an impact over time by preservation and maintenance operations during the life of a project or the time period thereafter that an impact continues.

FWP may, as an alternative to preparing an EIS, prepare an EA whenever the action is one that might normally require an EIS, but effects which might otherwise be deemed significant appear to be mitigable below the level of significance through design, or enforceable controls or stipulations, or both, imposed by the agency or other government agencies. For an EA to suffice in this instance, the agency must determine that all the impacts of the proposed action have been accurately identified, that they will be mitigated below the level of significance, and that no significant impact is likely to occur. The agency may not consider compensation for purposes of determining that impacts have been mitigated below the level of significance. ARM 12.2.430(4).

A list of any mitigation strategies including, but not limited to, design, enforceable controls or stipulations, or both, as applicable to the proposed project is included in **Section VI** above.

FWP must analyze impacts to the physical and human environment for each alternative considered. The proposed project considered the following alternatives:

- Alternative 1: No Action
- Alternative 2: Proposed Project

VIII. Alternative 1: No Action. Evaluation and Summary of Potential Impacts on the Physical Environment and Human Population

Under the “No Action” alternative, the proposed project would not occur. Therefore, no additional impacts to the physical or human environment in the analysis area would occur. The “No Action” alternative forms the baseline from which the potential impacts of the proposed Project can be measured.

Under the No Action alternative, FWP would not contract with Powder River County for increased targeted coyote removal in areas where mule deer populations are currently low in abundance and recruitment. The existing coyote population would continue to potentially suppress mule deer numbers below what the landscape can support, and the affected mule deer population growth could be limited.

IX. Alternative 2: Proposed Project. Evaluation and Summary of Potential Impacts on the Physical Environment and Human Population

A. Evaluation and Summary of Potential Impacts on the Physical Environment

1. Terrestrial, Avian, and Aquatic Life and Habitats

Existing Environment/Baseline Conditions (No Action Alternative):

Mammals found in the project area include American badger (*Taxidea taxus*), American black bear (*Ursus americanus*), American mink (*Neogale vison*), beaver (*Castor canadensis*), Black-tailed prairie dog (*Cynomys ludovicianus*), bobcat (*Lynx rufus*), coyote, desert cottontail (*Sylvilagus audubonii*), eastern fox squirrel (*Sciurus niger*), eastern gray squirrel (*Sciurus carolinensis*), elk (*Cervus canadensis*), least chipmunk (*Neotamias minimus*), least weasel (*Mustela nivalis*), long-tailed weasel (*Neogale frenata*), moose (*Alces alces*), mountain cottontail (*Sylvilagus nuttallii*), mountain lion (*Puma concolor*), mule deer, muskrat (*Ondatra zibethicus*), North American porcupine (*Erethizon dorsatum*), northern pocket gopher (*Thomomys talpoides*), northern river otter (*Lontra canadensis*), pronghorn (*Antilocapra*

americana), raccoon (*Procyon lotor*), red fox (*Vulpes vulpes*), red squirrel (*Tamiasciurus hudsonicus*), striped skunk (*Mephitis mephitis*), swift fox (*Vulpes velox*), thirteen-lined ground squirrel (*Ictidomys tridecemlineatus*), white-tailed deer (*Odocoileus virginianus*), white-tailed jackrabbit (*Lepus townsendii*), yellow-bellied marmot (*Marmota flaviventris*). Small mammals found in the project area include Bushy-tailed woodrat (*Neotoma cinerea*), deer mouse (*Peromyscus maniculatus*), house mouse (*Mus musculus*), masked shrew (*Sorex cinereus*), meadow vole (*Microtus pennsylvanicus*), Merriam's shrew (*Sorex merriam*), northern grasshopper mouse (*Onychomys leucogaster*), olive-backed pocket mouse (*Perognathus fasciatus*), Ord's kangaroo rat (*Dipodomys ordii*), sagebrush vole (*Lemmiscus curtatus*), western harvest mouse (*Reithrodontomys megalotis*), and white-footed mouse (*Peromyscus leucopus*). As well as big brown Bat (*Eptesicus fuscus*), eastern red bat (*Lasiurus borealis*), fringed myotis (*Myotis thysanodes*), hoary bat (*Lasiurus cinereus*), little brown myotis (*Myotis lucifugus*), long-eared myotis (*Myotis evotis*), long-legged myotis (*Myotis Volans*), pallid bat (*Antrozous pallidus*), silver-haired bat (*Lasionycteris noctivagans*), Townsend's big-eared bat (*Corynorhinus townsendii*), and western small-footed myotis (*Myotis cilirostris*).

There are approximately 314 different species of birds that are common or frequent the project area. Some of the more common birds that utilize the project area include American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), bald eagle (*Haliaeetus leucocephalus*), Barn owl (*Tyto alba*), barn swallow (*Hirundo rustica*), black-billed magpie (*Pica hudsonia*), black-capped chickadee (*Poecile atricapillus*), blue jay (*Cyanocitta cristata*), bobolink (*Dolichonyx oryzivorus*), brown-headed cowbird (*Molothrus ater*), burrowing owl (*Athene cunicularia*), Canada goose (*Branta canadensis*), common grackle (*Quiscalus quiscula*), common raven (*Corvus corax*), downy woodpecker (*Dryobates pubescens*), eastern bluebird (*Sialia sialis*), Eurasian collared-dove (*Streptopelia decaocto*), Franklin's gull (*Leucophaeus pipixcan*), gray partridge (*Perdix perdix*), greater sage-grouse (*Centrocercus urophasianus*), horned lark (*Eremophila alpestris*), killdeer (*Charadrius vociferus*), long-billed curlew (*Numenius americanus*), mallard (*Anas platyrhynchos*), mourning dove (*Zenaidura macroura*), northern flicker (*Colaptes auratus*), prairie falcon (*Falco mexicanus*), red-winged blackbird (*Agelaius phoeniceus*), sharp-tailed grouse (*Tympanuchus phasianellus*), turkey vulture (*Cathartes aura*), and Merriam's turkey (*Meleagris gallopavo*). The entire list of birds found in the project area can be found in Appendix A.

Fish species reside in the riverine systems, when seasonally running, and man-made stock water impoundments. Some of the more common species include channel catfish (*Ictalurus punctatus*), common carp (*Cyprinus carpio*), creek chub (*Semotilus atromaculatus*), emerald shiner (*Notropis atherinoides*), fathead minnow (*Pimephales promelas*), flathead chub (*Platygobio gracilis*), goldeye (*Hiodon alosoides*), northern pike (*Esox Lucius*), and stonecat (*Noturus flavus*). A full list of fish species can be found in Appendix B.

The majority of habitat within the proposed project area is native habitat and consists of five main habitat types that include Great Plains mixedgrass prairie, which accounts for most of the habitat within the proposed action area, as well as big sagebrush steppe, Great Plains sand prairie, Great Plains ponderosa pine woodland and savanna, and riparian and wetland systems.

Direct Impacts:

No long-term adverse direct impacts would be expected because of the proposed project. Expected direct impacts include a short-term reduction in the coyote population and a short-term increase in the survival of mule deer fawns within the area affected by the proposed action. No long-term adverse impacts to distribution or abundance of mule deer and coyotes would be anticipated. Minimal adverse

impacts on the distribution of ungulates other than mule deer, meso-predators not targeted by the proposed project, and avian life would be expected during the aerial shooting and groundwork from the predator control specialists. Any impacts to such resources would be short-term and negligible.

No long-term direct impacts on habitat are expected to occur. Predator control activities similar to the proposed action already occur in the area affected by the proposed action and a short-term limited increase in such activities would not further impact habitat. No significant adverse direct impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project.

Secondary Impacts:

No significant adverse secondary impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project. Mule deer populations in Powder River County are currently well below long-term averages, as monitored by FWP spring surveillance flights conducted in calendar years 2021 and 2022. FWP believes current low mule deer numbers in the affected area reflect, in part, a high level of coyote predation during the spring when fawns are most vulnerable to predation. FWP also understands the larger impact of weather, including summer drought and extreme winter cold and snow, has adversely impacted local mule deer populations in recent years. This relative scarcity and abundance of mule deer and coyotes, respectively, enhances the potential for predation by coyotes thereby further impacting mule deer survival and recruitment in the affected area.

The intent of the proposed project is to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring when mule deer fawning occurs. Limiting the number of coyotes located in the affected area during spring fawning season could lessen potential mule deer fawn mortality via predation. Because such predator control activities already occur in the affected area, any secondary impacts to coyotes resulting from increased removal via aerial culling would be short-term, consistent with existing impacts, adverse, and minor, while impacts to the local mule deer population would be short- and long-term, consistent with existing impacts, beneficial, and moderate. Any impacts to other local terrestrial, avian, and aquatic life and habitats would be short-term and negligible, largely occurring during aerial operations.

