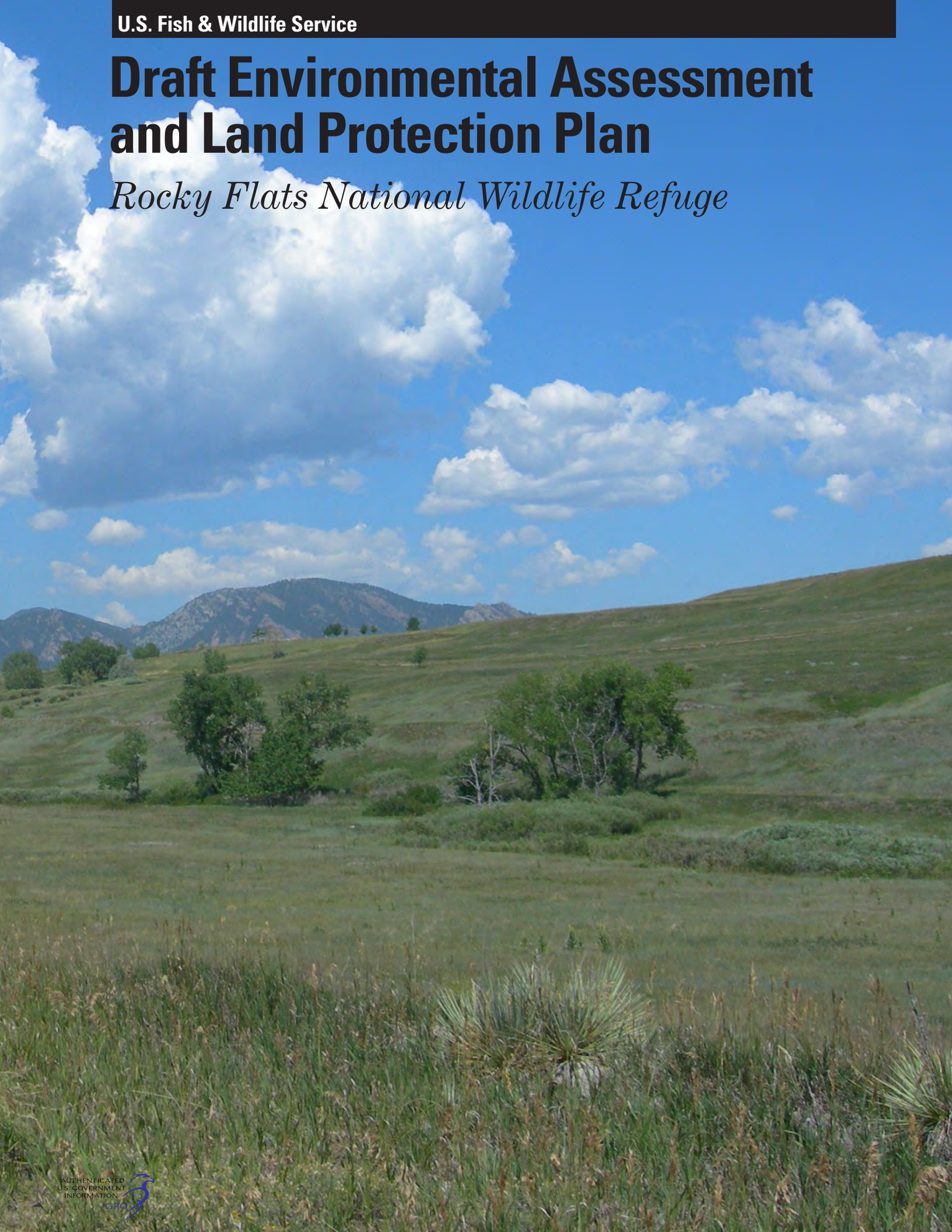
U.S. Fish & Wildlife Service

Draft Environmental Assessment and Land Protection Plan

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 of Americans.

Cover photograph of Rocky Flats National Wildlife Refuge in Jefferson County, Colorado.
Michael D. Dixon / USFWS

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1.0 Introduction and Project Description

This Environmental Assessment (EA) was prepared by the U.S. Fish and Wildlife Service (Service) in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508), and Service NEPA guidance and Departmental regulations (43 CFR 46), procedures and memoranda. The EA documents the purpose, issues, alternatives, and analysis for the proposed action (described in Section 1.2) at the Rocky Flats National Wildlife Refuge (NWR or Refuge) in Jefferson County, Colorado.

