

**U.S. Fish & Wildlife Service**

**Environmental Assessment  
Improved Visitor Access at the Rocky Flats National Wildlife Refuge**





***The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.***



***The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations.***

Cover Photo: Non-native smooth brome grass (*Bromus inermis*) shown in the proposed alignment of new trail in the Woman Creek drainage of the Rocky Flats National Wildlife Refuge (Credit: Federal Highways Administration)

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# **Environmental Assessment for Improved Visitor Access at the Rocky Flats National Wildlife Refuge**

**Date: August 2020**

This environmental assessment (EA) documents the issues, alternatives, and analysis associated with implementation of aspects of the 2005 Comprehensive Conservation Plan (CCP) for the Rocky Flats National Wildlife Refuge (refuge). Specifically, beginning in 2014, the U.S. Fish and Wildlife Service (FWS) began working with its partners to provide the public access to the Refuge described in the CCP. The FWS began offering its first public tours of the refuge in June 2015. The FWS then announced in April 2016 its plans to begin a public participation process to assist with the opening of the refuge to general visitation. The refuge officially opened a network of internal trails in September 2018.

The FWS prepares this Environmental Assessment (EA) to evaluate the effects associated with the proposed action in accordance with the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations (40 CFR §§ 1500-1509) and Department of the Interior (43 CFR Part 46; 516 DM 8) and FWS (550 FW 3) regulations and policies. NEPA requires examination of the effects of proposed actions on the natural and human environment. This document is also consistent with Secretarial Order No. 3355 (2017) to immediately implement certain improvements to NEPA reviews and additional guidance from the Department of the Interior to implement this Order (memorandum dated August 6, 2018).<sup>1</sup>

## **I. Proposed Action**

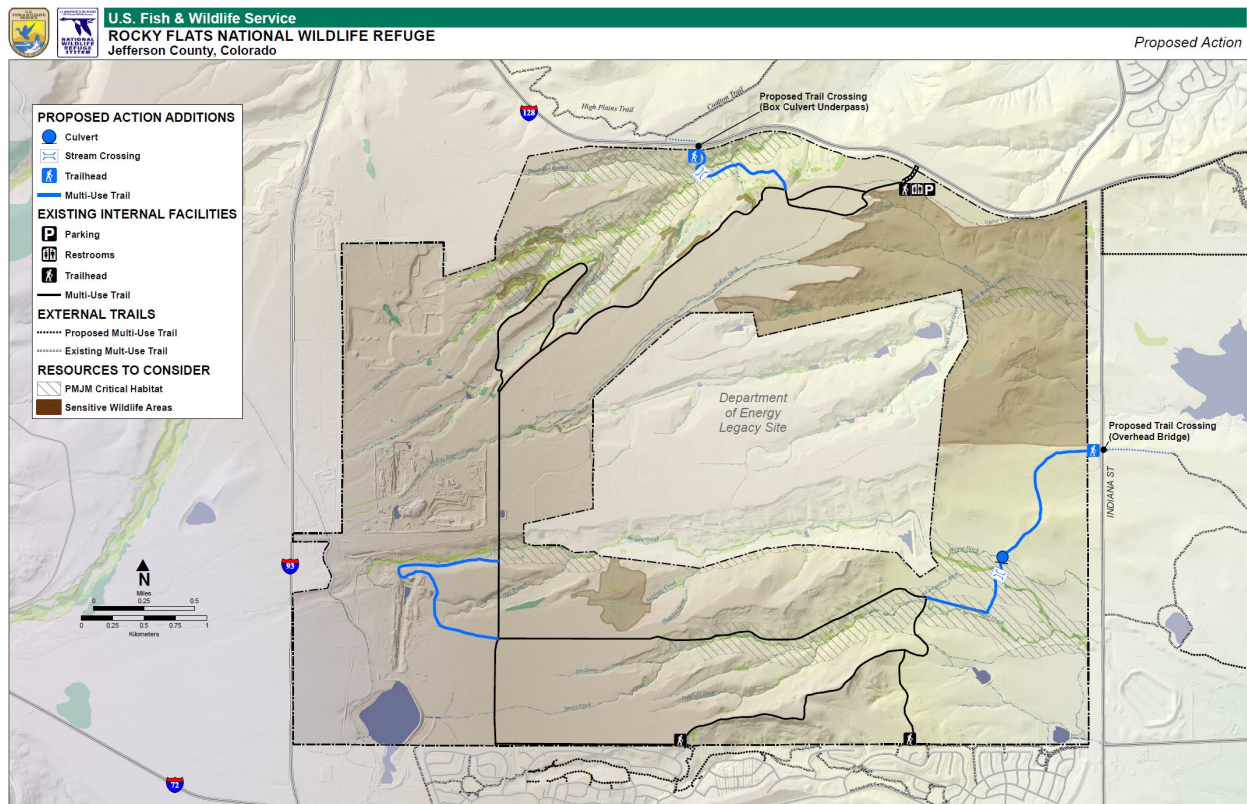
Consistent with its 2005 Comprehensive Conservation Plan (CCP), the FWS would further improve visitor access to the refuge. Working with the Federal Highways Administration and multiple local governments, the FWS would improve the 8.2 mile non-motorized trail within the refuge also known as the Rocky Mountain Greenway Trail (see figure below). This work would also include: (1) the creation of improved “off-road” connections to existing regional trail systems, (2) minor improvements to the refuge’s existing main entrance and parking area, and (3) support a partner-led project funded through the Federal Lands Access Program (FLAP) to create two additional connections to adjacent open space lands (see Appendix A for additional details).

Specifically, the FWS would ask the Federal Highways Administration to design and construct 3.4 miles of trail and two stream-bed crossings on the refuge. An additional 600 feet of trail would be constructed on lands owned by Boulder County, Jefferson County and the Jefferson Parkway Public Highway Authority (see Appendix A). Construction of trails requires clearing and grubbing of vegetation within the trail bed and placing vegetation barrier and a compacted aggregate material to create the trail. It is necessary for newly constructed trails to cross to both Rock Creek and Woman Creek where a box culvert, short-span bridge, or other type of low-water crossing would be installed. The FLAP project

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<sup>1</sup> Additional information on the U.S. Department of the Interior’s efforts to streamline NEPA can be found at < <https://www.doi.gov/nepa> >.

would construct a new bridge over Indiana Street and install a box culvert under State Highway 128 to create a grade-separated crossing connecting the refuge to adjacent open space lands (see Appendix A).



## Background

Rocky Flats National Wildlife Refuge (refuge) sits about 2 miles from the foothills of the Front Range at the interface of the Great Plains and Rocky Mountains. The refuge has a somewhat unusual history. It was established in 2001 and came into FWS stewardship in 2007 following the closure and subsequent cleanup of a nuclear weapons plant operated by the Department of Energy (DOE).

The planning for the refuge began in 2001 with the passage of the Rocky Flats National Wildlife Refuge Act of 2001 (Pub. L. No. 107-107 §§ 3171-3182), though Rocky Flats did not come into FWS stewardship until 2007 after the Environmental Protection Agency (EPA) issued certification of the cleanup of the former DOE Rocky Flats Environmental Technology Site (R. Roberts, letter dated June 11, 2007). A thorough Comprehensive Conservation Plan (CCP) was drafted for the then-future refuge in 2005 (U.S. Fish and Wildlife Service 2005). The planning process for the CCP included the drafting of an Environmental Impact Statement (EIS) to assess the impacts of conservation and management alternatives for the refuge (U.S. Fish and Wildlife Service 2004). This EIS included an analysis of the impacts of various alternatives to construct any infrastructure needed to support future public visitation of the refuge.

A Record of Decision (ROD) was issued 2005 that selected “Alternative B – Wildlife, Habitat, and Public Use” for future implementation by the FWS.<sup>2</sup>

The refuge was established by the Rocky Flats National Wildlife Refuge Act of 2001 (Pub. L. No. 107-107). Section 3177(e) of this Act outlined the following purposes for the refuge:

(e) ADMINISTRATION AND PURPOSES.—

(1) IN GENERAL.—The Secretary of the Interior shall manage the refuge in accordance with applicable law, including this subtitle, the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd et seq.), and the purposes specified in that Act.

(2) REFUGE PURPOSES.—The refuge shall be managed for the purposes of—

(A) restoring and preserving native ecosystems;

(B) providing habitat for, and population management of, native plants and migratory and resident wildlife;

(C) conserving threatened and endangered species (including species that are candidates for listing under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.)); and

(D) providing opportunities for compatible scientific research.