Cumulative Impacts:

No significant adverse cumulative impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project. Historically, FWP has contracted directly with APHIS-WS to manage low mule deer populations in areas with an associated high coyote population. Monitoring efforts conducted by FWP to evaluate the impact of those efforts has identified beneficial short-term local prey population responses. For example, in Hunting District (HD) 530, which was located in portions of Petroleum and Musselshell Counties, from March 1997 through June 1999, a coyote control effort was implemented to assess the impacts on mule deer and other wildlife species. Post project monitoring observed slightly higher recruitment rates in the treatment area compared to other hunting districts or HDs where treatment did not occur, which suggests that coyote control may have positively influenced population recovery. FWP would monitor mule deer demographics in the proposed project areas and adjacent DTAs in the spring of 2024 to see if similar results are produced.

FWP's experience with this type of action in other counties with a similar mule deer-coyote population imbalance scenario demonstrates the potential effectiveness of the proposed action. Therefore, the proposed action, with consideration for other similar actions conducted in other affected counties, contributes to FWP's prior and ongoing efforts to increase low mule deer populations in regions of the state where the predator-prey relationship is out of balance.

Effectively, the proposed action would further FWP's objective to limit mule deer fawn mortality and thus increase the overall herd by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Because prior predator control activities have been shown to be effective at achieving the stated objective, any cumulative impacts to the local coyote population are expected to be short-term, consistent with existing impacts, adverse, and minor, while impacts to the local mule deer population would be short- and long-term, consistent with existing impacts, beneficial, and moderate.

The proposed action specifically targets the removal of coyotes to bring the mule deer-coyote predator-prey population back into balance. Other animals preyed upon by coyotes may be similarly impacted in that a decrease in the local coyote population may lead to an increase in a given prey-animal population. A balanced predator-prey relationship would generally result in a healthier overall ecosystem. Therefore, cumulative impacts to other local terrestrial, avian, and aquatic life and habitats would be expected to be short- and long-term, consistent with existing impacts, beneficial, and moderate.

Prior similar actions by FWP have demonstrated that no significant adverse impacts to existing wildlife habitats would be expected because of the proposed action. Like other counties in eastern Montana where similar actions have been conducted, Powder River County consists of hundreds of thousands of acres of native habitats and native and introduced species occupying those habitats. The landscape currently provides habitat for diverse biological resources, including resident and migratory species such as pronghorn, mule deer, and a suite of passerines and waterfowl. Resident populations of white-tailed deer, sharp-tailed grouse, elk, black bears, mountain lions, and bobcats also inhabit the landscape. Powder River County also provides important core and general habitat for greater sage grouse. As demonstrated by other similar actions conducted in counties with similar coyote and mule deer population concerns, targeted removal of coyotes during the spring mule deer fawning season may increase the local mule deer population, which may result in impacts to those habitats. However, historically, mule deer and coyote populations in Powder River County have fluctuated season-to-season. Therefore, any adverse cumulative impacts to habitat would be consistent with impacts realized in other areas with similar predator-prey population imbalance. Further, a balanced mule deer-coyote population represents stability in the ecosystem and would ultimately be expected to promote healthier habitats. Therefore, as with similar actions conducted by FWP, the proposed action would increase low mule deer populations in regions of the state where the predator-prey relationship is out of balance and thereby potentially improve such affected habitats. Therefore, the proposed action, with consideration for other similar actions conducted in other affected counties, contributes to FWP's prior and ongoing efforts to increase low mule deer populations in regions of the state where the predator-prey relationship is out of balance.

2. Water Quality, Quantity, and Distribution

Existing Environment/Baseline Conditions (No Action Alternative):

The larger riverine systems that run through portions of the proposed project area include the Powder River, Mizpah Creek, Timber Creek, and all the smaller tributaries and depressional water bodies and reservoirs found across the prairie landscape. There is estimated to be over 100,000 acres of open water, riparian, and wetland habitats in the project area, most of which are seasonally wet or running immediately following snow melt and then are dry for much of the year.

Direct Impacts:

There would be no significant adverse direct impacts to water quality, quantity, and distribution in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact water quality, quantity, and distribution in the affected area. Therefore, no direct impacts to water quality, quantity and distribution in the affected area would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to water quality, quantity, and distribution in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact water quality, quantity, and distribution in the affected area. Therefore, no secondary impacts to water quality, quantity and distribution would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant adverse cumulative impacts to water quality, quantity, and distribution because of the proposed project. The proposed project does not impact water quality, quantity, and distribution in any way. Further, FWP is unaware of any other related projects that impact local water quality, quantity, and distribution. Therefore, no cumulative impacts to water quality, quantity and distribution would be expected because of the proposed action.

3. Geology

Existing Environment/Baseline Conditions (No Action Alternative):

The Powder River Basin (Basin) is the structural and topographic basin that occurs within the proposed project area. Sedimentary rocks within the Basin have a maximum thickness of about 18,000 feet and rocks of every geologic period are represented throughout its span. Within the Basin there are Paleozoic rocks (consisting of marine carbonate rocks and sandstone), Mesozoic rocks (consisting of marine and nonmarine siltstone and sandstone), and Cenozoic rocks (Consisting of coal-bearing sandstone and shale).

Direct Impacts:

There would be no significant adverse direct impacts to the geology in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact geology in the affected area. Therefore, no direct impacts to the geology in the affected area would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to geology in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact geology in the affected area. Therefore, no secondary impacts to geology would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant cumulative impacts to geology because of the proposed project. The proposed project does not impact geology in any way. Further, FWP is unaware of any other related projects that impact geology in the area affected by the proposed action. Therefore, no cumulative impacts to geology would be expected because of the proposed action.

4. Soil Quality, Stability, and Moisture

Existing Environment/Baseline Conditions (No Action Alternative):

Most of the soil types within the area affected by the proposed action consist of arvada-bone complex, midway-also association, remit-ocean lake fine sandy loam, terrace escarpments and a variety of clay loams.

Direct Impacts:

There would be no significant adverse direct impacts to soil quality, stability, and moisture in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact soil quality, stability, and moisture in the affected area. Therefore, no direct impacts to soil quality, stability, and moisture in the affected area would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to soil quality, stability, and moisture in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact soil quality, stability, and moisture in the affected area. Therefore, no secondary impacts to soil quality, stability, and moisture would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant cumulative impacts to soil quality, stability, and moisture because of the proposed project. The proposed project does not impact soil quality, stability, and moisture in any way. Further, FWP is unaware of any other related projects that impact soil quality, stability, and moisture in the area affected by the proposed project. Therefore, no cumulative impacts to soil quality, stability, and moisture would be expected because of the proposed action.

5. Vegetation Cover, Quantity, and Quality

Existing Environment/Baseline Conditions (No Action Alternative):

Great plains mixedgrass prairie is the dominant habitat type in the project area and includes western wheatgrass (*Pascopyrum smithii*), thickspike wheatgrass (*Elymus lanceolatus*), green needle grass (*Nassella viridula*), blue grama (*Bouteloua gracilis*), and needle and thread (*Hesperostipa comata*). Common forbs found in this habitat type consist of yarrow (*Achillea millefolium*), scarlet globemallow (*Sphaeralcea coccinea*), western sagewort (*Artemisia ludoviciana*), prairie cinquefoil (*Potentilla gracilis*) and Missouri goldenrod (*Solidago missouriensis*). The second most abundant habitat type is big sagebrush steppe, which is dominated by Wyoming big sagebrush (*Artemisia tridentata* ssp. *Wyomingensis*), silver sagebrush (*Artemisia cana*), greasewood (*Sarcobatus vermiculatus*), saltbrush (*Atriplex* spp.), rubber rabbitbrush (*Ericameria nauseosa*), green rabbitbrush (*Chrysothamnus viscidiflorus*), and antelope bitterbrush (*Purshua tridentata*). Common forbs found in this habitat type consist of Hood's phlox (*Phlox hoodi*), sandwort (*Arenaria* spp.), prickly pear (*Opuntia* spp.), scarlet globemallow (*Sphaeralcea coccinea*), purple prairie clover (*Dalea purpurea*), gayfeather (*Liatris punctata*), and milkvetch (*Astragalus* spp.). Other habitat types that are present in the area are classified as forest and woodland, open water/wetland and riparian, sparse and barren habitats, and varying human land use. Previously cultivated areas that have been re-vegetated with non-native plants are typically comprised of Kentucky bluegrass (*Poa pratensis*), crested wheatgrass (*Agropyron cristatum*), and alfalfa (*Medicago sativa*). Invasive species present in the project area include smooth brome (*Bromus inermis*), cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicus*).

Direct Impacts:

There would be no significant direct impacts to vegetation cover, quantity, and quality in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact vegetation cover, quantity, and quality in the affected area. Therefore, no direct impacts to vegetation cover, quantity, and quality in the affected area would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to vegetation cover, quantity, and quality in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact vegetation cover, quantity, and quality in the affected area. Therefore, no secondary impacts to vegetation cover, quantity, and quality would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant cumulative impacts to vegetation cover, quantity, and quality because of the proposed project. The proposed project does not impact vegetation cover, quantity, and quality in any way. Further, FWP is unaware of any other related projects that impact vegetation cover, quantity, and quality in the area affected by the proposed project. Therefore, no cumulative impacts to vegetation cover, quantity, and quality would be expected because of the proposed action.