1.1 Background

Rocky Flats NWR, located 16 miles northwest of Denver, Colorado on the borders of Boulder, Broomfield, and Jefferson counties, was authorized by Congress in 2001. Rocky Flats NWR was once the Rocky Flats Environmental Technology Site, a portion of a 6,240-acre former nuclear defense facility operated by the U.S. Department of Energy (DOE). All weapons manufacturing was performed in a 600-acre area in the middle of the site known as the Industrial Area. In 1992, weapons production at Rocky Flats site ceased and environmental cleanup and closure began. The DOE completed the cleanup in accordance with the Rocky Flats Cleanup Agreement (RFCA) under oversight from the U.S. Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE). Under the Rocky Flats National Wildlife Refuge Act of 2001 (Rocky Flats Act), most of the 6,240-acre Rocky Flats Environmental Technology Site became the Rocky Flats NWR in 2007 following certification from the EPA that cleanup and closure had been completed; the Central Operable Unit in the center of the Refuge, which will remain under the jurisdiction of the DOE.

1.2 Proposed Action

In accordance with the Rocky Flats Act (Appendix A), land up to 300 feet in width extending west from the existing Indiana Street transportation corridor shall be made available by easement or sale for the sole purpose of transportation improvements upon application from any county, city, or political subdivision of the State of Colorado, provided that the transportation improvements "are carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge" and are part of the approved Denver regional transportation plan.

The Service has received proposals related to the 300-foot-wide parcel of land along the eastern boundary of the Refuge from approximately 96th Avenue to State Highway (SH) 128.

The two current applications are from the City of Golden and the Jefferson Parkway Public Highway Authority (JPPHA), and they are discussed in detail in Appendices E and F, respectively. Briefly, the City of Golden initially proposed to acquire the 300-foot-wide transportation corridor for use as a bike path with the remainder of the land reserved for future transportation improvements along Indiana Street, but has since stated that they only intend to use the property as a bike path. Golden has offered to buy the transportation corridor outright for $3 million, which is $200 thousand greater than the current appraised

value of the land. Alternatively, they have offered to exchange the transportation corridor for land of equal value. This could be a portion of land known as section 16 (Section 16, Township 2 South, Range 70 West) on the immediate southwestern corner of the Refuge, or land in inholdings at refuges elsewhere in Colorado. At present, there are inholdings at both Baca and Arapaho National Wildlife Refuges.

The proposal from JPPHA is to acquire the transportation corridor in order to construct a toll highway in the northwest corner of the Denver metropolitan area. Following Golden's submission of a proposal, JHPPA's application was amended to reflect that they too would include a bike path, in addition to their originally intended highway. JPPHA has offered to purchase the land for its appraised value of $2.8 million, or to exchange the parcel for property in section 16. They have brokered a deal with several local municipalities who will donate money and dedicate Natural Resource Damage Assessment funds from the Rocky Flats site to a broader conservation initiative to acquire land and mineral rights on 617 acres of section 16. This deal also includes provisions to buy out the existing mineral estates on 629 acres of Department of Energy lands that are already within the refuge boundary.

The Service proposes to expand the acquisition boundary of Rocky Flats NWR to accommodate a potential land exchange at the Refuge. Acquisition boundaries are administrative lines delineating areas within which the Service has the authority to acquire interests in land.

1.3 Purpose of and Need for Proposed Action

This EA presents and evaluates a proposal for protection and management of wildlife habitats through the expansion of the Rocky Flats NWR approved acquisition boundary. Lands within a refuge acquisition boundary do not become part of the refuge unless and until a legal interest is acquired through an easement, lease, donation, or purchase. Lands within an acquisition boundary are not subject to any refuge regulations or jurisdiction unless and until an interest is acquired. Land interests are typically acquired from willing sellers only. Any landowner whose land is within an approved acquisition boundary, even though the surrounding parcels may have been purchased by the Service, retains all the rights, privileges, and responsibilities of private land ownership. These include, but are not limited to, the rights to allow access, hunting, and vehicle use; control trespass; the right to sell the property to any other party; and the responsibility to pay local real estate or property taxes.

Within approved acquisition boundaries, the Service can enter into negotiations for the protection of environmentally sensitive lands. The land within the proposed Rocky Flats expansion area serves several important environmental functions. First, it contains a large portion of the remaining unprotected xeric tallgrass prairie, a globally rare vegetation community that is dependent upon disturbance by fire and grazing. Acquisition of this land would allow this habitat to be managed for these important disturbance mechanisms, and would protect it from the residential and commercial development that is occurring in adjacent parcels.