(3) MANAGEMENT.—In managing the refuge, the Secretary of the Interior shall—

(A) ensure that wildlife-dependent recreation and environmental education and interpretation are the priority public uses of the refuge; and

(B) comply with all response actions.

The former Rocky Flats was a large industrial facility, comprised of over 800 structures, including several large processing facilities for plutonium and uranium. The vast majority of industrial activities (including waste disposal), took place in or near the center of the site, in the approximately 300-acre Industrial Area. Lands that encompass the refuge are acceptable for unrestricted use and unlimited exposure (CAD/ROD 2006). In 2016, the Executive Director of the Colorado Department of Public Health and Environment (CDPHE) issued the following statement:

*In 2005 and following \$7 billion invested in the remediation, my agency (the Colorado Department of Public Health and Environment) and EPA (the Environmental Protection Agency) declared that the cleanup of Rocky Flats was complete. Public access and trails through the Refuge have long been envisioned. As a result of reassuring ongoing surveillance data, the Rocky Mountain Greenway trail through the Refuge does not pose a threat to public health. [Larry Wolk, MD, MSPH, May 2, 2016]*

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<sup>2</sup> The complete Record of Decision is included as Appendix H of the Comprehensive Conservation Plan. Appendices to the final CCP can be found at < [https://www.fws.gov/mountain-prairie/refuges/completedPlanPDFs\\_M-S/rfl\\_2005\\_ccpfinal\\_appendix.pdf](https://www.fws.gov/mountain-prairie/refuges/completedPlanPDFs_M-S/rfl_2005_ccpfinal_appendix.pdf) >.

Further, the FWS committed to additional confirmatory soil sampling in areas of new construction (U.S. Fish and Wildlife Service 2016). In June 2018, the FWS contracted with a company to analyze soil samples collected along planned trail routes for radionuclides.<sup>3</sup> A total of 48 samples were collected. Data was summarized and are consistent with, if not generally lower than, the radionuclide data used in prior Comprehensive Risk Assessments. It was the opinion of the contractor that they “did not obtain any results from the soil samples collected and analyzed that indicate a higher risk level than presented in the 2006 Kaiser Hill Company report and the DOE (2017) report, which allowed for public access to the Project area.” (Engineering Analytics 2019). On the refuge, 33 samples (69%) were below background level including 15 reported below detection. The maximum plutonium (Pu<sup>239/240</sup>) activity detected was 3.510 pCi/g within the Wind Blown Exposure Unit, which is one-third the Wildlife Refuge Worker PRG of 9.3 pCi/g (Engineering Analytics 2019a).<sup>4</sup> Additional sampling has been completed off-refuge by partners as a part of the Federal Lands Access Program (FLAP) grant (see Appendix A).

On June 27, 2020, the CDPHE issued a report summarizing their review of the 2019 soil sampling efforts. This included a summary review of the sampling protocols and data described above completed by Colorado State University. The report also included a literature review on plutonium and a summary of a radiological dose assessment specific to road workers and offsite residents as a result of anticipated construction activities. CDPHE provided the following summary statement in its report: “Together, these efforts paint a consistent picture: remaining Rocky Flats plutonium in the Jefferson Parkway transportation corridor and offsite poses a small risk, well within regulatory limits for radiation. This conclusion is consistent with previous findings and the cleanup process.” (CDPHE 2020). Further, CDPHE also provided comments on this EA and stated: “CDPHE supports FWS’ open space alternative and does not believe it presents any significant risk to human health or the environment.” (see Appendix D for the complete letter received from CDPHE).

## **Decisions to Be Made**

Based on the analysis provided in this EA, the FWS will make two decisions:

1. Determine whether the FWS should pursue actions to further improve visitor access to the Rocky Flats National Wildlife Refuge (Alternative B). This EA is an evaluation of the environmental impacts of the alternatives and provides information to help the FWS fully consider these impacts.
2. If yes, determine whether the selected alternative will have a significant impact on the quality of the human environment. This decision is required by the National Environmental Policy Act (NEPA). If the quality of the human environment would not be significantly affected, a “finding of no significant impact” will be signed and will be made available to the public. If the preferred alternative would have a significant impact, an environmental impact statement will be prepared to further address those impacts.

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<sup>3</sup> Additional information on the soil sampling efforts in and around the Rocky Flats National Wildlife Refuge can be found at: <https://www.jeffco.us/3639/Rocky-Mountain-Greenway>

<sup>4</sup> A total of 15 samples were collected from Section 16 of the refuge. To remain consistent with prior reports, this area is called the “Southwest Offsite Area” in the final Engineering Analytics report. The maximum plutonium (Pu<sup>239/240</sup>) activity detected in this area was 0.070 pCi/g.



## II. Description of Alternatives

This section describes the alternatives analyzed by the FWS to facilitate improved visitor access to the refuge:

- no-action alternative
- open space alternative (proposed action)

These alternatives were developed according to NEPA §102(2)(E) requirements to “study, develop, and describe appropriate alternatives to recommend courses of action in any proposal which involves unresolved conflicts concerning alternatives uses of available resources.” The alternatives consider the effects of further improvements to visitor access within the refuge and immediately adjacent properties (see Appendix A).

In addition, several alternatives that were eliminated from further analysis are briefly discussed below.

### **Alternative A – No Change(s) From Existing Plan (no action)**

Management of the refuge is governed by a Comprehensive Conservation Plan (CCP) that was signed by FWS in 2005. Development of the CCP was accompanied by an Environmental Impact Statement (EIS) that was prepared pursuant to the National Environmental Policy Act (NEPA).

When the FWS prepared its CCP and EIS, it evaluated four alternatives. After public review and comment, the FWS ultimately chose “Alternative B – Wildlife, Habitat and Public Use,” because it best satisfies the missions of the FWS and the National Wildlife Refuge System, the direction of the Rocky Flats National Wildlife Refuge Act of 2001, and the long-term needs of the habitats and wildlife at the Rocky Flats. Among other topics, the 2005 CCP addresses visitor use programs. The 2005 CCP anticipated that over the next 15 years visitor use facilities would include 12.8 miles of multi-use trail, 3.8 miles of hiking-only trail, a visitor contact station, interpretive overlooks, viewing blinds, and associated access and parking facilities. Bicycles and horses will be permitted on multiple use trails in order to facilitate regional trail linkages and to serve as a mode of transportation for wildlife viewing and accessing the refuge from surrounding communities.

The CCP includes analysis of regional trail connections at both Highway 128 and Indiana Street which will satisfy the needs of the Rocky Mountain Greenway Trail.<sup>5</sup> Trail users would cross these roads at grade and there would be no construction of over or underpasses with the no action alternative.

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<sup>5</sup> In 2012, the Rocky Mountain Greenway was announced by Colorado Governor John Hickenlooper and Department of the Interior Secretary Ken Salazar. When complete, the Rocky Mountain Greenway will form an 80-mile continuous trail, passing through more than 10 municipal jurisdictions, six counties, and four federal land areas. The Rocky Mountain Greenway Trail first seeks to identify trail that already exist near the planned alignment and where necessary construct new trail segments to fill gaps. See < <https://rockymtngreenway.org/#/home> > for additional information.

Under this alternative in the CCP, the FWS would maintain trails and facilities as described in the CCP. In 2018, minor modifications to this plan were authorized and an existing Categorical Exclusion was invoked for the project.<sup>6</sup>

### **Alternative B – Open Space Alternative (proposed)**

Same as Alternative A except:

- Working with the Federal Highways Administration and multiple local governments, the FWS would construct new portions and improve existing trail segments of the 8.2 mile non-motorized trail at the refuge, also known as the Rocky Mountain Greenway Trail.<sup>7</sup> The entrance road to the refuge would change from crushed fines to a gravel, unpaved surface. Minimal signage and a vault toilet would be the only amenities provided. *This work would be funded by the Federal Lands Transportation Program, also known as “FLTP.”*
- Working with its partners and the Federal Highways Administration, a trail bridge would be constructed over Indiana Street and an underpass would be constructed under Highway 128 to provide trail users a continuous trail connection to existing regional trail networks. *This work would be funded by local governments and the Federal Lands Access Program, also known as “FLAP” (see Appendix A).*

During 2017, the FWS began work with the Federal Highways Administration to develop preliminary scoping documents for improvements to the 8.2 mile non-motorized trail connecting Westminster’s Open Space trails to Boulder County’s Open Space trails. Design included several components:

- Improvement of the trail to a minimum continuous width and compacted surface material;
- Construction of two riverine stream crossings; and
- Re-routing of existing trail, including: improved grading of the trail through the Rock Creek drainage; adding an extension of the existing trail to the historic Caprock Mine on Section 16 of the refuge to avoid designated critical habitat and reduce grades through the Woman Creek drainage; and shifting the trail west and away from the Indiana Street corridor.