6. Aesthetics

Existing Environment/Baseline Conditions (No Action Alternative):

The proposed project area has many unique features across the natural landscape that include native habitats, minerals, flora, fauna, areas of historic significance, riverine and wetland ecosystems. The proposed project area also has a diverse rural community that is dominated by agricultural use and outdoor recreational opportunities.

Direct Impacts:

There would be no significant adverse direct impacts to aesthetics in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact aesthetics in the affected area. Therefore, no direct impacts to aesthetics in the affected area would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to aesthetics in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact aesthetics in the affected area. Therefore, no secondary impacts to aesthetics would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant cumulative impacts to aesthetics because of the proposed project. The proposed project does not impact aesthetics in any way. Further, FWP is unaware of any other related projects that impact the aesthetics in the affected area. Therefore, no cumulative impacts to aesthetics would be expected because of the proposed action.

7. Air Quality

Existing Environment/Baseline Conditions (No Action Alternative):

The Colstrip coal-fired power plant is located approximately 80 miles from the affected area. No other significant point-sources of air pollution exist in the area affected by the proposed project. Air quality in the area affected by the proposed project is currently unclassifiable or in compliance with applicable national and Montana ambient air quality standards (NAAQS/MAAQS). Existing sources of air pollution in the area are limited and generally include unpaved county roads (fugitive dust source), vehicle exhaust emissions, and various agricultural practices (vehicle exhaust emissions and fugitive dust).

Direct Impacts:

There would be no significant adverse direct impacts on air quality from the proposed project. Vehicle travel on unpaved roads may result in increased local fugitive dust emissions and vehicle exhaust emissions from the combustion of fossil fuels. Agricultural practices such as tilling, planting, harvesting, and other activities that use heavy equipment may also contribute to area fugitive dust and vehicle exhaust emissions. The proposed project would employ the use of fixed-wing aircraft for aerial removal of coyotes. Operation of the fixed-wing aircraft would increase local vehicle exhaust emissions; however, any impacts would be short-term, lasting only as long as individual fixed-wing aircraft is operating, and negligible. Fixed-wing aircraft operations conducted near exposed ground may also result in increased fugitive dust emissions. Emissions from the nearby coal-fired power plant at Colstrip include the same regulated air pollutants that would be generated by the combustion of fossil fuels required for fixed-wing aircraft operations to be implemented under the proposed action. Therefore, while the proposed action would increase local air pollution, any increase in such air pollutants in the area affected by the proposed project would be short-term and negligible.

Secondary Impacts:

There would be no significant adverse secondary impacts to air quality in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, which would be short-term and consistent with existing impacts in the affected area. Therefore, no secondary impacts to air quality would be expected because of the proposed action. Any impacts to air quality would be short-term and negligible, largely occurring during aerial and ground operations.

Cumulative Impacts:

There would be no significant adverse cumulative impacts to air quality because of the proposed project. Potential fugitive dust emissions from low-flying fixed wing aircraft to be used for the proposed project could contribute to existing fugitive dust emissions generated by existing agricultural practices such as tilling, planting, harvesting, and moving livestock, as well as Typical vehicle travel on unpaved roads by county residents and visitors to the affected are. Emissions of regulated air pollutants from fossil fuel combustion associated with fixed wing aircraft operations may contribute to air pollution resulting from local vehicle emissions and the nearby Colstrip power plant. However, any increase in regulated air pollution resulting from the proposed project would be short-term, and negligible with consideration for existing sources of air pollution. FWP is unaware of any other related projects that impact the air quality. Therefore, impacts to air quality would be short-term, and negligible.

8. Unique, Endangered, Fragile, or Limited Environmental Resources

Existing Environment/Baseline Conditions (No Action Alternative):

The proposed project area has freshwater emergent wetlands, freshwater ponds, riparian forest, riparian scrub-shrub, native Great Plains mixedgrass prairie, big sagebrush steppe, and other fragile ecosystem resources. There have been no observations of piping plover (*Charadrius melodus*), which is a Federally threatened species, in the proposed project area but there is the potential for them to utilize habitats along the major rivers and wetlands. The least tern (*Sternula antillarum*), which is a Federally endangered species, has been observed north of the proposed project area along the Yellowstone River and there is potential for this species to utilize the major river systems in the proposed project area. The Federally endangered pallid sturgeon (*Scaphirhynchus albus*) has been recently documented migrating up the Powder River in the proposed project area. Another Federally endangered species, the whooping crane (*Grus americana*) may migrate through the area between its breeding area in Wood Buffalo

National Park in the Northwest Territories and their wintering range at the Aransas National Wildlife Refuge on the Texas coast. The black-footed ferret (*Mustela nigripes*), another Federally endangered species, may exist within the proposed project location in association with the many prairie dog towns in the proposed project location but observations have not been recorded in Powder River County since 1923. Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) utilize habitats throughout the proposed project location. The proposed project area may also have important animal habitat such as bat roosting areas (i.e., maternity roosts, hibernacula, or bachelor roosts), bird rookeries, and important stopover sights for migrating birds that provide critical resources for their annual migrations.

Direct Impacts:

There would be no significant adverse direct impacts to unique, endangered, fragile, or limited environmental resources in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact unique, endangered, fragile, or limited environmental resources in the affected area. Therefore, no direct impacts to unique, endangered, fragile, or limited environmental resources in the affected area would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to unique, endangered, fragile, or limited environmental resources in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact unique, endangered, fragile, or limited environmental resources in the affected area. Therefore, no secondary impacts to unique, endangered, fragile, or limited environmental resources would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant cumulative impacts to unique, endangered, fragile, or limited environmental resources because of the proposed project. The proposed project does not impact unique, endangered, fragile, or limited environmental resources in any way. Further, FWP is unaware of any other related projects that would impact any unique, endangered, fragile, or limited environmental resources. Therefore, no cumulative impacts to unique, endangered, fragile, or limited environmental resources would be expected because of the proposed action.

9. Historical and Archaeological Sites

Existing Environment/Baseline Conditions (No Action Alternative):

The proposed project location was the traditional homeland and hunting grounds for the Crow, Hidatsa, Mandan, Arikara and Sioux tribes. Additionally, there were homesteaders, trappers, pioneers, and other travelers through the area. All these groups utilized the proposed project area and there are known and unknown historical, archaeological, and other sites of importance across the proposed project area.

Direct Impacts:

There would be no significant adverse direct impacts to historical or archaeological sites in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which result in land disturbance or impact of any kind to existing historic structures that may be located in the affected area. Therefore, no direct impacts to historical or archaeological sites in the affected area would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to historical or archaeological sites in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact historical or archaeological sites in the affected area. Therefore, no secondary impacts to historical or archaeological sites would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant cumulative impacts to historical or archaeological sites because of the proposed project. The proposed project does not impact historical or archaeological sites in any way. Further, FWP is unaware of any other related projects that may impact existing historical or archaeological sites in the affected area. Therefore, no cumulative impacts to historical or archaeological sites would be expected because of the proposed action.

10. Demands on Environmental Resources of Land, Water, Air, and Energy

Existing Environment/Baseline Conditions (No Action Alternative):

The proposed project location is primarily a rural, agricultural area that relies on the resources of the land for agricultural and recreational operations.

Direct Impacts:

There would be no significant adverse direct impacts to demands on environmental resources of land, water, air, and energy in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape. Fuel would be required to operate fixed-wing aircraft and vehicles used for the proposed project. No other demands on the environmental resources of land, water, air, and energy would be expected because of the proposed project. Therefore, any impacts to demands on environmental resources of land, water, air, and energy in the affected area would be short-term, consistent with existing impacts, and negligible.

Secondary Impacts:

There would be no significant adverse secondary impacts to demands on environmental resources of land, water, air, and energy in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape. Fuel would be required to operate fixed-wing aircraft and vehicles used for the proposed project; however, any impacts from increased fuel use to accommodate proposed project operations would be limited to the period in which these operations occur. Therefore, no secondary impacts to demands on environmental resources of land, water, air, and energy would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant cumulative impacts to demands on environmental resources of land, water, air, and energy because of the proposed project. Fuel would be required to operate fixed-wing aircraft and vehicles used for the proposed project. Fuel is also used for existing similar operations conducted by the county. FWP is unaware of any other related projects that impact the demands on environmental resources of land, water, air, and energy. Therefore, cumulative impacts to demands on environmental resources of land, water, air, and energy from the proposed project would be short-term, consistent with existing impacts, and negligible.

B. Evaluation and Summary of Potential Impacts of the Proposed Project on the Human Environment

1. Social Structures and Mores

Existing Environment/Baseline Conditions (No Action Alternative):

Powder River County is a rural, agricultural county in southeastern Montana of approximately 2,110,080 acres and has a population of 1,694 (2020 US Census). The local population is largely made up of agricultural producers. The five largest ethnic groups in Powder River County are white (non-Hispanic) 91.6%, American Indian & Alaska Native (non-Hispanic) 3.24%, white (Hispanic) 2.39%, Two+ (Hispanic) 2.02%, and Two+ (non-Hispanic) 0.49%. No households in Powder River County reported speaking a non-English language as a primary language.