Many species of wildlife make use of the land within the proposed expanded boundary. The property includes critical habitat for the Preble's meadow jumping mouse, a Federally threatened species that inhabits the riparian area along Woman Creek. A herd of resident mule deer uses the site, and elk are known to move through this parcel into the adjacent Refuge from mountain habitat in the Front Range of the Rocky Mountains. The acquisition of an interest in this parcel would protect this important wildlife corridor by connecting Rocky Flats NWR to regional open space to the west, providing a permanently

protected path to the Front Range. In addition to allowing normal wildlife movement, the acquisition of this corridor would provide ecological resiliency by allowing migration and re-colonization following major disturbances such as disease, fire, and long-term environmental change.

View from the Refuge into section 16, which serves as an important wildlife corridor linking Rocky Flats with public lands to the west.

The expansion of the Refuge to the west to permanently conserve this land would be in keeping with the vision that was articulated in the Rocky Flats National Wildlife Refuge Comprehensive Conservation Plan (CCP) (2005):

> *Rocky Flats National Wildlife Refuge is a healthy expanse of grasslands, shrublands, and wetlands, including rare xeric tallgrass prairie, where natural processes support a broad range of native wildlife. The Refuge provides striking mountain and prairie views and opportunities to appreciate the refuge resources in an urbanized area through compatible wildlife-dependent public uses and education. Working with others, the Refuge conserves the unique biotic communities and sustains wildlife populations at the interface of mountains and prairies on Colorado's Front Range.*

1.4 Decisions to Be Made

The Service's planning team will complete an analysis of the No Action and action alternatives, and the resulting impacts to the natural, social, and cultural environment. Based on that analysis, the Service's Director of Region 6, with the concurrence of the Director of the U.S. Fish and Wildlife Service, will make three decisions:

- Determine whether the Service should expand the acquisition boundary of Rocky Flats NWR;

- Determine whether the Service should exchange the 300-foot wide transportation corridor for property and mineral rights adjacent to the existing Refuge, or elsewhere in the refuge system; and

- If yes to both of these issues, determine whether the selected alternative would have a significant impact on the quality of the natural and human environment. The National Environmental Policy Act of 1969 requires this analysis. If the quality of the natural and human environment would not be significantly affected, a Finding of No Significant Impact will be signed and made available to the public. If the selected alternative would have a significant impact, completion of an environmental impact statement (EIS) would be required to address those impacts.

1.5 Issues Identified and Selected for Analysis

The Service solicited comments on the proposed Rocky Flats NWR boundary expansion and land exchange from the public and agencies through direct mailings, a news release, a public scoping meeting, and direct contacts.

- On July 7, 2011, the Service issued a scoping notice to local media outlets in Colorado. This information was also posted on www.fws.gov/rockyflats, as well as the Service's Facebook and Twitter profiles. Scoping comments were accepted through July 29, 2011.

- The Service prepared a 2-page fact sheet which was made available through the Refuge Website, and as a handout at the scoping meeting and at the Rocky Mountain Arsenal NWR, which manages the Rocky Flats NWR. The fact sheet was also sent electronically to interested individuals.

- A scoping meeting was held on July 20, 2011 at the Westminster City Park Recreation Center in Westminster, Colorado from 5-8 pm. Sign-in attendance was 80 individuals.

- The Refuge website provided interested parties with updates and information about the proposal.

The Service received 1,163 email and written comments during the scoping period, of which 796 were generated by a change.org petition. Most of the comments reflected concern about the potential use of the 300-foot-wide transportation corridor as a highway rather than a bike path. A substantial number of commentors also expressed concern about potential public health risks related to the disturbance of contaminated surface soil in that corridor as part of any potential transportation improvements on the site. The vast majority of comments expressed support for the proposed expansion of the refuge boundary to include Section 16.

Looking south along Indiana Street along proposed transportation corridor.

The Service's planning team (listed in section 5.4) reviewed all comments collected from the public and agencies, and identified several key issues that were considered in this EA. If comments were substantive and/or provided relevant information, the issues are addressed in this EA. Based on internal discussion and comments received during scoping, the following issues and concerns were identified for discussion in detail in this EA.