Within the refuge: 7,493 feet of trail must be constructed to connect the existing trail system to the proposed trail bridge over Indiana Street; 3,668 feet of trail must be constructed to connect the existing trail system to the proposed underpass beneath Highway 128; and approximately 6,706 feet of trail must be constructed to connect the existing trail system to the Caprock Mine area. A significant portion (52%)

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<sup>6</sup> Categorical exclusions are classes of actions which do not individually or cumulatively have a significant effect on the human environment. Categorical exclusions are not the equivalent of statutory exemptions. Categorical exclusions for the U.S. Fish and Wildlife Service are found in the U.S. Department of the Interior’s policy manual (516 DM 8). Specifically, “Minor changes in existing master plans, comprehensive conservation plans, or operations, when no or minor effects are anticipated. Examples could include minor changes in the type and location of compatible public use activities and land management practices.” and “The issuance of new or revised site, unit, or activity-specific management plans for public use, land use, or other management activities when only minor changes are planned. Examples could include an amended public use plan or fire management plan.” See < <https://elips.doi.gov/ELIPS/DocView.aspx?id=1739> > for additional information.

of each follows past roadways (FWS Route 400 within the Woman Creek drainage; FWS Route 466 around the Caprock Mine; FWS Route 498 within the Rock Creek drainage; and an undesignated route leading to Woman Creek). Adjacent to the refuge on open space lands, approximately 600 feet of trail must be constructed (see Appendix A).

As a part of the 2016 Federal Lands Access Program (FLAP) grant, participating local governments agreed to develop a confirmatory soil sampling program for areas where construction activities would be undertaken on and adjacent to the refuge. This work was completed by an independent agency. Results are available at the project's website at: <https://www.jeffco.us/3639/Rocky-Mountain-Greenway> and at the Colorado Department of Public Health and Environment at: <https://www.colorado.gov/pacific/cdphe/rocky-flats>.

### **Alternatives Considered but Eliminated from Further Analysis**

In accordance with the requirements of NEPA, we have identified and eliminated several alternatives from detailed analysis. These issues and the rationale for not discussing them further are briefly described below:

- The use of paved or concrete trails has been proposed by some users. The FWS will maintain an accessible trail near the primary entrance of the refuge, but will not consider paved trails throughout the refuge. This type of trail does not meet the natural and aesthetic vision of the refuge or the needs of various trail users (e.g., mountain bikes, equestrian, etc.).
- The FWS was also asked to consider “on-road” alternatives where trails and bike-lanes could be constructed along existing paved roadways and/or construction of various off-site trails. This analysis was completed previously (ATKINS, Inc. 2016). Such trails may be important to regional trail networks, but this work is not included within the scope of the Federal Lands Access Program and is not within the scope of this document. Should the opportunity present itself in the future, the FWS is willing to cooperate on the development of off-refuge trails that provide further access to the refuge.
- Construction of a visitor center at the refuge will not be addressed in this EA. The FWS already operates a large visitor center at the Rocky Mountain Arsenal National Wildlife Refuge and does not see the need for another large facility within the same area. A visitor center represents a large capital investment and recurring operations and maintenance costs that cannot be supported at this location. Consistent with the CCP, the FWS may consider a smaller visitor contact station at some point in the future. If the FWS proceeds with construction of a visitor facility at the refuge, that decision-making will be accompanied by compliance with NEPA and compliance with other applicable laws.

### III. Affected Environment

The resources contained at the refuge are well described in the 2005 CCP and various other documents. The CCP and associated EIS are incorporated by reference specifically for their description of the affected environment.<sup>8</sup>

### IV. Environmental Consequences

For alternatives A and B described in section 2, the following analyzes the environmental effects expected to occur from implementing each of the alternatives. These projects are currently in preliminary design, which focused on the general nature, type, and alignment of trails. For the purposes of this EA, the FWS analyzed the potential effects of implementing each alternative at their preliminary design, including the following:

#### A. Physical Environment

##### Geology, Soils, and Topography

###### *Alternative A*

Continued use of refuge by visitors will require minor trail maintenance and improvement. Without trail maintenance, the result will be the potential for soil erosion in certain locations with heavy use or poor drainage.

###### *Alternative B*

The proposed action would require approximately 3.4 miles of trail be constructed on the refuge. Work would likely be completed during one season. A significant portion (52%) follow past roadways. Adjacent to the refuge on open space lands, approximately 600 feet of trail must be constructed (see Appendix A). Trail construction would result in a temporary disturbance to the area of the trail and placement of several permanent culverts to cross low-lying areas. In addition, some earthwork may be necessary to provide an appropriate trail grade. Stormwater techniques would be utilized to reduce erosion effects during construction, but any impact soils would be temporary and confined to periods of construction.

##### Water Resources

###### *Alternative A*

No effect. There will be no changes or impacts to water resources, because there would be no construction of new trails.

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<sup>8</sup> Please see “Rocky Flats National Wildlife Refuge Resource Inventory” at <  
<https://www.fws.gov/WorkArea/DownloadAsset.aspx?id=2147522147>>



### *Alternative B*

It is necessary for newly constructed trails to cross to both Rock Creek and Woman Creek on the refuge. Woman Creek is located in the Big Dry Creek watershed on Segment 4a. Rock Creek is located in the Boulder Creek watershed in Segment 8. No construction or visitor access will occur in Big Dry Creek Segment 5, which is specific to the DOE Central Operable Unit.<sup>9</sup>

There would be temporary affects during construction by placing either a box culvert, short-span bridge, or other type of low-water crossing. This would include temporary loss of wetland vegetation, but there would be no destruction, loss, or degradation of wetlands and would be below the 1/10-acre notification requirement under Section 404 of the Clean Water Act (FWS 2017, 2018a). Once installed, these crossings would be designed to have no effect on hydrology of these drainages. Hydraulic analysis for these crossings requires 2-feet of freeboard for the 5-year storm event; scour protection for the 10-year storm event, and assurance that the 25-year storm event would not wash out the new crossing.

Construction near water can create the possibility for water pollution. Without proper stormwater pollution prevention, increases in sedimentation are possible. Best management practices will be required to minimize sediment loads entering affected streams that may impact downstream users. Further, an appropriate spill containment kit will be required whenever motorized construction equipment is working in or near riparian corridors (see Appendix B).

### Air Quality

#### *Alternative A*

Continued use of the refuge by visitors consistent with the CCP will require using staff vehicles for maintenance and patrol activities. Regular vehicle traffic activities are not considered significant and will not affect air quality on the refuge or in the larger Denver metropolitan area (U.S. Fish and Wildlife Service 2004). There will be a minor increase in auto emissions associated with increased visitation to the refuge (U.S. Fish and Wildlife Service 2004).

#### *Alternative B*

Construction activities associated with trail construction would require clearing and grading of which would result in soil disturbance. As discussed previously, the EPA has determined that no hazardous contamination (including plutonium) occurs above levels that allow for unlimited use of the area.

Use of standard emission minimization measures<sup>10</sup> and dust abatement would mitigate potential impacts to air quality during construction (Federal Highways Administration 2008). Best management practices to reduce impacts of fugitive dust during construction would be required for this project (see Appendix C).

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<sup>9</sup> Additional information on the State of Colorado's stream classification and numeric standards for streams located on the refuge (5 CCR 1002-38) can be found at:

<https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=8813&fileName=5%20CCR%201002-38>  
Standards for Woman Creek can be found on page 337 and for Rock Creek on page 348.

<sup>10</sup> Examples of emission minimization measures include reduced idling, proper maintenance of equipment, and use of properly sized equipment. Please see "Potential for Reducing Greenhouse Gas Emissions in the Construction Sector" at < <https://archive.epa.gov/sectors/web/pdf/construction-sector-report.pdf>>

Similar to Alternative A, there would be a minor increase in auto emissions associated with increased visitation to the refuge (U.S. Fish and Wildlife Service 2004) and some of these emissions may be offset as non-motorized users utilize trail connections between locations (Barnes et al 2005, Krizek et al 2007).