Direct Impacts:

There would be no significant adverse direct impacts to social structures and mores in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase aerial gunning and trapping efforts that already occur on the landscape, none of which directly impact social structures and mores in the affected area. Therefore, no direct impacts to pre-project social structures, customs, values, and conventions in the affected area would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to social structures and mores in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which impact social structures and mores in the affected area. Therefore, no secondary impacts to pre-project social structures, customs, values, and conventions in the affected area would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant cumulative impacts to social structures and mores because of the proposed project. The proposed project does not impact social structures and mores in any way. Further, FWP is unaware of any other related projects that impact the social structures and mores. Therefore, no cumulative impacts to pre-project social structures, customs, values, and conventions in the affected area would be expected because of the proposed action.

2. Cultural Uniqueness and Diversity

Existing Environment/Baseline Conditions (No Action Alternative):

Powder River County is a rural, agricultural county in southeastern Montana of approximately 2,110,080 acres and has a population of 1,694 (2020 US Census). The local population is largely made up of agricultural producers. The five largest ethnic groups in Powder River County are white (non-Hispanic) 91.6%, American Indian & Alaska Native (non-Hispanic) 3.24%, white (Hispanic) 2.39%, Two+ (Hispanic) 2.02%, and Two+ (non-Hispanic) 0.49%. No households in Powder River County reported speaking a non-English language as a primary language.

The proposed project location was the traditional homeland and hunting grounds for the Crow, Hidatsa, Mandan, Arikara and Sioux tribes. Additionally, there were homesteaders, trappers, pioneers, and other travelers through the area. All these groups utilized the proposed project area and there are known and unknown historical, archaeological, and other sites of importance across the proposed project area.

Direct Impacts:

There would be no significant adverse direct impacts to cultural uniqueness and diversity in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape and the increased activity would be accomplished by people already living in the affected area. Therefore, the proposed action would not bring new residents to the area or otherwise change the make-up of the existing population. Therefore, no direct impacts to cultural uniqueness and diversity in the affected area would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to cultural uniqueness and diversity in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape and the increased activity would be accomplished by people already living in the affected area and would not bring new residents to the area or otherwise

change the make-up of the existing population.. Therefore, no secondary impacts to cultural uniqueness and diversity would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant cumulative impacts to cultural uniqueness and diversity because of the proposed project. The proposed project would be accomplished by people already living in the affected area and would not bring new residents to the area or otherwise change the make-up of the existing population. Further, FWP is unaware of any other related projects that would impact the cultural uniqueness and diversity of the existing population. Therefore, no cumulative impacts to cultural uniqueness and diversity would be expected because of the proposed action.

3. Access to and Quality of Recreational and Wilderness Activities

Existing Environment (No Action Alternative):

Visitor opportunities within the proposed project area are available for hunting, trapping, fishing, wildlife viewing, photography, hiking, camping, as well as other recreational opportunities. The proposed project location has thousands of acres of accessible public lands. There are no State Parks or formal campgrounds within the proposed project area. The proposed project area has approximately 19 different Block Management Areas that are either completely encompassed within the proposed project area or have portions within the proposed project area that provide a wide variety of hunting opportunities for Montanans and visitors to the state in pursuit of certain species.

The proposed project area is located within hunting district (HD) 705 for deer and elk. Many Montanans and visitors to the state come to the area in pursuit of mule and white-tailed deer and elk. FWP estimated that in 2019 there were 5,642 deer hunters that actively hunted in HD 705 and accounted for 27,689 hunter days and in 2020 there were 5,463 deer hunters that accounted for 28,793 hunter days. For elk in HD 705, FWP estimated in 2018 there were 602 elk hunters that accounted for 3,834 hunter days and in 2020 there were 529 hunters that accounted for 3,535 hunter days.

Antelope hunting is another large attraction to the proposed project area. Many Montanans and visitors to the state pursue antelope in the proposed project area. The proposed project area is located within antelope HD 705 and FWP estimated in 2018 there were 1,745 antelope hunters that accounted for 6,433 hunter days and in 2020 there were 2,007 antelope hunters that accounted for 6,829 hunter days.

Upland game bird hunting and turkey hunting other attractions to the proposed project area by Montanans and visitors to the state. The proposed project area is located within the southern half of FWP Administrative Region 7. FWP estimated in 2020 there were 2,050 upland game bird hunters that accounted for 13,549 hunter days and in 2021 there were 1,833 upland game bird hunters that accounted for 13,996 hunter days. FWP estimated that in Powder River County for 2020 there were 228 turkey hunters that accounted for 1,306 hunter days and in 2021 there were 295 turkey hunters that accounted for 1,137 hunter days.

Direct Impacts:

There would be no significant adverse direct impacts to access and quality of recreational and wilderness activities in the affected area because of the proposed project. No wilderness areas currently

exist in the affected area; therefore, no direct impacts to wilderness activities would occur because of the proposed project.

The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. In achieving the objective of the proposed project, the local mule deer population would increase thereby providing increased opportunities for those who simply enjoy seeing mule deer on the landscape and for successful recreational mule deer hunting activities in the affected area. Big game license availability would not change as a result of the proposed action; however, an increase in mule deer available for harvest would increase opportunities for success. In contrast, the proposed action would directly and adversely impact the local coyote population, at least in the short-term. Therefore, those that enjoy seeing coyotes on the landscape and those seeking to hunt coyotes in the affected area may realize less opportunity for such recreational pursuits. While a decrease in the local coyote population may limit opportunities to see and successfully hunt coyotes, the proposed action would likely result in an improved predator-prey balance in the affected area and further FWP's stated objective to manage for the long-term welfare of Montana's mule deer resource. Therefore, direct impacts to access and quality of recreational and wilderness activities in the affected area would be short-term and potentially long-term, dependent on the sustained efficacy of the proposed action; moderately beneficial for those that simply enjoy having mule deer on the landscape and those that enjoy mule deer hunting as a recreational pursuit; and moderately adverse for those that simply enjoy having coyotes on the landscape and those that enjoy coyote hunting as a recreational pursuit, at least directly and in the short-term.

Secondary Impacts:

There would be no significant adverse secondary impacts to access and quality of recreational and wilderness activities in the area affected by the proposed project. No wilderness areas currently exist in the affected area; therefore, no secondary impacts to wilderness activities would occur because of the proposed project.

The proposed project would likely result in an improved predator-prey balance in the affected area and further FWP's stated objective to manage for the long-term welfare of Montana's mule deer resource. Further, a more balanced predator-prey scenario in the affected area would likely result in a healthier overall ecosystem, which would ultimately benefit all local recreational pursuits associated with mule deer, coyotes, and other wildlife species located within the area affected by the proposed project. Any secondary impacts to access to and quality of recreational and wilderness activities in the area affected by the proposed project would be long-term and beneficial.

Cumulative Impacts:

There would be no significant adverse cumulative impacts to access and quality of recreational and wilderness activities because of the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape and further FWP's ongoing objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Ultimately, the proposed project, in concert with past, present, and future related actions would likely result in an improved predator-prey balance in the affected area, and further FWP's objective to manage for the long-term welfare of all wildlife resources located in the affected area. FWP is unaware of any other

related projects that impact the access to and quality of recreational and wilderness activities in the affected area. Therefore, no cumulative impacts to access to and quality of recreational and wilderness activities would be expected because of the proposed action.

4. Local and State Tax Base and Tax Revenue

Existing Environment/Baseline Conditions (No Action Alternative):

Powder River County had an increase in local government property tax (8.28% growth rate) and was one of eight counties in Montana that had compound annual growth rates at or above 8% between TY 2001 and TY2018. This was likely due to larger amounts of property wealth. Powder River County had a decrease (-0.27% growth rate) in the number of mills levied but had an increase in property tax collections. This was likely due to the limit on local government property tax growth which allows mills to “float” up and down to meet the budget determined by the locality (Montana Legislative Fiscal Division 2020).

Direct Impacts:

There would be no significant adverse direct impacts to local and state tax base and tax revenue in the affected area because of the proposed project. FWP is proposing to provide Powder River County with \$26,400 to assist with their predator control efforts specific to coyotes during the spring of 2023. The proposed project would further FWP’s objective to manage for the long-term welfare of Montana’s mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape. The increased funds provided by FWP for the proposed action would be spent locally; therefore, the proposed project would be expected to increase state and local tax revenues from the sale of fuel to be used for fixed wing aerial operations, as well as other supplies, equipment, goods and services necessary to complete the project. Therefore, direct impacts to local and state tax base and tax revenue would be short-term and beneficial.

Secondary Impacts:

There would be no significant adverse secondary impacts to local and state tax base and tax revenue in the area affected by the proposed project. FWP is proposing to provide Powder River County with \$26,400 to assist with their predator control efforts specific to coyotes during the spring of 2023. The increased funds provided by FWP for the proposed action would be spent locally and entirely during the spring of 2023. However, the infusion of \$26,400 into the local economy during the spring of 2023 would likely promote the overall health of locally affected businesses. Therefore, secondary impacts from the proposed project would be short and long-term and beneficial.