- Effects of a land exchange on wildlife habitat, regional open space, and functional and resilient ecosystems
- Potential effects of transportation uses on the Refuge
- Effects of potential highway construction on local communities, including increased traffic, development and urban sprawl, and health impacts of vehicle traffic
- Potential recreational and commuter value of using the transportation corridor for a bike path as well as lack of existing, safe bike commuting options along SH 93 and Indiana Street
- Effects of highway construction on the viewshed, soundscape, and open space aesthetic
- Concern about construction-related disturbance of soil resulting in potential public exposure to plutonium

- Inadequacy of the scope of 2004 Rocky Flats NWR CCP/EIS as it relates to downstream and cumulative effects of the proposed transportation uses

- Lack of attention to environmental justice issues in Rocky Flats NWR CCP/EIS and Northwest Corridor Transportation Study

Existing NEPA Compliance at Rocky Flats NWR

As discussed above (section 1.2), the Rocky Flats Act mandated that the Service make available a parcel up to 300 feet wide from the Indiana Street transportation corridor for transportation improvements, as long as such improvements will be undertaken in a way that does not interfere with the management of Rocky Flats as a National Wildlife Refuge. Following the Rocky Flats Act, but prior to the transfer of Rocky Flats to Service stewardship in 2007, the Service drafted a CCP (USFWS 2005a) detailing the vision for the management of the then-future Refuge. A full NEPA review, which culminated in an EIS (USFWS 2004a), was conducted for the proposed actions in the CCP. Because of the congressionally-mandated transportation corridor provision, the 2004 EIS included an analysis of the impacts from potential transportation improvements along Indiana Street. The impacts analyzed in the 2004 EIS included water quality, noxious weeds, wildlife corridors/habitat fragmentation, noise and aesthetics, public use facilities such as trails, and overall loss of wildlife and cultural resources (USFWS 2004). Based upon this analysis, the Service determined that a land transfer up to the statutory 300 foot width would not adversely affect the management of the Refuge, and that the analysis satisfied its NEPA requirement relating to the mandated land disposal (USFWS 2009). Analysis contained in the 2004 EIS related to transfer of the transportation corridor is still valid and is incorporated into this EA by reference.

The Service is aware that plutonium is present within areas of the former Rocky Flats Environmental Technology Site that have become Rocky Flats NWR, including within the surface soils of the 300-foot wide transportation corridor (USFWS 2004a). The following timeline outlines the actions related to plutonium contamination at the Refuge ending at the Refuge's establishment on August 3, 2007 (72 FR 43293):

- Rocky Flats NWR Act of 2001 -- December 28, 2001
- Rocky Flats NWR Comprehensive Conservation Plan EIS -- September 16, 2004
- Rocky Flats NWR CCP/EIS Record Of Decision -- February 16, 2005
- USFWS Refuge Soil Samples for Modified Level III Contaminants Assessment-- May 8, 2006
- Remedial Investigation/Feasibility Report -- July 2006
- Corrective Action Decision/Record of Decision for Rocky Flats Plant (USDOE) Peripheral Operable Unit and Central Operable Unit -- September 29, 2006
- Notice of Partial Deletion of the Rocky Flats Plant From National Priorities List -- May 25, 2007
- USFWS Modified Level III Contaminants Assessment Report -- May 2007
- Land Transfer -- July 12, 2007
- Refuge Established -- August 3, 2007

The EPA, as the lead Federal regulatory agency for peripheral areas transferred to the Service, has stated that no hazardous substances, pollutants, or contaminants occur above levels that allow for unlimited use and unrestricted exposure (72 FR 11313 & 72 FR 29276). This information has been confirmed by the EPA and the CDPHE. Both the Corrective Action Decision/Record of Decision and delisting action contemplated the eventual transfer of lands for the transportation corridor and are included in the

agency's decision to remove Rocky Flats from the National Priorities List (CDPHE 2011; Appendix G). Included within the CDPHE/EPA letter in Appendix G is updated information and regulatory guidance from EPA and CDPHE on any potentially remaining plutonium contamination and on the safety of refuge workers and visitors on Refuge lands. Refuge lands are currently managed under exclusive Federal jurisdiction whereby current State environmental regulations do not apply. That said, grading and construction activities such as those associated with the proposed bike path (City of Golden) or Jefferson Parkway (Jefferson Parkway Public Highway Authority) construction, after the disposal of the property to a non-Federal entity, would be subject to Colorado Standards for Protection Against Radiation[1]; These control techniques would be required on non-Federal lands and would be similar to those already imposed on any transportation project. For example, dust suppression would likely be required, but is not considered a restriction and would not limit the use of the property proposed for transfer (CDPHE 2011; Appendix G). In addition, the Colorado Air Pollution Prevention and Control Act (§25-7-102 C.R.S), is designed to provide the maximum practical air quality for the residents of Colorado. This act includes regulations to reduce fugitive particulate matter that may arise during ground disturbing techniques, such as watering, chemical stabilization, and speed restrictions for construction vehicles.[2] Similarly, the Water Quality Control Act (§25-8-501(1) C.R.S.), requires control measures for erosion control and stormwater management during construction activities, including development of a stormwater management plan and a variety of tools to reduce the likelihood of spills or other venues where contaminants could be added to surface or groundwater.[3]