There would not be impacts to air quality under either alternative and the project is consistent with National Ambient Air Quality Standards.<sup>11</sup>

## **B. Biological Environment**

### Vegetation

#### *Alternative A*

The refuge is home to more than 600 plant species, of which four are considered rare or imperiled by the Colorado Natural Heritage Program (CHNP) (Nelson 2010). A diverse mosaic of vegetation communities is found at the refuge. The dominant natural vegetation in this ecoregion is short grass prairie, which today comprises only about 20 percent of its original area (Robinson et al. 1995) due to land cover and land use changes associated with factors such as agriculture and urbanization. Two of the vegetation communities present on the refuge, the xeric tallgrass grassland and the tall upland shrubland, are considered to be rare in the region. The continued use of existing trails by visitors consistent with the CCP will have no additional effect on vegetation. To date, there has been no noticeable unauthorized “off-trail” use of the refuge. Refuge staff will continue to monitor and address unauthorized uses.

#### *Alternative B*

The proposed action would require approximately 3.4 miles of trail be constructed. A significant portion (52%) follow past roadways. Work would likely be completed during one season. Trail construction would result in a temporary disturbance to vegetation in the area of trails. There would be a permanent loss of vegetation where the trail is located (~1.56 acres). Trail alignments were selected to avoid native prairie habitat and focus on areas where non-native plants have invaded.

Protection of native grassland habitat(s) would be a priority during construction. Affected areas would be restored using the refuge’s “Hillside Seed Mix,” which consists entirely of native grass species.

### Wildlife and Fisheries

#### *Alternative A*

Public use can have negative effects to wildlife. Human disturbances can be particularly detrimental during certain critical periods of an animal’s life or during the year when animals are in poor condition or more vulnerable to injury (e.g., pregnancy, calving, and fly season) (Geist 1971a,b; Kuss et al., 1990; Phillips and Alldrege, 2000). Research has shown that human presence associated with roads and trails can result in a simplification of avian communities (fewer specialists and more generalists), reduced nest success, and reduced habitat quality (Hamann et al. 1999; Johnson and Temple 1990). Many species are more likely to flush with increased human presence, resulting in less time spent foraging, with a

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<sup>11</sup> 40 CFR §50 – National Primary and Secondary Ambient Air Quality Standards

potentially adverse effect on building suitable energy reserves for egg laying and migration, food delivery rates to young, territory establishment and defense, and mate attraction. Research has shown that various activities result in differing levels of disturbance. Humans on foot results in greater disturbance than humans on bicycles, horses, or in cars (Stankowich 2008). Regardless of the impact, animals generally show decreased flight responses in areas with larger human populations (Stankowich and Blumstein 2005). Trails and roads create habitat edges, which lead to increased predation, parasitism, and displacement of interior-sensitive birds. Trails and roads can restrict animal movement and dispersal. Native fish restoration efforts began 2002 at the refuge and remain a goal for the Rock Creek drainage (FWS 1995).

#### *Alternative B*

During periods of construction, there would be temporary impacts to wildlife in the area of construction. Proper timing of construction activities can reduce these impacts. The majority of impacts are considered minor, but mortality of some individuals cannot be completely dismissed. For example, it is possible that an animal may be struck and killed by construction equipment or forced to leave shelter to succumb to predation. The additional 3.4 miles of trails would increase public use in some areas of the refuge, but these changes would not include or affect access to several sensitive wildlife areas (SWAs). The majority of trails follow previous or existing roadways, but any new trail would create additional habitat edges that can negatively affect some species of wildlife.

Maintaining healthy populations of fish and wildlife is the mission of the FWS. Refuge staff are responsible for monitoring these populations and are empowered to make changes in management of the project if negative effects are observed. There is minimal effect to fish and wildlife resources through continued implementation of the CCP and additional trail distances and alignments under Alternative B represent a negligible change.

The Refuge Manager will monitor sensitive species and may close or modify any activity, including access, timing, and methods. For example, the FWS is currently participating in an effort to assess the distribution and health of the Clear Creek elk herd. GPS collars were placed on five female elk at the refuge and data will be analyzed for up to five years (Kraft et al 2019).

In 2018, the FWS established several SWAs within the refuge. These areas were identified for further protection, because they represent important areas for resources of concern. The public is not allowed in the SWAs and neither alternative affects these SWAs.

The use of construction equipment near Rock Creek or Woman Creek could present a risk of introduction and/or spread of aquatic invasive species. Best management practices to prevent the introduction and/or spread of aquatic invasive species would be required when working in these areas to eliminate risk (see Appendix C).

## Threatened, Endangered, and Candidate Species

### *Alternative A*

There is no effect to federally listed or federally designated critical habitat (including the Preble's meadow jumping mouse). To protect, maintain and improve Preble's habitat, one of the refuge CCP's strategies is to : survey Preble's locations and habitat every 2-3 years for the presence or absence of the mice. Small mammal trapping has occurred in the three major drainages of the refuge between 2014-2020. No Preble's mice were captured during this period and trapping will continue annually (U.S. Fish and Wildlife Service 2018b, unpublished data).

### *Alternative B*

Formal Intra-Service Section 7 was completed for this project due to the presence of the Preble's meadow jumping mouse and its habitats. The biological opinion recognizes that there would be no effect on Mexican spotted owl (*Strix occidentalis lucida*) and Canada lynx (*Lynx canadensis*) as suitable habitat for these species is not present within the action area. The biological opinion agrees there would be no effect on Ute ladies'-tress orchid (*Spiranthes diluvialis*) as there are no known populations or seed sources within the action area and that there would be no effect on the pallid sturgeon (*Scaphirhynchus albus*), interior least tern (*Sterna antillarum antillarum*), piping plover (*Charadrius melodus*), whooping crane (*Grus americana*), or western prairie-fringed orchid (*Platanthera praeclara*) as the proposed project will not cause depletions to the South Platte River system (U.S. Fish and Wildlife Service 2020). The greatest threat to riparian areas is unnecessary damage to important vegetation and the potential of spillage of fuel oils from motorized equipment while constructing trail on the refuge. The proposed stream-bed crossings (also described under Water Resources) would be designed to minimize effects to the natural hydrologic processes that occur in these drainages and minimize the potential to create habitat fragmentation to the Preble's meadow jumping mouse (see Appendix B). The biological opinion states: "After reviewing the current status of the affected species, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the Preble's meadow jumping mouse." (U.S. Fish and Wildlife Service 2020).

The refuge recently increased habitat protections for sensitive wildlife species, including Preble's mice, by further restricting human access to SWAs. While future habitat conditions in the two proposed crossing locations would likely remain consistent for the Preble's mouse, direct mortality from construction activities cannot be completely discounted.

## **C. Historic Resources**

### *Alternative A*

There would be no change and no effect on historic properties under this alternative.

### *Alternative B*

A comprehensive assessment of the former Rocky Flats identified and recorded 45 cultural sites or artifacts. These cultural resources were not eligible for listing in the National Register of Historic Places (U.S. Fish and Wildlife Service 2005). A cultural resource survey for a proposed trail system at the refuge



was completed in the spring of 2018. The Area of Potential Effect for this survey consisted of five meters on either side of the centerlines of the proposed trails and concluded that there would be no effect on historic properties (U.S. Fish and Wildlife Service 2018c). The Colorado State Historic Preservation Officer has concurred with this recommendation in a letter dated July 2, 2018.

The FWS added Section 16 to the refuge in 2012. These trail alignments were surveyed (U.S. Fish and Wildlife Service 2018c) and the FWS contracted with a private consultant to complete an assessment on the Caprock Mine located on this property (ARRPA Permit No. FWS.R6.19-01, State Permit No. 2019-75573). This cultural resource inventory and evaluation concluded that the site is heavily disturbed and that the Caprock Mine is not eligible for listing in the National Register of Historic Places due to its lack of physical and associative integrity (ERO Resources Corporation 2019). Construction of the trail would not affect the Caprock Mine area.

The trail connection located at Indiana Street is proximate to the historic Denver, Utah, & Pacific Railroad (5JF.742.I), but is not located in the APE. This segment of railroad was removed in the past. There would be no construction within the previous alignment of the railroad and construction would not affect the railroad bed (see Appendix A).