Cumulative Impacts:

There would be no significant adverse cumulative impacts to local and state tax base and tax revenue because of the proposed project. FWP is proposing to provide Powder River County with \$26,400 to assist with their predator control efforts specific to coyotes during the spring of 2023. Increased funding for targeted coyote removal would increase activities that already occur on the landscape and further FWP’s ongoing objective to manage for the long-term welfare of Montana’s mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior

related actions. Ultimately, the proposed project, in concert with past, present, and future related actions would likely promote the overall health of locally affected businesses and thus the local and state tax base and tax revenue through sale of fuel to be used for fixed wing aerial operations, as well as other supplies, equipment, goods and services necessary to complete the project. Therefore, cumulative impacts to local and state tax base and tax revenue would be short-term and beneficial.

5. Industrial, Commercial, and Agricultural Activities and Production

Existing Environment/Baseline Conditions (No Action Alternative):

Agricultural and livestock development in the proposed action area consists mostly of cropland, pastureland, and grazing lands. Most of Powder River County is designated grazing lands fluctuating between 1.54 and 1.72 million acres. In the 2017 Census of Agriculture there were an estimated 325 farms within the county with an average size of 5,005 acres. The most abundant crop farmed is forage (hay) at about 84,497 acres and the dominant livestock is cattle and calves with an estimated inventory of 84,944 animals, followed by sheep and lambs with 10,620 animals in the livestock inventory. Powder River County has limited oil and timber production.

Direct Impacts:

There would be no significant adverse direct impacts to industrial, commercial, and agricultural activities and production in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact existing industrial, commercial, and agricultural activities and production in the affected area. Therefore, no additional direct impacts to industrial, commercial, and agricultural activities and production in the affected area would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to industrial, commercial, and agricultural activities and production in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact industrial, commercial, and agricultural activities and production in the affected area. Therefore, no secondary impacts to industrial, commercial, and agricultural activities and production would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant cumulative impacts to industrial, commercial, and agricultural activities and production because of the proposed project. The proposed project does not impact industrial, commercial, and agricultural activities and production in any way. Further, FWP is unaware of any other related projects that impact industrial, commercial, and agricultural activities and production. Therefore, no cumulative impacts to industrial, commercial, and agricultural activities and production would be expected because of the proposed action.

6. Human Health and Safety

Existing Environment/Baseline Conditions (No Action Alternative):

Powder River County is an aging, rural community where disability and chronic disease are likely to increase over time. The median age is 13.5 years higher than the Montana average and 25% of residents are over the age of 65. The leading cause of death within Powder River County is linked to chronic disease such as heart disease and cancer. In 2020, the Powder River County Commissioners created the Powder River County Health Advisory Board to assess the need for additional health services (Powder River County Community Health Assessment 2021).

Direct Impacts:

There would be no significant direct impacts to human health and safety in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape and as such may increase the risk to health and safety of those performing such operations. The proposed project would employ the use of fixed wing aircraft to conduct operations, which can be dangerous if not done in a safe manner. Affected contractors conducting the activity may realize increased risk to human health and safety; however, FWP and Powder River County require affected contractors to operate in a safe manner and utilize best management practices, including the use of available and appropriate safety precautions. Therefore, any potential direct impacts to human health and safety would be short-term and negligible, lasting only as long as the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to human health and safety in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, some of which impact the health and safety of those conducting the activities while conducting the activity. However, any increased risk to human health and safety would be direct and only occur during affected operations. Therefore, no secondary impacts to human health and safety would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant cumulative impacts to human health and safety because of the proposed project. The proposed project does not impact human health and safety in any way. FWP is proposing to provide Powder River County with \$26,400 to assist with their predator control efforts specific to coyotes during the spring of 2023. Increased funding for targeted coyote removal would increase activities that already occur on the landscape and further FWP's ongoing objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Ultimately, the proposed project, in concert with past, present, and future related actions may increase the risk to human health and safety, but any cumulative impact would be short-term and minor, occurring only during the spring of 2023 and only while performing activities that present human health risk, such as fixed wing aerial

operations proposed under the proposed action. FWP is unaware of any other related projects that impact human health and safety. Therefore, no cumulative impacts to human health and safety would be expected because of the proposed action.

7. Quantity and Distribution of Employment

Existing Environment/Baseline Conditions (No Action Alternative):

The economy in Powder River County employs approximately 877 people. The largest industries include agriculture, forestry, fishing and hunting (302 people), educational service (127 people), and other services, except public administration (77 people). The highest paying industries in Powder River County are construction (\$63,438), mining, quarrying, and oil and gas extraction (\$60,625), and professional, scientific, and technical services (\$42,188).

Direct Impacts:

There would be no significant direct impacts to quantity and distribution of employment in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape. The proposed project would be conducted by a local contractor employed by Powder River County and would not otherwise involve additional or new local staffing requirements. Therefore, no direct impacts to the quantity and distribution of employment in the area affected by the proposed project would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to quantity and distribution of employment in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape. The proposed project would be conducted by a local contractor employed by Powder River County and would not otherwise involve additional or new local staffing requirements. Therefore, no secondary impacts to the quantity and distribution of employment in the area affected by the proposed project would be expected because of the proposed project.

Cumulative Impacts:

There would be no significant cumulative impacts to quantity and distribution of employment because of the proposed project. The proposed project does not impact quantity and distribution of employment in any way. Further, FWP is unaware of any other related projects that impact quantity and distribution of employment. Therefore, no cumulative impacts to quantity and distribution of employment would be expected because of the proposed action.

8. Density and Distribution of Human Population and Housing

Existing Environment/Baseline Conditions (No Action Alternative):

Powder River County has an estimated population of 1,694 (2020 US Census) and approximately 28% of the county's residents live in Broadus, which is the county's seat. The median household income is \$57,744 and the median property value is \$135,900 (2020 US Census).

Direct Impacts:

There would be no significant direct impacts to density and distribution of human population and housing in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape. The proposed project would be conducted by a local contractor employed by Powder River County and would not otherwise require or result in the movement of existing or new population into or out of the affected area. Therefore, no direct impacts to the distribution and density of population and housing in the area affected by the proposed project would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to density and distribution of human population and housing in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape. The proposed project would be conducted by a local contractor employed by Powder River County and would not otherwise require or result in the movement of existing or new population into or out of the affected area in the short or long-term. Therefore, no secondary impacts to the distribution and density of population and housing in the area affected by the proposed project would be expected because of the proposed project.

Cumulative Impacts:

There would be no significant cumulative impacts to density and distribution of human population and housing because of the proposed project. The proposed project does not impact density and distribution of human population and housing in any way. Further, FWP is unaware of any other related projects that impact density and distribution of human population and housing. Therefore, no cumulative impacts to density and distribution of human population and housing would be expected because of the proposed action.

9. Demands for Government Services

Existing Environment/Baseline Conditions (No Action Alternative):

Powder River County utilizes services similar to other rural counties in Montana. Government services available within Powder River County include Broadus airport, Broadus volunteer fire department, clerk and recorder, clerk of district court, County Commissioners, County Attorney, Disaster Emergency Services, driver's license department, election information, County Extension Office, Justice of the Peace, landfill, library, Planning Board, Powder River Clinic, Powder River Emergency Medical Services, Powder River County Fair, Powder River Health Board, Powder River Manor, Powder River Public

Transportation, Public Health, recycling center, road department, sanitarian, senior center, sheriff, Superintendent of Schools, swimming pool, treasurer, Valley View Cemetery, and a Weed District.

Direct Impacts:

There would be no significant direct impacts to demands for government services in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape. FWP is proposing to provide Powder River County with \$26,400 to assist with their predator control efforts specific to coyotes during the spring of 2023. Increased funding for targeted coyote removal would not be ongoing; therefore, demands for government services would be limited to the funds provided for operations during the spring of 2023 and, when completed, would not further impact demands for government services. Therefore, any direct impacts to the demands for government services would be short-term and minor.

Secondary Impacts:

There would be no significant adverse secondary impacts to demands for government services in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape. FWP is proposing to provide Powder River County with \$26,400 to assist with their predator control efforts specific to coyotes during the spring of 2023. Increased funding for targeted coyote removal would not be ongoing; therefore, demands for government services would be limited to the funds provided for operations during the spring of 2023 and, when completed, would not further impact demands for government services. Therefore, any secondary impacts to the demands for government services would be short-term and minor.

Cumulative Impacts:

There would be no significant adverse cumulative impacts to demands for government services because of the proposed project. FWP is proposing to provide Powder River County with \$26,400 to assist with their predator control efforts specific to coyotes during the spring of 2023. Increased funding for targeted coyote removal would increase activities that already occur on the landscape and further FWP's ongoing objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Ultimately, the proposed project, in concert with past, present, and future related actions would increase demands for government services, but such demands would be limited to the funds provided for operations during the spring of 2023 and, when completed, would not further impact demands for government services. Therefore, any cumulative impacts to the demands for government services would be short-term and minor.