Also confirmed is the FWS's 2004 analysis of cultural resources in the transportation corridor. The FWS's work with the State's Historic Preservation Office's staff is described in 3.3 of this EA.

1.6 National Wildlife Refuge System and Authorities

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 of Americans" (National Wildlife Refuge System Improvement Act of 1997). National wildlife refuges provide important habitat for native plants and many species of mammals, birds, fish, insects, amphibians, and reptiles. They also play a vital role in conserving threatened and endangered species. Refuges offer a wide variety of wildlife-dependent recreational opportunities, and many have visitor centers, wildlife trails, and environmental education programs.

Conservation of additional wildlife habitat in the Rocky Flats NWR would continue to be consistent with the following policies and management plans:

- Migratory Bird Treaty Act (1918)
- Bald Eagle Protection Act (1940)
- U.S. Fish and Wildlife Act (1956)
- Land and Water Conservation Fund Act (1965)

[1] 6 CCR 1007-1 Part 4 – Standards for Protection Against Radiation; effective July 31, 2005

[2] 5 CCR 1001-3 Regulation 1 – Emmission Control for Particulate Matter, Smoke, Carbon Monoxide, and Sulfur Oxides; effective June 21, 2007

[3] 5 CCR 1002-61 – Colorado Discharge Permit System Regulations; effective September 30, 2011

- Endangered Species Act (1973)
- Migratory Non-Game Birds of Management Concern in the U.S. (2002)
- Rocky Flats Comprehensive Conservation Plan (2005)

The acquisition authorities for the proposed refuge boundary expansion and property acquisition are the U.S. Fish and Wildlife Act of 1956 (16 U.S.C. 742a-j) and the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee). Federal money for land acquisition would not be required under the terms of the current land exchange proposals. However, if the boundary is expanded but land is not exchanged within section 16, land could be acquired with the use of the Land and Water Conservation Fund (LWCF). The LWCF is derived primarily from oil and gas leases on the Outer Continental Shelf, motorboat fuel taxes, and the sale of surplus Federal property. There could also be additional money to acquire lands, water, and interests for fish and wildlife conservation purposes as identified by Congress or donations from nonprofit organizations. Any acquisition from willing sellers would be subject to available funding.

2.0 Description of Alternatives

2.1 Introduction

This chapter describes the alternatives that were considered in the development of this EA and discusses alternatives that were considered but were eliminated from detailed analysis. The alternatives offer a hard look at the full range of possibilities available that will be analyzed further to make a decision on whether or not significant impacts will be associated with the Service's proposed action. Alternatives are different approaches that meet the purpose and need for the proposed action and must be identified and objectively evaluated.

The Service has developed a range of alternatives for this EA necessary to provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement (EIS) or a Finding of No Significant Impact (40 CFR § 1508.9). Informed by the scoping process, a range of alternatives was identified during the development of this EA. The alternatives include a decision to not expand the Refuge (no action), a decision to expand the Refuge and facilitate a land exchange for lands adjacent to the Refuge (proposed action), and decisions on whether or not to expand the Refuge and facilitate a land exchange for lands at another Refuge elsewhere in Colorado. These alternatives evaluate different scenarios that may accomplish the requirements that land be made available for transportation improvements to Indiana Street as well as provide the necessary real estate options to expand the Refuge.

Section 3174 of the Rocky Flats National Wildlife Refuge Act of 2001 (Public Law 107-107, 115 Stat. 1382) states that, upon receipt of an application meeting certain conditions, the Service must make land along the eastern boundary of Rocky Flats NWR available for the sole purpose of transportation improvements along Indiana Street. An application must meet the following conditions:

- Be submitted by any county, city, or political subdivision of the State of Colorado; and
- Include documentation demonstrating that the transportation improvements for which the land is to made available:
  - Are carried out so as to minimize adverse effects on the management of Rocky Flats as a National Wildlife Refuge; and
  - Are included in the regional transportation plan of the metropolitan planning organization designated for the Denver metropolitan area under 49 U.S.C. § 5303.