#### **D. Social and Economic Environment**

##### *Alternative A*

Continued management of the refuge has a minor socioeconomic impact through employment of refuge staff, purchasing of maintenance supplies, and occasional projects (U.S. Fish and Wildlife Service 2004).

In fiscal year 2019, the FWS estimates that 14,750 people visited the refuge. The global coronavirus pandemic has led to record crowds on Colorado's public lands (Blevins 2020). The refuge has also seen a dramatic increase in visitation and estimates annual visitation may approach 40,000 this fiscal year. While visitation may decrease slightly after the pandemic, continued management will likely result in steadily increasing numbers of visitors.

Boulder County Parks and Open Space ("BOCO") monitors trail use at multiple locations. In 2017, BOCO estimated approximately 43,312 visitors used the Coalton Trailhead (a formal trailhead with parking near Superior, CO). In 2018, this number dropped to 39,428 (BOCO 2017, 2018). Boulder County is observing similar increases in visitation during the global pandemic. Visitation to BOCO lands is expected to return to similar levels after the pandemic.

The City of Westminster is currently completing a visitor use study that includes Westminster Hills Dog Park and Open Space. Visitation at this park is focused around the off-leash dog park and its two parking areas, but preliminary data suggests heavy visitation at this location. City of Westminster is observing similar increases in visitation during the global pandemic. Specific to this project, between January 1 and June 30, 2020, approximately 14,779 people have entered the area from the Mower Ditch (an undeveloped trailhead located east of Indiana Street) (H. Reichgelt, personal communication, August 11, 2020). Visitation to City of Westminster lands is expected to return to similar levels after the pandemic.

The City of Arvada maintains the Big Dry Creek Trail located in the Candelas neighborhood south of the Refuge. Use of this trail is expected to increase as construction of residences continues.

### *Alternative B*

The FWS developed a socioeconomic analysis for this proposal that has determined the intensity and economic impacts are generally considered low for the project (ASPN 2017). Direct costs associated with these projects is estimated at \$3.75 million and would create temporary employment. The CCP (U.S. Fish and Wildlife Service 2005) states, “visitors will have opportunities to observe and photograph wildlife and to experience the refuge’s unique habitats, mountain and prairie views on foot, bike and horse.” Recreation is an economic driver, but also provides non-monetary benefits. In 2011, recreational visits to national wildlife refuges generated \$2.4 billion of sales in regional economies and over 35,000 people were employed by these activities (U.S. Fish and Wildlife Service 2011). There may be negligible increases in vehicle traffic on roads within and around the refuge during construction and it is anticipated that this project would have no effect on regional transportation goals.

Specific to the FLAP grant, there are beneficial impacts to the area by creating non-motorized off-road trail connections. Direct costs of the FLAP projects are estimated at \$2.8 million and the project would create temporary employment. Minor impacts to vehicular traffic are expected on Indiana Street and State Highway 128 during certain moments of construction.

Further improvements to refuge trails would create a more positive experience for current users and have a negligible change on the frequency and type of use of trails.

Specific to the FLAP project, creating grade-separated trail crossings between adjacent trail systems could create a minor increase in overall trail use. Use of local trails is dependent on many factors. For example, the population size of surrounding municipalities and type of trail will effect use (Gobster 1995, Lindsey & Nguyen 2004). Additional cycling facilities have been shown to have a statistically significant impact on commuting within the surrounding areas (Barnes et al 2005), but that the utility of the routes and overall connectivity are key to use (Cleaveland & Douma 2009). Krizek et al (2007) showed that cyclists are likely to travel further to an off-street route.

## **V. Cumulative Impacts**

As defined by NEPA regulations, a cumulative impact on the environment “results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions” (40 CFR 1508.7).

Past, present, and reasonably foreseeable future actions include continued human development around the refuge, continued mining adjacent to the refuge, increased recreational opportunities at and around the refuge, the Jefferson Parkway proposed along Indiana Street, and the construction of a new electrical substation by Xcel Energy near (but not within) the refuge.

### *Alternative A*

There would be no cumulative impacts on the environment and refuge staff will continue to work with external entities to minimize impacts resulting from these activities.

### *Alternative B*

Same as Alternative B, but there may be minor increases in recreational use on adjacent open space lands once trail connections are completed.

## **Irreversible and Irretrievable Commitment of Resources**

There are no irreversible or irretrievable resource commitments identified by this assessment, except for a minor consumption of trail materials used for constructing and maintaining trails and fossil fuels for routine operations.

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### **Agency Coordination**

The FWS has discussed this plan with other federal agencies (U.S. Department of Transportation – Federal Highways Administration, DOE and the U.S. Environmental Protection Agency), State of Colorado (Colorado Parks and Wildlife, Colorado Department of Public Health and Environment), local governments, and local neighbors and landowners.

Tribes with an aboriginal interest in the Rocky Flats were invited to participate or formally consult in the planning process on this project (Northern Arapaho Tribe, Cheyenne and Arapaho Tribes of Oklahoma, Northern Cheyenne Tribe, Shoshone-Bannock Tribes, and Eastern Shoshone Tribe). A number of nongovernmental organizations are interested in the refuge and were also consulted, including the Friends of the Front Range National Wildlife Refuges.

The FWS coordinated internally in the development of this EA as well. Refuge staff conducted the analysis and prepared this document.

### **National Wildlife Refuge System Administration Act**

When making the decision to permit a new use or expand, renew, or extend an existing use of a national wildlife refuge, the Refuge Manager is required to follow federal regulations (50 CFR § 25.21 and § 26.41) and FWS policy (603 FW 2). Specifically, we may open a national wildlife refuge for any refuge use, or expand, renew, or extend an existing refuge use only after the Refuge Manager determines that it is a compatible use and is not inconsistent with any applicable law. Consistent with the National Wildlife Refuge System Administration Act, as amended (16 U.S.C. §§ 668dd *et seq.*), wildlife observation, photography, interpretation, and environmental education are priority wildlife-dependent recreational activities that are encouraged on national wildlife refuges. The Refuge Manager must re-evaluate compatibility determinations under certain circumstances and may re-evaluate the compatibility of a use at any time. A compatibility determination for Wildlife Observation, Photography, Interpretation, and Environmental Education was approved by the Refuge Manager authorizing these uses.

## **Distribution and Availability**

The FWS has participated in extensive public outreach, consultation, and coordination with its partners and other stakeholders, on issues related to the proposed action. A press release was issued on July 16, 2020 to open a 14-day public comment period (see Appendix D). Agency comments were received from the Colorado Department of Public Health and Environment (“CDPHE”) and Colorado Division of Parks and Wildlife (“CPW”). Comments were received from several local governments including Boulder County and City of Broomfield. A total of 124 individual responses were received. Three sets of comments were received after the deadline and these comments were also considered.

The FWS will make this EA available on its Fish and Wildlife Service Catalog (ServCat). All written comments will be included in the decision file. Copies may be requested from the refuge.

# Appendix A

## Summary of Effects Resulting From Adjacent Construction as a Part of the Federal Lands Access Program Grant (FLAP)

The U.S. Fish and Wildlife Service is responsible for evaluating any effects resulting from the construction of the Federal Lands Access Program grant. The table below summarizes the FWS' evaluation of the action alternative of the environmental assessment, which is to construct a trail bridge over Indiana Street and an underpass under State Highway 128 to provide trail users a continuous trail connection to existing regional trail networks. Trails currently terminate at the Great Western Reservoir Open Space. There is minimal off-trail use in the area by those seeking to bridge this current gap to the overlook located at Indiana Street. New trail on the western side of Indiana Street must also cross the 300-foot wide transportation corridor that was previously analyzed by the FWS (2011). Additional information on the FLAP is available at the project's website at: <https://www.jeffco.us/3639/Rocky-Mountain-Greenway>.

Similar to the work conducted on the refuge, extensive information on the history, previous studies, and previous human health assessments has been developed by the FLAP Partner Group. This includes summary statistics for select radionuclides at each crossing location (Engineering Analytics, Inc. 2018). Jefferson County and other local governments led an effort to obtain additional confirmatory soil sampling in areas of new construction. This analysis is independent of this document. Results are consistent with past soil sampling efforts. At the Highway 128 location, all samples were returned below background levels for plutonium ( $\text{Pu}^{239/240}$ ). At the Indiana Street location, one sample contained a plutonium ( $\text{Pu}^{239/240}$ ) concentration of 19.400 pCi/g. No other samples exceeded the WRW PRG and the mean of all samples was 4.406 pCi/g (Engineering Analytics 2020).