10. Locally Adopted Environmental Plans and Goals

Existing Environment/Baseline Conditions (No Action Alternative):

Powder River County has many local environmental plans and associated goals in the proposed project area that include but are not limited to the NRCS Powder River County Long Range Plan (2019), Powder River County Community Wildlife Protection Plan (2016 Update), and the U.S. Department of the Interior Powder River Final Management Plan Environmental Assessment (1994). Powder River County also received a \$7 million grant from the Economic Development Administration Disaster Recovery Program with a goal to replace and upgrade four bridges and resurface up to 18.1 miles of roadways. FWP is not aware of any other related locally adopted environmental plans or goals.

Direct Impacts:

There would be no significant adverse direct impacts to locally adopted environmental plans and goals in the affected area because of the proposed project. The proposed project would further FWP's objective to manage for the long-term welfare of Montana's mule deer resource by attempting to limit mule deer fawn mortality by reducing the number of coyotes located in the affected area during the spring mule deer fawning season, as deemed effective through implementation of prior related actions. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which directly impact other locally adopted environmental plans and goals in the affected area. Therefore, no direct impacts to locally adopted environmental plans and goals in the affected area would be expected because of the proposed project.

Secondary Impacts:

There would be no significant adverse secondary impacts to locally adopted environmental plans and goals in the area affected by the proposed project. Increased funding for targeted coyote removal would increase activities that already occur on the landscape, none of which impact locally adopted environmental plans and goals in the affected area. Therefore, no secondary impacts to locally adopted environmental plans and goals would be expected because of the proposed action.

Cumulative Impacts:

There would be no significant cumulative impacts to locally adopted environmental plans and goals because of the proposed project. The proposed project does not impact locally adopted environmental plans and goals in any way. Further, FWP is unaware of any other related projects that impact locally adopted environmental plans and goals. Therefore, no cumulative impacts to locally adopted environmental plans and goals would be expected because of the proposed action.

X. Determining the Significance of Impacts

If the EA identifies impacts associated with the proposed action FWP must determine the significance of the impacts. This determination forms the basis for FWP's decision as to whether it is necessary to prepare an environmental impact statement. FWP considered the criteria identified in **Table 6** below to determine the significance of each impact on the quality of the physical and human environment. ARM 12.2.431.

The significance determination is made by giving weight to these criteria in their totality. For example, impacts identified as moderate or major in severity may not be significant if the duration is short-term. However, moderate or major impacts of short-term duration may be significant if the quantity and quality of the resource is limited and/or the resource is unique or fragile. Further, moderate or major impacts to a resource may not be significant if the quantity of that resource is high or the quality of the resource is not unique or fragile.

Table 6: Determining the Significance of Impacts

Criteria Used to Determine Significance	
1	<p>The severity, duration, geographic extent, and frequency of the occurrence of the impact</p> <p>“Severity” describes the density of the potential impact, while “extent” describes the area where the impact will likely occur, e.g., a project may propagate ten noxious weeds on a surface area of 1 square foot. Here, the impact may be high in severity, but over a low extent. In contrast, if ten noxious weeds were distributed over ten acres, there may be low severity over a larger extent.</p> <p>“Duration” describes the time period during which an impact may occur, while “frequency” describes how often the impact may occur, e.g., an operation that uses lights to mine at night may have frequent lighting impacts during one season (duration).</p>
2	The probability that the impact will occur if the proposed project occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur
3	Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts
4	The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values
5	The importance to the state and to society of each environmental resource or value that would be affected
6	Any precedent that would be set as a result of an impact of the proposed project that would commit FWP to future actions with significant impacts or a decision in principle about such future actions
7	Potential conflict with local, state, or federal laws, requirements, or formal plans

XI. Private Property Impact Analysis (Takings)

The 54th Montana Legislature enacted the Private Property Assessment Act, now found at § 2-10-101. The intent was to establish an orderly and consistent process by which state agencies evaluate their proposed projects under the "Takings Clauses" of the United States and Montana Constitutions. The Takings Clause of the Fifth Amendment of the United States Constitution provides: "nor shall private property be taken for public use, without just compensation." Similarly, Article II, Section 29 of the Montana Constitution provides: "Private property shall not be taken or damaged for public use without just compensation..."

The Private Property Assessment Act applies to proposed agency projects pertaining to land or water management or to some other environmental matter that, if adopted and enforced without due process of law and just compensation, would constitute a deprivation of private property in violation of the United States or Montana Constitutions.

The Montana State Attorney General's Office has developed guidelines for use by state agencies to assess the impact of a proposed agency project on private property. The assessment process includes a careful review of all issues identified in the Attorney General's guidance document (Montana Department of Justice 1997). If the use of the guidelines and checklist indicates that a proposed agency project has taking or damaging implications, the agency must prepare an impact assessment in accordance with Section 5 of the Private Property Assessment Act.

Table 4: Private Property Assessment (Takings)

		Yes	No
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<i>Is FWP regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Does the proposed regulatory action restrict the use of the regulated person's private property? If not, no further analysis is required.</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Does FWP have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>If so, FWP must determine if there are alternatives that would reduce, minimize, or eliminate the restriction on the use of private property, and analyze such alternatives. Have alternatives been considered and/or analyzed? If so, describe below:</i>	<input type="checkbox"/>	<input type="checkbox"/>	
PRIVATE PROPERTY ASSESMENT ACT (PPAA)			
Does the Proposed Action Have Takings Implications under the PPAA?	Question #	Yes	No
Does the project pertain to land or water management or environmental regulations affecting private property or water rights?	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action result in either a permanent or an indefinite physical occupation of private property?	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action deprive the owner of all economically viable uses of the property?	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 4a and 4b and continue with question 5.)	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there a reasonable, specific connection between the government requirement and legitimate state interest?	4a	<input type="checkbox"/>	<input type="checkbox"/>
Is the government requirement roughly proportional to the impact of the proposed use of the property?	4b	<input type="checkbox"/>	<input type="checkbox"/>
Does the action deny a fundamental attribute of ownership?	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action have a severe impact of the value of the property?	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public general? (If the answer is NO, skip questions 7a-7c.)	7	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the impact of government action direct, peculiar, and significant?	7a	<input type="checkbox"/>	<input type="checkbox"/>
Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?	7b	<input type="checkbox"/>	<input type="checkbox"/>
Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?	7c	<input type="checkbox"/>	<input type="checkbox"/>
Does the proposed action result in taking or damaging implications?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Taking or damaging implications exist if YES is checked in response to Question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to question 4a or 4b.			
If taking or damaging implications exist, the agency must comply with MCA § 2-10-105 of the PPAA, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.			
Alternatives: The analysis under the Private Property Assessment Act, §§ 2-10-101-112, MCA, indicates no impact. FWP does not plan to impose conditions that would restrict the regulated person's use of private property to constitute a taking.			

XII. Public Participation

Scoping

Scope is the full range of issues that may be affected if an agency implements a proposed action or alternatives to the proposed action. The scope of the environmental review is described through a definition of those issues, a reasonable range of alternatives considered, a description of the impacts to the physical and human environments, and a description of reasonable mitigation measures that would ameliorate the impacts. Scoping is the process used to identify all issues that are relevant to the proposed action.

Depending on the level of impact associated with a proposed action, the scoping process may include a request for public participation in the identification of issues.

Because FWP determined the proposed action will result in limited environmental impact, and little public interest has been expressed, FWP determined the proposed project did not meet the criteria for a public scoping meeting. Therefore, a public scoping meeting was not held for the proposed action.

Public Review of Environmental Assessments

The level of analysis in an EA will vary with the complexity and seriousness of environmental issues associated with a proposed action. The level of public interest will also vary. FWP is responsible for adjusting public review to match these factors (ARM 12.2.433(1)). For the proposed project, FWP determined the following public notice strategy will provide an appropriate level of public review:

- An EA is a public document and may be inspected upon request. Any person may obtain a copy of an EA by making a request to FWP.
- Public notice will be served on the Montana Fish, Wildlife and Parks website at: <https://fwp.mt.gov/public-notices>.
- Public notice will be served on the Montana Environmental Quality Council's MEPA Document List website at: <https://leg.mt.gov/mepa/search/>.
- As applicable, copies will be distributed to neighboring landowners to ensure their knowledge of the proposed project and opportunity for review and comment on the proposed action.
- FWP maintains a mailing list of persons interested in a particular action or type of action. FWP will notify all interested persons and distribute copies of the EA to those persons for review and comment (ARM 12.2.433(3)).
- FWP will issue public notice in the following newspaper periodical(s) on the date(s) indicated.

Table 5: Public Notice – Newspaper/Periodical and Date Published

Newspaper / Periodical	Date(s) Public Notice Issued
Powder River Examiner	Week of March 15th

Public notice announces availability of the Draft EA for public review, summarizes the proposed project, identifies the time-period available for public comment, and provides direction for submitting comments.