As described above in section 1.5, analysis of potential impacts associated with disposal of lands within 300 feet of Indiana Street was included as a part of the Refuge's 2004 EIS. The Service will not include deed restrictions or reversionary clauses as a condition of sale. However, language will be included as a part of any real estate transaction that is specific to the Rocky Flats Act, requiring that these lands must be used solely for transportation improvements.

2.2 Alternative A – No Change to the Administrative Boundary of the Refuge and Direct Sale of Transportation Corridor (No Action Alternative)

The No Action Alternative is included in the range of alternatives because it allows decision-makers to compare the magnitude of environmental effects of the action alternatives (i.e., Alternatives B, C, and D) against a benchmark. NEPA regulations require the inclusion of a no action alternative. The CEQ provides additional interpretation of the "no action alternative" requirement, stating that one option is to consider such an alternative as "no change" from current management guidelines (CEQ 1981). The Service has developed a no action alternative following these guidelines.

Under the No Action Alternative, there would be no change to existing management and the administrative boundary of the Refuge would be unchanged. The Service, as directed by Congress, would release Federal lands for disposal per the conditions set forth and purposes included in the Rocky Flats Act. Any future construction of transportation improvements occurring on these lands (which at this time is not well-defined) would be beyond the Service's jurisdiction and would be regulated by appropriate Federal, State, and local agencies.

The Service would oversee a real estate transaction to sell up to 300 feet of the eastern boundary of the Refuge for its fair market value. In December 2010, the Service received an appraisal for a strip of land approximately 300 feet wide and approximately 2.76 miles long along the west side of Indiana Street between 120th Avenue and Jefferson County Road 4. The market value of the property, based on its highest and best use as a transportation corridor, is $2,800,000 (Shannon & Lundquist 2010). The Service has no authority to retain any revenue received from this transaction. Any funds received from the land sale would be deposited into the U.S. Treasury (31 U.S.C. § 3302(b)).[4] Under this alternative, the Service would sell these lands for $2,800,000 or more to one or more entities for the purpose of transportation improvements along Indiana Street.

2.3 Alternative B – Expand the Administrative Boundary of the Refuge and Complete a Land Exchange for Holdings at the Refuge (Proposed Action)

Under this alternative, the Service would expand the Refuge by 617 acres into an area known as section 16.[5] These lands are currently owned by the State of Colorado and managed as state trust lands[6]. The Refuge's expanded boundary would exclude approximately 23 acres located in the northwest corner of

[4] Known as the "miscellaneous receipts" statute, 31 U.S.C. 3302(b) provides "Except as provided in section 3718(b) of this title, an official or agent of the Government receiving money for the Government from any source shall deposit the money in the Treasury as soon as practicable without deduction for any charge or claim." (GAO 2006).

[5] The Public Land Survey System (PLSS) is a method used in the United States to survey and identify land parcels, particularly for titles and deeds of rural, wild or undeveloped land. Its basic units of area are the township and section. A section of land is one-square-mile block of land, containing 640 acres, or approximately one thirty-sixth of a township.

[6] As a general rule, the Federal Government endowed sections 16 and 36 of each township to the State of Colorado. The Colorado State Land Board is responsible for management and stewardship of lands and minerals associated with these lands. Over 95% of these lands are part of the common school trust required to generate revenue for public education.

section 16 that have been affected by prior oil and gas development. Consistent with Service policy, all existing land acquisition methods would be available to add lands to the refuge system within the expanded boundary of the Refuge.

The administrative boundary of the Refuge encompasses 6,240 acres of Federal lands. The Service has accepted ownership of and management responsibility for approximately 3,953 of these acres. The DOE has retained approximately 1,308 acres within the center of the Refuge. This retained area is located in and around the past industrial area, which is required to maintain institutional controls and ongoing monitoring activities associated with the final clean-up remedy. In addition, the DOE desires to transfer an additional 644 acres once outstanding mineral rights are resolved to the Service's satisfaction. Rocky Flats is surrounded on three sides by designated open space. There are additional Federal and non-Federal lands immediately to the west of the Refuge that may be added to the Refuge System to increase habitat resiliency and connectivity.