### PHYSICAL ENVIRONMENT

Geology, Soils, and Topography	Lands are heavily impacted by transportation improvements along Indiana Street and State Highway 128. The location of the Indiana Street bridge was previously cut to create the appropriate grade for the road and the location of the Highway 128 underpass was filled during road construction. Temporary disturbance to the area is anticipated during construction. Stormwater techniques would be utilized to reduce erosion effects. The impact would be temporary and confined to periods of construction.
Water Resources	There are no wetlands or other water resources impacts in the areas of the Indiana Street or State Highway 128 trail connections.
Air Quality and Climate	There would not be impacts to air quality under either alternative and the project is consistent with National Ambient Air Quality Standards.

**BIOLOGICAL ENVIRONMENT**

Vegetation	An additional 600 feet of trail would be constructed on lands owned by Boulder County, Jefferson County and the Jefferson Parkway Public Highway Authority. Vegetation in these areas is degraded and contains non-native species. Trail construction would result in a temporary disturbance followed by permanent loss of vegetation in the area of the trails and placement of a more compacted material (~0.11 acres)
Wildlife Fisheries	Neither the bridge at Indiana Street or underpass at State Highway 128 would have significant affects on fish and wildlife species. There may be temporary disturbance to any wildlife in the area, but this would be limited to periods of construction.
Threatened, Endangered, and Candidate Species	There is no effect to federally threatened or endangered species in the area of the Indiana Street or Highway 128 trail connections.
<b>SOCIAL AND ECONOMIC ENVIRONMENT</b>	There are beneficial impacts to the area by creating non-motorized off-road trail connections. Direct costs these projects are estimated at \$2.8 million and the project would create temporary employment. Minor impacts to vehicular traffic are expected on Indiana Street and State Highway 128 during certain moments of construction.
<b>HISTORIC PROPERTIES</b>	The trail connection located at Indiana Street is proximate to the historic Denver, Utah, & Pacific Railroad (5JF.742.I), but is not located in the APE. This segment of railroad was removed in the past. There would be no construction within the previous alignment of the railroad.

Overall, there would be minor temporary impacts associated with construction of the FLAP project. The completed trail is considered to be beneficial.

**References:**

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# Appendix B

## Potential Conservation Measures for Preble’s Meadow Jumping Mouse

The greatest threat to riparian areas from the Alternative B described in the EA is unnecessary damage to important vegetation and the potential of spillage of fuel oils from motorized equipment while constructing trail on the refuge. The proposed stream-bed crossings would be designed to minimize effects to the natural hydrologic processes that occur in these drainages and minimize the potential to create habitat fragmentation to the Preble’s meadow jumping mouse.<sup>12</sup> To further minimize threats, the refuge would complete several important conservation measures:

### Conservation Measures for Preble’s Meadow Jumping Mouse

#### ***Preparation:***

1. The proposed stream-bed crossings are designed to be perpendicular to riparian corridors to reduce the amount of potential disturbance to sensitive wildlife species.
2. Prior to construction, designated critical habitat for the Preble’s meadow jumping mouse in the area of the project will be clearly identified “on the ground” through staking.
3. Potential hibernation habitat would be removed by the August prior to commencing construction to discourage Preble’s meadow jumping mouse hibernation in affected areas.
4. Willows will be cut and stored prior to construction. This will require less “grubbing” and allow for rapid regrowth in the area. In addition, cut willows will provide stock for immediate replanting after construction.

#### ***During Construction:***

5. A resource advisor from the FWS will be assigned to all aspects of the project. The individual will ensure minimum impacts to Preble’s meadow jumping mouse habitat throughout the project and will be on-site during any construction activities that occur within designated critical habitat. The individual will also be capable of identifying any federally-threatened plants that may occur within the project area.
6. Any construction activities within critical and potential habitat for the Preble’s meadow jumping mouse will occur prior to May 1<sup>st</sup> when mice emerge from hibernation.
7. An appropriate spill containment kit will be required whenever motorized construction equipment is working in or near riparian corridors.

#### ***After Construction:***

8. As soon as practical after construction, refuge staff will complete riparian restoration including plantings of coyote willow (*Salix exigua* Nutt).
9. Refuge staff aggressively attack invasive plant species utilizing an Integrated Pest Management (IPM) approach (use of biological, chemical, and mechanical control techniques) which reduces the threat of chemicals on Preble’s mice while controlling target species.

<sup>12</sup> Hydraulic analysis for these bridges require 2-feet of freeboard for the 5-year storm event; scour protection for the 10-year storm event, and assurance that the 25-year storm event would not wash out the new crossing.

# Appendix C

## Suggested Best Management Practices During Construction

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Under State of Colorado air quality regulations, small land development activities are not subject to the same reporting and permitting requirements as large land activities. Specifically, land development activities that are less than 25 contiguous acres and less than 6 months in duration do not need to report air emissions.<sup>13</sup> The following fugitive dust control techniques are recommended for this project:

- Restricted vehicle speeds on disturbed surface areas and unpaved roads, including posted speed limits.
- Cease earthwork activities when an agreed-upon wind speed is exceeded.
- Limit the amount of disturbed surface area during construction to the smallest practicable areas needed for construction.
- Watering, covering, compaction and/or revegetation of disturbed land as applicable.
- Washing of vehicle wheel tires and daily cleanup of mud and dirt carryout to paved areas.

The State of Colorado recommends that heavy equipment used for construction in the Rock Creek or Woman Creek drainage (that was used in another stream, river, lake, reservoir, pond, or wetland) be sanitized using one of the following disinfection practices prior to construction to prevent the spread of New Zealand mud snails, zebra mussels, quagga mussels, whirling disease, and any other aquatic invasive species into this drainage. These practices are also necessary after project completion, prior to this equipment being used in another stream, river, lake, reservoir, pond, or wetland:

- Remove all mud, plants, debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment in a 1:15 solution of Quat 4 or Super HDQ Neutral institutional cleaner and water. Keep equipment moist for at least 10 minutes OR
- Remove all mud, plants and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with water greater than 140 degrees F for at least 10 minutes.
- Clean hand tools, boots, and any other equipment that will be used in the water with one of the above options as well. Do not move water from one water body to another. Be sure equipment is dry before use.”

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<sup>13</sup> Additional information on the State of Colorado air permitting for non-oil and gas sources can be found at: <https://www.colorado.gov/pacific/cdphe/air/air-permit>



# Appendix D

Public Notice & Agency Letters

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[EXTERNAL] Trail Improvements Proposed at Rocky Flats National Wildlife Refuge to Enhance Outdoor Recreation Across the Denver Metro Area

FWS Region 6 <fw6media@fws.gov>

Thu 7/16/2020 10:44 AM

To: Lucas, David C <david\_c\_lucas@fws.gov>

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

U.S. Fish and Wildlife Service

## News Release

U.S. FISH AND WILDLIFE SERVICE

**Interior Regions 5 & 7 - Missouri Basin & Upper Colorado Basin**

Kansas, Montana, Nebraska, North Dakota, South Dakota, Wyoming, Colorado, and Utah

134 Union Blvd., Lakewood, Colorado 80228



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*For Immediate Release*

July 16, 2020

**Contact:** Jennifer Strickland, [Jennifer\\_Strickland@fws.gov](mailto:Jennifer_Strickland@fws.gov), 303-236-4574

### **Trail Improvements Proposed at Rocky Flats National Wildlife Refuge to Enhance Outdoor Recreation Across the Denver Metro Area**

*Project would connect national wildlife refuges and local open spaces, expand the reach of the Rocky Mountain Greenway Trail*



Elk with calves passing through Rocky Flats National Wildlife Refuge. [Photo](#): Ryan Moehring/USFWS.

Soon, residents of the Denver metro area may be able to visit three national wildlife refuges and several open spaces in Jefferson and Boulder counties, while minimizing their carbon footprint and getting exercise at the same time. Today, the U.S. Fish and Wildlife Service (Service) released a [draft environmental assessment](#) analyzing the impacts of constructing several miles of non-motorized multi-use trail within [Rocky Flats National Wildlife Refuge](#). The assessment is now open for public comment for 14 days.