- **Duration of Public Comment Period:** The public comment period begins on the date of publication of legal notice in area newspapers (see above). Written or e-mailed comments will be accepted until 5:00 p.m., Mountain Time, on the last day of public comment, as listed below:

Length of Public Comment Period: 30 days

Public Comment Period Begins: March 10th, 2023

Public Comment Period Ends: 5pm, April 8th, 2023

Comments must be addressed to the FWP contact listed below.

- **Where to Mail or Email Comments on the Draft EA:**

Name: BRETT DORAK

Email: brett.dorak@mt.gov

Mailing Address:

Montana Fish, Wildlife and Parks
Attn: Brett Dorak
PO Box 1630
352 I-94 Business Loop
Miles City, MT 59301

XIII. Recommendation for Further Environmental Analysis

NO further analysis is needed for the proposed action	<input checked="" type="checkbox"/>
FWP must conduct EIS level review for the proposed action	<input type="checkbox"/>

XIV. EA Preparation and Review

	Name	Title
EA prepared by:	Brett Dorak	Region 7 Wildlife Manager
EA reviewed by:		

Literature Cited

Ballard, W. B., D. Lutz, T. W. Keegan, L. H. Carpenter, and J. C. deVos, Jr. Deer-Predator Relationships: A Review of Recent North American Studies with Emphasis on Mule and Black-tailed Deer. 2001. Wildlife Society Bulletin. Vol. 29, No. 1, pp 99 – 115

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Montana Fish, Wildlife and Parks, 2000. The Effects of Coyote Removal on Populations of Antelope and Mule Deer in Central Montana. Helena, MT. pp. 1 – 16

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Skelly, B.P. 2018. Potential effects of oil and natural gas development on mule deer (*Odocoileus hemionus*) survival and fawn rearing resource selection. Thesis. West Virginia University. Morgantown, USA. 70 pp.

Appendix A – Wildlife Species Present in Affected Area

List of Avian Species Present in the Proposed Project Area

Common Name	Scientific Name
American Avocet	<i>Recurvirostra americana</i>
American Bittern	<i>Botaurus lentiginosus</i>
American Coot	<i>Fulica americana</i>
American Crow	<i>Corvus brachyrhynchos</i>
American Goldfinch	<i>Spinus tristis</i>
American Kestrel	<i>Falco sparverius</i>
American Pipit	<i>Anthus rubescens</i>
American Redstart	<i>Setophaga ruticilla</i>
American Robin	<i>Turdus migratorius</i>
American Three-toed Woodpecker	<i>Picoides dorsalis</i>
American Tree Sparrow	<i>Spizelloides arborea</i>
American White Pelican	<i>Pelecanus erythrorhynchos</i>
American Wigeon	<i>Mareca americana</i>
Baird's Sandpiper	<i>Calidris bairdii</i>
Baird's Sparrow	<i>Centronyx bairdii</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Baltimore Oriole	<i>Icterus galbula</i>
Bank Swallow	<i>Riparia riparia</i>
Barn Owl	<i>Tyto alba</i>
Barn Swallow	<i>Hirundo rustica</i>
Belted Kingfisher	<i>Megaceryle alcyon</i>
Black Tern	<i>Chlidonias niger</i>
Black-and-white Warbler	<i>Mniotilta varia</i>
Black-backed Woodpecker	<i>Picoides arcticus</i>
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>
Black-billed Magpie	<i>Pica hudsonia</i>
Black-capped Chickadee	<i>Poecile atricapillus</i>
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>
Blackpoll Warbler	<i>Setophaga striata</i>
Blue Jay	<i>Cyanocitta cristata</i>

Blue-headed Vireo	Vireo solitarius
Blue-winged Teal	Spatula discors
Bobolink	Dolichonyx oryzivorus
Bohemian Waxwing	Bombycilla garrulus
Bonaparte's Gull	Chroicocephalus philadelphia
Brewer's Blackbird	Euphagus cyanocephalus
Brewer's Sparrow	Spizella breweri
Broad-tailed Hummingbird	Selasphorus platycercus
Broad-winged Hawk	Buteo platypterus
Brown Creeper	Certhia americana
Brown Thrasher	Toxostoma rufum
Brown-headed Cowbird	Molothrus ater
Bufflehead	Bucephala albeola
Bullock's Oriole	Icterus bullockii
Burrowing Owl	Athene cunicularia
Cackling Goose	Branta hutchinsii
California Gull	Larus californicus
Calliope Hummingbird	Selasphorus calliope
Canada Goose	Branta canadensis
Canvasback	Aythya valisineria
Canyon Wren	Catherpes mexicanus
Cassin's Finch	Haemorhous cassinii
Cassin's Kingbird	Tyrannus vociferans
Cattle Egret	Bubulcus ibis
Cedar Waxwing	Bombycilla cedrorum
Chestnut-collared Longspur	Calcarius ornatus
Chimney Swift	Chaetura pelagica
Chipping Sparrow	Spizella passerina
Chukar	Alectoris chukar
Cinnamon Teal	Spatula cyanoptera
Clark's Nutcracker	Nucifraga columbiana
Clay-colored Sparrow	Spizella pallida
Cliff Swallow	Petrochelidon pyrrhonota
Common Goldeneye	Bucephala clangula
Common Grackle	Quiscalus quiscula
Common Loon	Gavia immer
Common Merganser	Mergus merganser
Common Nighthawk	Chordeiles minor
Common Poorwill	Phalaenoptilus nuttallii
Common Raven	Corvus corax
Common Redpoll	Acanthis flammea
Common Tern	Sterna hirundo
Common Yellowthroat	Geothlypis trichas

Cooper's Hawk	<i>Accipiter cooperii</i>
Cordilleran Flycatcher	<i>Empidonax occidentalis</i>
Dark-eyed Junco	<i>Junco hyemalis</i>
Dark-eyed Junco (Montana)	<i>Junco hyemalis montanus</i>
Dark-eyed Junco (Pink-sided)	<i>Junco hyemalis mearnsi</i>
Dark-eyed Junco (Slate-colored)	<i>Junco hyemalis hyemalis</i> / <i>cismontanus</i>
Dark-eyed Junco (White-winged)	<i>Junco hyemalis aikenii</i>
Dickcissel	<i>Spiza americana</i>
Double-crested Cormorant	<i>Nannopterum auritum</i>
Downy Woodpecker	<i>Dryobates pubescens</i>
Dusky Flycatcher	<i>Empidonax oberholseri</i>
Eared Grebe	<i>Podiceps nigricollis</i>
Eastern Bluebird	<i>Sialia sialis</i>
Eastern Kingbird	<i>Tyrannus tyrannus</i>
Eastern Phoebe	<i>Sayornis phoebe</i>
Eastern Screech-Owl	<i>Megascops asio</i>
Eurasian Collared-Dove	<i>Streptopelia decaocto</i>
Eurasian Wigeon	<i>Mareca penelope</i>
European Starling	<i>Sturnus vulgaris</i>
Evening Grosbeak	<i>Coccothraustes vespertinus</i>
Ferruginous Hawk	<i>Buteo regalis</i>
Field Sparrow	<i>Spizella pusilla</i>
Franklin's Gull	<i>Leucophaeus pipixcan</i>
Gadwall	<i>Mareca strepera</i>
Golden Eagle	<i>Aquila chrysaetos</i>
Golden-crowned Kinglet	<i>Regulus satrapa</i>
Golden-crowned Sparrow	<i>Zonotrichia atricapilla</i>
Grasshopper Sparrow	<i>Ammodramus savannarum</i>
Gray Catbird	<i>Dumetella carolinensis</i>
Gray Flycatcher	<i>Empidonax wrightii</i>
Gray Partridge	<i>Perdix perdix</i>
Gray-crowned Rosy-Finch	<i>Leucosticte tephrocotis</i>
Great Blue Heron	<i>Ardea herodias</i>
Great Crested Flycatcher	<i>Myiarchus crinitus</i>
Great Horned Owl	<i>Bubo virginianus</i>
Great-tailed Grackle	<i>Quiscalus mexicanus</i>
Greater Sage-Grouse	<i>Centrocercus urophasianus</i>
Greater White-fronted Goose	<i>Anser albifrons</i>
Greater Yellowlegs	<i>Tringa melanoleuca</i>
Green-tailed Towhee	<i>Pipilo chlorurus</i>
Green-winged Teal	<i>Anas crecca</i>
Hairy Woodpecker	<i>Dryobates villosus</i>
Hammond's Flycatcher	<i>Empidonax hammondii</i>