The Rocky Mountain Greenway Trail is designed to provide enhanced access to several metro area public lands and open spaces by connecting a variety of trail networks within the Front Range. Currently, the trail extends from Rocky Mountain Arsenal National Wildlife Refuge in Commerce City, through Two Ponds National Wildlife Refuge in Arvada, and ends at Rocky Flats National Wildlife Refuge in Golden. If approved, the proposed project at Rocky Flats would create improved “off-road” connections to existing regional trail systems; make minor improvements to the refuge’s main entrance and parking area; and create two new connections between Westminster’s open space trails and Boulder County’s open space trails.

“We’re releasing this environmental assessment to provide an opportunity for public review and comment on our proposed trail enhancements prior to finalizing our trail designs later this fall,” said David Lucas, complex manager for Rocky Flats, Rocky Mountain Arsenal, and Two Ponds National Wildlife Refuges. “We’re also acting in response to an observed increase in public use; more people want to get outside more often, so we want to provide more recreational opportunities to our local communities.”

A coalition of local governments would construct the roadway crossings, and the projects are supported by grants and funding received from the Federal Highways Administration. The participating local governments retained an independent agency to conduct soil sampling in the areas where the proposed construction activities would occur both on and adjacent to the refuge. These results are available on the project website, <https://www.jeffco.us/3639/Rocky-Mountain-Greenway>, and on the Colorado Department of Public Health and Environment site: <https://www.colorado.gov/pacific/cdphe/rocky-flats>.

“This has been a fabulous regional partnership to extend the Rocky Mountain Greenway and connect to Rocky Flats National Wildlife Refuge. These connections provide more opportunities for millions of people in the metro area to enjoy the outdoors, spectacular scenery and wildlife close to home,” said Tom Hoby, Director of Jefferson County Open Space.

Please submit comments by July 30, 2020 via email to [rockyflats@fws.gov](mailto:rockyflats@fws.gov), or by postal mail to: Colorado Front Range NWRC, 6550 Gateway Road, Commerce City, Colorado 80022.

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*The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. For more information on our work and the people who make it happen in the West, visit [our website](#), connect with us on [Instagram](#) and [Facebook](#), follow us on [Twitter](#), watch our [YouTube channel](#) at and download public domain photos from [Flickr](#).*

- FWS -

This email was sent to [david\\_c\\_lucas@fws.gov](mailto:david_c_lucas@fws.gov)  
US Fish and Wildlife Service, 134 Union Blvd, Lakewood, CO 80822, USA  
[Unsubscribe](#)



July 30, 2020

David Lucas, Complex Manager  
U.S. Fish and Wildlife Service, Mountain-Prairie Region  
Rocky Flats National Wildlife Refuge  
6550 Gateway Road  
Commerce City, CO 80022

Submitted via email to [rockyflats@fws.gov](mailto:rockyflats@fws.gov)

**RE: Colorado Department of Public Health and Environment's Comments on the Improved Visitor Access at the Rocky Flats National Wildlife Refuge, Environmental Assessment**

Dear Mr. Lucas:

The Colorado Department of Public Health and Environment (CDPHE) appreciates the opportunity to provide comments on the U.S. Fish and Wildlife Service (FWS)'s 2020 *Improved Visitor Access at the Rocky Flats National Wildlife Refuge, Environmental Assessment* (EA).<sup>1</sup> According to the EA, FWS intends to determine whether (1) improved access is needed at Rocky Flats National Wildlife Refuge (Refuge), and (2) the select alternative will have a significant impact on the quality of the human environment.

CDPHE conducts National Environmental Policy Act (NEPA) reviews and provides comments as a cooperative agency to ensure compliance with applicable Federal and State requirements intended to avoid or minimize impacts to public health and the environment. In addition, because of CDPHE's regulatory history and role with the U.S. Department of Energy Rocky Flats Site, we are submitting this letter to provide additional information that may be of interest to FWS.

CDPHE supports FWS' proposed open space alternative and does not believe it presents any significant risk to human health or the environment. To date, environmental testing and information continue to support the conclusions from the Rocky Flats investigation and cleanup. Furthermore, this alternative will help minimize potential soil erosion. While CDPHE

<sup>1</sup>U.S. Fish and Wildlife Service. 2020. Environmental Assessment: Improved Visitor Access at the Rocky Flats National Wildlife Refuge. U.S. Department of the Interior, Fish and Wildlife Service, Rocky Flats National Wildlife Refuge.





agrees with FWS' proposed mitigation efforts, our Air Division requests additional information from FWS regarding Refuge visitor use.

Based on its review of the EA for the proposed project, CDPHE provides the following comments and questions for your consideration.

#### **Hazardous Materials and Waste Management**

From a hazardous waste perspective, there are no significant human health or environmental threats posed by the FWS' open space alternative because this area was found to be unimpacted by hazardous wastes. The Rocky Peripheral Operable Unit generally covers what is now the Rocky Flats National Wildlife Refuge (the Refuge includes other land acquired separately). The Peripheral Operable Unit was not remediated because CERCLA/RCRA investigation data showed contamination in this operable unit was below levels of regulatory concern. Investigation and risk assessment data did not show an unacceptable risk to human health and the environment. Based on the results of the investigation, CDPHE, DOE, and EPA concluded that the Peripheral Operable Unit was unaffected by site activities from a hazardous waste perspective: no hazardous wastes or constituents have been placed in or migrated to the Peripheral Operable Unit. While soil samples from the Peripheral Operable Unit showed Rocky Flats radionuclide contamination, concentrations were low and did not pose an unacceptable risk. At the time of site closure, the Peripheral Operable Unit was already in a state protective of human health and the environment. In 2007, the Peripheral Operable Unit was delisted from the National Priorities List of CERCLA sites. While small amounts of plutonium remain in the soil, reported post-closure soil sampling results from 2019 are consistent with the findings of the Rocky Flats investigation and cleanup. The most recent CERCLA Five-Year Review for Rocky Flats affirmed that the Rocky Flats Central Operable Unit remedy remains protective of human health and the environment. While the Refuge was not the focus of the 2017 Five-Year Review, the Five-Year Review examined changes to toxicity factors and found that Peripheral Operable Unit lands remain suitable for unlimited use and unrestricted exposure.

#### **Air Quality**

As described in the EA, the project will cause temporary emissions from the use of motorized equipment and land disturbance while constructing trails on the Refuge. CDPHE supports the project's use of emission minimization measures and dust abatement to minimize potential impacts to air quality during construction, referenced on page 9 of the EA. The EA states that the entrance road to the Refuge would change from crushed fines to a gravel, unpaved surface, presumably to reduce fugitive dust emissions caused by motorized vehicle traffic.



The FWS' 2005 *Final Comprehensive Conservation Plan, Environmental Impact Statement*, includes a strategy to make all motorized access and parking areas unpaved, to maintain the natural and aesthetic vision of the refuge.<sup>2</sup> Road management plays a significant role in visitor experience, safety, environmental impacts, and costs. The EA states that the proposed action would increase public use in some areas of the Refuge. The EA does not provide a discussion of considerations related to Refuge management and increased population, economic activity, vehicle miles traveled, and outdoor recreation activity in the Denver Metropolitan/North Front Range area over the past two decades. Visitor statistics for this Refuge are not provided in the EA or in periodic FWS Refuge Reports.<sup>3</sup> CDPHE's Air Division requests clarification on whether or not these factors have been considered in relation to the short- and long-term management of the Refuge, specifically related to dust management and motor vehicle emissions.

Under Colorado air quality regulations, land development refers to all land clearing activities, including but not limited to land preparation such as excavating or grading, for residential, commercial or industrial development. Land development activities release fugitive dust, a pollutant regulated by the CDPHE Air Division. Small land development activities are not subject to the same reporting and permitting requirements as large land activities. Specifically, land development activities that are less than 25 contiguous acres and less than 6 months in duration do not need to report air emissions to the Air Division. It is important to note that even if a permit is not required, the fugitive dust control measures included in the Land Development APEN Form APCD-223 must be followed at the Refuge. The Air Division recommends the following fugitive dust control techniques:

- Restricted vehicles speeds on disturbed surface areas and unpaved roads, including posted speed limits.
- Cease earthwork activities when an agreed-upon wind speed is exceeded.
- Limit the amount of disturbed surface area during construction to the smallest practicable areas needed for construction.
- Watering, covering, compaction, and/or revegetation of disturbed land as applicable.
- Washing of vehicle wheel tires and daily cleanup of mud and dirt carryout to paved areas.