Harris's Sparrow	Zonotrichia querula
Hermit Thrush	Catharus guttatus
Hooded Merganser	Lophodytes cucullatus
Horned Lark	Eremophila alpestris
House Finch	Haemorhous mexicanus
House Sparrow	Passer domesticus
House Wren	Troglodytes aedon
Indigo Bunting	Passerina cyanea
Killdeer	Charadrius vociferus
Lapland Longspur	Calcarius lapponicus
Lark Bunting	Calamospiza melanocorys
Lark Sparrow	Chondestes grammacus
Lazuli Bunting	Passerina amoena
Least Flycatcher	Empidonax minimus
Least Sandpiper	Calidris minutilla
LeConte's Sparrow	Ammospiza leconteii
Lesser Goldfinch	Spinus psaltria
Lesser Scaup	Aythya affinis
Lesser Yellowlegs	Tringa flavipes
Lewis's Woodpecker	Melanerpes lewis
Lincoln's Sparrow	Melospiza lincolnii
Loggerhead Shrike	Lanius ludovicianus
Long-billed Curlew	Numenius americanus
Long-billed Dowitcher	Limnodromus scolopaceus
Long-eared Owl	Asio otus
MacGillivray's Warbler	Geothlypis tolmiei
Mallard	Anas platyrhynchos
Marbled Godwit	Limosa fedoa
Marsh Wren	Cistothorus palustris
Merlin	Falco columbarius
Mountain Bluebird	Sialia currucoides
Mountain Chickadee	Poecile gambeli
Mountain Plover	Charadrius montanus
Mourning Dove	Zenaida macroura
Nashville Warbler	Leiothlypis ruficapilla
Northern Flicker	Colaptes auratus
Northern Flicker (Red-shafted)	Colaptes auratus cafer
Northern Flicker (Yellow-shafted)	Colaptes auratus auratus
Northern Goshawk	Accipiter gentilis
Northern Harrier	Circus hudsonius
Northern Mockingbird	Mimus polyglottos
Northern Pintail	Anas acuta
Northern Rough-winged Swallow	Stelgidopteryx serripennis

Northern Saw-whet Owl	<i>Aegolius acadicus</i>
Northern Shoveler	<i>Spatula clypeata</i>
Northern Shrike	<i>Lanius borealis</i>
Northern Waterthrush	<i>Parkesia noveboracensis</i>
Olive-sided Flycatcher	<i>Contopus cooperi</i>
Orange-crowned Warbler	<i>Leiothlypis celata</i>
Orchard Oriole	<i>Icterus spurius</i>
Osprey	<i>Pandion haliaetus</i>
Ovenbird	<i>Seiurus aurocapilla</i>
Pectoral Sandpiper	<i>Calidris melanotos</i>
Peregrine Falcon	<i>Falco peregrinus</i>
Pied-billed Grebe	<i>Podilymbus podiceps</i>
Pileated Woodpecker	<i>Dryocopus pileatus</i>
Pine Grosbeak	<i>Pinicola enucleator</i>
Pine Siskin	<i>Spinus pinus</i>
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>
Plumbeous Vireo	<i>Vireo plumbeus</i>
Prairie Falcon	<i>Falco mexicanus</i>
Purple Finch	<i>Haemorhous purpureus</i>
Pygmy Nuthatch	<i>Sitta pygmaea</i>
Red Crossbill	<i>Loxia curvirostra</i>
Red-breasted Nuthatch	<i>Sitta canadensis</i>
Red-eyed Vireo	<i>Vireo olivaceus</i>
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>
Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>
Red-necked Phalarope	<i>Phalaropus lobatus</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Redhead	<i>Aythya americana</i>
Ring-billed Gull	<i>Larus delawarensis</i>
Ring-necked Duck	<i>Aythya collaris</i>
Ring-necked Pheasant	<i>Phasianus colchicus</i>
Rock Pigeon	<i>Columba livia</i>
Rock Wren	<i>Salpinctes obsoletus</i>
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Rough-legged Hawk	<i>Buteo lagopus</i>
Ruby-crowned Kinglet	<i>Corthylio calendula</i>
Ruby-throated Hummingbird	<i>Archilochus colubris</i>
Ruddy Duck	<i>Oxyura jamaicensis</i>
Rufous Hummingbird	<i>Selasphorus rufus</i>
Rusty Blackbird	<i>Euphagus carolinus</i>
Sage Thrasher	<i>Oreoscoptes montanus</i>
Sandhill Crane	<i>Antigone canadensis</i>

Savannah Sparrow	Passerculus sandwichensis
Say's Phoebe	Sayornis saya
Semipalmated Plover	Charadrius semipalmatus
Semipalmated Sandpiper	Calidris pusilla
Sharp-shinned Hawk	Accipiter striatus
Sharp-tailed Grouse	Tympanuchus phasianellus
Short-eared Owl	Asio flammeus
Smith's Longspur	Calcarius pictus
Snow Bunting	Plectrophenax nivalis
Snow Goose	Anser caerulescens
Snowy Owl	Bubo scandiacus
Solitary Sandpiper	Tringa solitaria
Song Sparrow	Melospiza melodia
Sora	Porzana carolina
Spotted Sandpiper	Actitis macularius
Spotted Towhee	Pipilo maculatus
Sprague's Pipit	Anthus spragueii
Swainson's Hawk	Buteo swainsoni
Swainson's Thrush	Catharus ustulatus
Tennessee Warbler	Leiothlypis peregrina
Thick-billed Longspur	Rhynchophanes mccownii
Townsend's Solitaire	Myadestes townsendi
Townsend's Warbler	Setophaga townsendi
Tree Swallow	Tachycineta bicolor
Tundra Swan	Cygnus columbianus
Turkey Vulture	Cathartes aura
Upland Sandpiper	Bartramia longicauda
Veery	Catharus fuscescens
Vesper Sparrow	Pooecetes gramineus
Violet-green Swallow	Tachycineta thalassina
Virginia Rail	Rallus limicola
Warbling Vireo	Vireo gilvus
Western Bluebird	Sialia mexicana
Western Grebe	Aechmophorus occidentalis
Western Kingbird	Tyrannus verticalis
Western Meadowlark	Sturnella neglecta
Western Sandpiper	Calidris mauri
Western Tanager	Piranga ludoviciana
Western Wood-Pewee	Contopus sordidulus
White-breasted Nuthatch	Sitta carolinensis
White-crowned Sparrow	Zonotrichia leucophrys
White-faced Ibis	Plegadis chihi
White-throated Sparrow	Zonotrichia albicollis

White-throated Swift	Aeronautes saxatalis
White-winged Crossbill	Loxia leucoptera
Whooping Crane	Grus americana
Wild Turkey	Meleagris gallopavo
Willet	Tringa semipalmata
Willow Flycatcher	Empidonax traillii
Wilson's Phalarope	Phalaropus tricolor
Wilson's Snipe	Gallinago delicata
Wilson's Warbler	Cardellina pusilla
Wood Duck	Aix sponsa
Wood Thrush	Hylocichla mustelina
Yellow Warbler	Setophaga petechia
Yellow-billed Cuckoo	Coccyzus americanus
Yellow-breasted Chat	Icteria virens
Yellow-headed Blackbird	Xanthocephalus xanthocephalus
Yellow-rumped Warbler	Setophaga coronata
Yellow-rumped Warbler (Audubon's)	Setophaga coronata auduboni
Yellow-rumped Warbler (Myrtle)	Setophaga coronata coronata
Yellow-throated Vireo	Vireo flavifrons

List of Fish Species Present in the Proposed Project Area

Common Name	Scientific Name
Black Bullhead	Ameiurus melas
Black Crappie	Pomoxis nigromaculatus
Bluegill	Lepomis macrochirus
Brassy Minnow	Hybognathus hankinsoni
Brook Stickleback	Culaea inconstans
Brook Trout	Salvelinus fontinalis
Brown Trout	Salmo trutta
Channel Catfish	Ictalurus punctatus
Common Carp	Cyprinus carpio
Creek Chub	Semotilus atromaculatus
Emerald Shiner	Notropis atherinoides
Fathead Minnow	Pimephales promelas
Flathead Chub	Platygobio gracilis
Freshwater Drum	Aplodinotus grunniens
Golden Shiner	Notemigonus crysoleucas
Goldeye	Hiodon alosoides
Green Sunfish	Lepomis cyanellus
Lake Chub	Couesius plumbeus
Largemouth Bass	Micropterus salmoides

Longnose Dace	Rhinichthys cataractae
Longnose Sucker	Catostomus catostomus
Mountain Sucker	Catostomus platyrhynchus
Northern Pike	Esox lucius
Northern Plains Killifish	Fundulus kansae
Plains Minnow	Hybognathus placitus
Pumpkinseed	Lepomis gibbosus
Rainbow Trout	Oncorhynchus mykiss
River Carpsucker	Carpodes carpio
Rock Bass	Ambloplites rupestris
Sand Shiner	Notropis stramineus
Sauger	Sander canadensis
Shorthead Redhorse	Moxostoma macrolepidotum
Shovelnose Sturgeon	Scaphirhynchus platyrhynchus
Smallmouth Bass	Micropterus dolomieu
Smallmouth Buffalo	Ictiobus bubalus
Spottail Shiner	Notropis hudsonius
Stonecat	Noturus flavus
Sturgeon Chub	Macrhybopsis gelida
Walleye	Sander vitreus
Western Silvery Minnow	Hybognathus argyritis
White Crappie	Pomoxis annularis
White Sucker	Catostomus commersonii
Yellow Bullhead	Ameiurus natalis
Yellow Perch	Perca flavescens