The Land Development APEN Form APCD-223 and guidance document can be found here: <https://www.colorado.gov/pacific/cdphe/air/air-permit>. For more details about permits,

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<sup>2</sup> U.S. Fish and Wildlife Service. 2004. Final Environmental Impact Statement: Rocky Flats National Wildlife Refuge. U.S. Fish and Wildlife Service, Division of Refuge Planning, Lakewood, Colorado.

<sup>3</sup> U.S. Fish and Wildlife Service. 2020. Refuge Reports. <https://www.fws.gov/refuges/about/refugereports/>





please contact Matt Burgett, Permit Program Manager, at 303-692-3183 or [matt.burgett@state.co.us](mailto:matt.burgett@state.co.us).

### **Water Quality**

This project will have temporary impacts on two streams, Rock Creek and Woman Creek. The Environmental Assessment did not provide water quality data, but there are existing impairments on both segments that should be considered with this project.

Woman Creek is located in the Big Dry Creek watershed on Segment 4a and is currently listed as impaired for total iron on Colorado's 303(d) List of Impaired Waters. Rock Creek is located in the Boulder Creek watershed in Segment 1 and is on the Monitoring and Evaluation List for *E. coli* and the 303(d) List of Impaired Waters for selenium. *E. coli* is a standard put into place to protect recreational uses in the water. With the addition of the paths there is a potential for wading and water play by children it will be important to minimize additional *E. coli* loading to these streams.

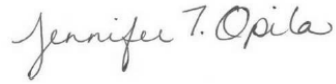
Other considerations:

- Based on our understanding of the project, the new trails are all outside of the Central Operable Unit located in Big Dry Creek Segment 5. The Water Quality Control Commission did not adopt the primary contact recreation use on this segment because of an understanding that these portions of the streams were to be fenced off with no public access. If the trails were to be included in this area, WQCD would have some concerns about the correct use being adopted and a change in the use should be considered in future rulemaking hearings with the Water Quality Control Commission.
- Standley Lake and Great Western Reservoir are both located downstream of the proposed project and Standley serves as a water supply reservoir for the cities of Westminster, Thornton and Northglenn. We understand that the impacts to the streams will be temporary. We recommend that best management practices be put into place to minimize sediment loads entering the streams that may impact downstream reservoirs.
- Big Dry Segments 4a, 4b, and 5 all have ambient based standards for uranium, plutonium, americium and tritium. At this time, there are no impairments indicated for these segments for these parameters.

Thank you again for the opportunity to comment. CDPHE appreciates FWS' efforts to protect wildlife and natural habitats, and foster access to and a love of the outdoors. We admire the important work you do.



Sincerely,



Jennifer T. Opila, MPA  
Division Director, Hazardous Materials and Waste Management Division  
Interim Director, Water Quality Control Division  
Colorado Department of Public Health and Environment

ec: John Putnam, Environmental Programs Director  
Deborah Nelson, Environmental Programs Operations Manager  
Laura Dixon, Community Involvement Manager  
Aimee Konowal, Watershed Section Manager  
Matt Burgett, Permit Program Manager  
Lindsay Masters, Environmental Protection Specialist  
Richard Coffin, Environmental Protection Specialist  
Jesse Aviles, EPA Remedial Project Manager  
Scott Surovchack, DOE Rocky Flats Site Manager  
HMWMD File





**COLORADO**  
**Parks and Wildlife**

Department of Natural Resources

Northeast Region  
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Denver, CO 80216  
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July 28, 2020

Mr. David Lucas  
United States Fish and Wildlife Service  
Colorado Front Range National Wildlife Refuge Complex  
6550 Gateway Road  
Commerce City, CO 80022

RE: Improved Visitor Access at the Rocky Flats National Wildlife Refuge

Dear Mr. Lucas:

Thank you for the opportunity to comment on the proposed development and construction of 3.4 miles of new trail and two stream-bed crossings on Rocky Flats National Wildlife Refuge (RFNWR) and 600 feet of new trail on lands owned by Boulder County, Jefferson County and the Jefferson Parkway Public Highway. Rocky Flats National Wildlife Refuge is a 5,237-acre wildlife refuge that has been managed by the United States Fish and Wildlife Service (USFWS) since 2007. The RFNWR is managed by USFWS and is bound on the north by Colorado Highway 128 and the National Renewable Energy Laboratory, on the west by Colorado Highway 93 and various parcels of private property, on the south by the Candelas housing development and other parcels of private property, and on the east by Indiana Avenue. A large Department of Energy property sits in the center of RFNWR and is not open to the public.

The mission of Colorado Parks and Wildlife (CPW) is to perpetuate the wildlife resources of the state, to provide a quality state parks system, and to provide enjoyable and sustainable outdoor recreation opportunities that educate and inspire current and future generations to serve as active stewards of Colorado's natural resources. Our goal in responding to land use proposals such as this is to provide complete, consistent, and timely information to all entities who request comment on matters within our statutory authority. Current CPW policy directs our efforts towards proposals that will potentially have high impacts to wildlife and wildlife habitat. The emphasis of CPW's concerns is on large acreages, critical habitats, wildlife diversity, and impacts to species of special concern, or those that are state or federally endangered.

CPW would expect to find small ground dwelling mammals including possibly Preble's meadow jumping mice, elk, mule deer, various species of birds, reptiles and amphibians in the vicinity of the proposed trail development. The development and implantation of the trail will likely impact the wildlife within the development area of the proposed trail.



## **Wildlife**

The Preble's meadow jumping mouse is classified as a Federally Threatened and State Threatened species. The development of the additional 3.4 miles of trails will result in the destruction of up to a 1/3 acre of Preble's meadow jumping mouse (PMJM) habitat, which would negatively affect the overall recovery effort of the PMJM. CPW recommends that USFWS conduct surveys to determine the presence of PMJM prior to construction of the trails. CPW also recommends that USFWS consider constructing the trail in a way to minimize impacts to the riparian areas if rerouting the proposed trails is not possible.

CPW also recommends that USFWS consider a possible seasonal closure to the proposed trails or usage restriction if it is determined that the usage of the trails results in undue stress being placed on the ungulate species that utilize RFNWR. There is a large herd of elk that regularly use all aspects of RFNWR, which may be negatively impacted by increased usage of the trail system, particularly during breeding season and calving season. CPW recommends that USFWS monitor the interactions between the elk herd and the public using the trail system for any potential increase in stress in the elk or any increase in conflict between the elk and the public. CPW recommends seasonal closures or use restrictions if the elk are negatively impacted by the trail system or if there are conflicts between the elk and trail users.

## **Natural Vegetation**

CPW recommends that vacant sections of land within the project area be restored with native vegetation if possible. To improve wildlife habitat after construction, CPW recommends using native plant species along the project area. CPW also recommends planting trees, shrubs, and grasses so that they are mixed within the landscape. A landscape that has a good mix of trees, grasses, and shrubs is more beneficial to wildlife than a landscape with all trees in one area and all grasses and shrubs in others. Best management practices should be utilized to avoid the introduction of invasive weeds into the project area or Rock Creek and Woman Creek. Best management practices should be utilized to minimize potential runoff into Rock Creek and Woman Creek.

If construction is anticipated to occur near Rock Creek or Woman Creek, heavy equipment used in the drainage (that was used in another stream, river, lake, reservoir, pond, or wetland) must be sanitized using one of the following disinfection practices prior to construction to prevent the spread of New Zealand mud snails, zebra mussels, quagga mussels, whirling disease, and any other aquatic invasive species into this drainage. These practices are also necessary after project completion, prior to this equipment being used in another stream, river, lake, reservoir, pond, or wetland:

- Remove all mud, plants, debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment in a 1:15 solution of Quat 4 or Super HDQ Neutral institutional cleaner and water. Keep equipment moist for at least 10 minutes **OR**
- Remove all mud, plants and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with water greater than 140 degrees F for at least 10 minutes.
- Clean hand tools, boots, and any other equipment that will be used in the water with one of the above options as well. Do not move water from one water body to another. Be sure equipment is dry before use.

If you have any questions or concerns on this project, please feel free to contact District Wildlife Manager Jordan Likes at (303) 291-7135.

Sincerely,



Matt Martinez  
Area Wildlife Manager

cc: M. Leslie, K. Cannon, J. Likes