Under this alternative, the Service would exchange the 300 feet of the eastern boundary of the Refuge for equal interests in lands found within section 16. This alternative is also described in the Draft Rocky Flats Land Protection Plan, included as Appendix I in this document. This alternative currently relates most directly to JPPHA's proposal that is described in Appendix F, but could easily apply to Golden or another party if they were to make arrange similar partnerships. All exchange proposals would include three parties (the applicant, the Service, and the owner of lands to be added to the Refuge). In this case, there would be a three-way transaction where: (1) the deed for the transportation corridor is transferred to the successful applicant; (2) the successful applicant provides funds to the Colorado State Land Board; and (3) the Colorado State Land Board provides a patent on lands within section 16 to the Service. The following policy guides this transfer

> *The Act of August 8, 1956 (Public Law 95-616, 70 Stat. 1122), known as the Fish and Wildlife Act of 1956, authorizes the Service to take such steps required for the development, advancement, management, conservation, and protection of fish and wildlife including land acquisition by purchase or exchange of land and water, or interests therein (16 U.S.C. § 742f(a)(4)). Service policy, 342 FW 5.7, provides criteria for land exchanges that include: (1) that the exchange be of benefit to the United States, and (2) that the value of the lands or interests in lands be approximately equal or that values may be equalized by the payment of cash by the grantor or by the United States. The Service Director must approve the acquisition of lands or interests by exchange when valued in excess of $500,000 and such actions require the notification of Congressional committees holding jurisdiction.*[7]

[7] On April 14, 2008, the Service's Deputy Director amended language found in land acquisition policy chapter 342 FW 5.7D to reflect the new Congressional Exchange guidelines listed on page 191 of House Report 110-187, which explains the FY 2008 Department of the Interior, Environment, and Related Agencies portion of the FY 2008 Consolidated Appropriations Act (PL 110·161).

The present and proposed boundaries of Rocky Flats NWR.

Under this alternative, the Service would also use its land acquisition methods to complete acquisition of additional holdings within the expanded boundary of the Refuge. This may include the acceptance of donations, withdrawal of additional Federal interests, and necessary steps to secure outstanding mineral interests. The following policy guides these actions:

> *The Fish and Wildlife Act of 1956, allows the Service to accept gifts, devises, or bequests of real and personal property, or proceeds therefrom, or interests therein, when beneficial to its mission (16 U.S.C. § 742f(b)(1)).*

As stated in the Refuge's 2004 EIS, a substantial portion of the mineral estate (subsurface mineral rights) associated with lands at the Rocky Flats NWR is privately owned or encumbered by leases. The Service does not believe it can manage the Refuge for the purposes included in section 3177(e)(2) of the Rocky Flats Act if certain mineral rights are exercised. The Service's 2004 EIS stated:

> *Accordingly, the Service will not accept transfer of administrative jurisdiction from DOE for lands subject to the mining of gravel and other aggregate material at Rocky Flats until the United States owns the mineral rights of the land to be transferred to the Service, or until the mined lands have been reclaimed to a mixed prairie grassland community (USFWS 2004a).*

Under this alternative, the Service will continue its efforts to obtain all outstanding non-oil and gas mineral rights beneath the current and expanded Refuge boundary. Some of these areas have active surface disturbance from aggregate mining and others do not. The following is a description of mineral ownership and encumbrances beneath DOE lands within the current Refuge boundary:

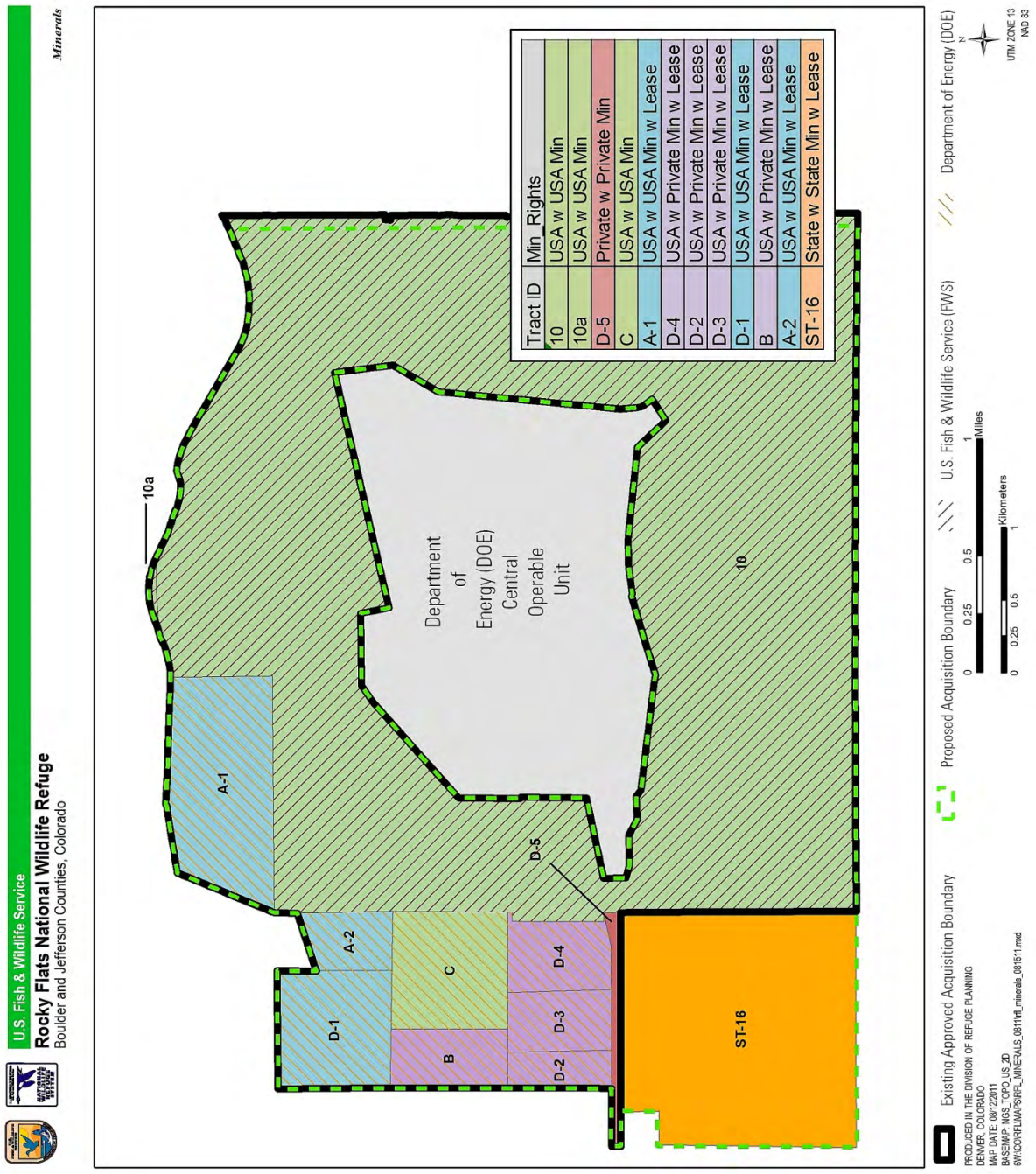
- Section 4 – The United States currently owns the minerals beneath Parcels A-1, A-2, and D-1, totaling 478 acres. These minerals are currently leased through December 31, 2012. The lessor may request an extension to this lease.

- Section 9 – The United States currently owns the minerals beneath Parcel C, totaling 161 acres, with no encumbrances (ready for transfer to the Service). The minerals beneath Parcels B, D-2, D-3, and D4 are privately owned. Parcels B and D-2, totaling 127 acres, are currently leased. Parcels D-3 and D-4, totaling 164 acres, are currently leased and being actively mined for aggregate.

- The State-Federal Natural Resource Trustee Council[8] for Rocky Flats has adopted a proposal to purchase aggregate mining leases on Parcels A-1, A-2, B, D-2, D-3, and D-4. This proposal is conditioned on the successful acquisition and transfer of private mineral rights to the United States.[9]

[8] The term "trustees" means the Federal and State officials designated as trustees under section 107f(2) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. § 9607f(2)). The purchase of essential mineral rights and eventual transfer of DOE lands is authorized by Section 3112 of the National Defense Authorization Act for Fiscal Year 2006 (Division C, Title XXXI of Public Law 109-163). Section 3112b(6) also exempts the purchase of outstanding mineral rights beneath Rocky Flats from the National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321 et seq.).

[9] Colorado Natural Resource Trustee Resolution 2011-7-19-11 was adopted on July 19, 2011.



Current surface and mineral estate ownership on and around Rocky Flats NWR.

PARCEL	APPROXIMATE AREA (ACRES)
A-1	262.31
A-2	61.11
B	80.61
C	160.54
D-1	154.89
D-2	46.12
D-3	75.66
D-4	87.86

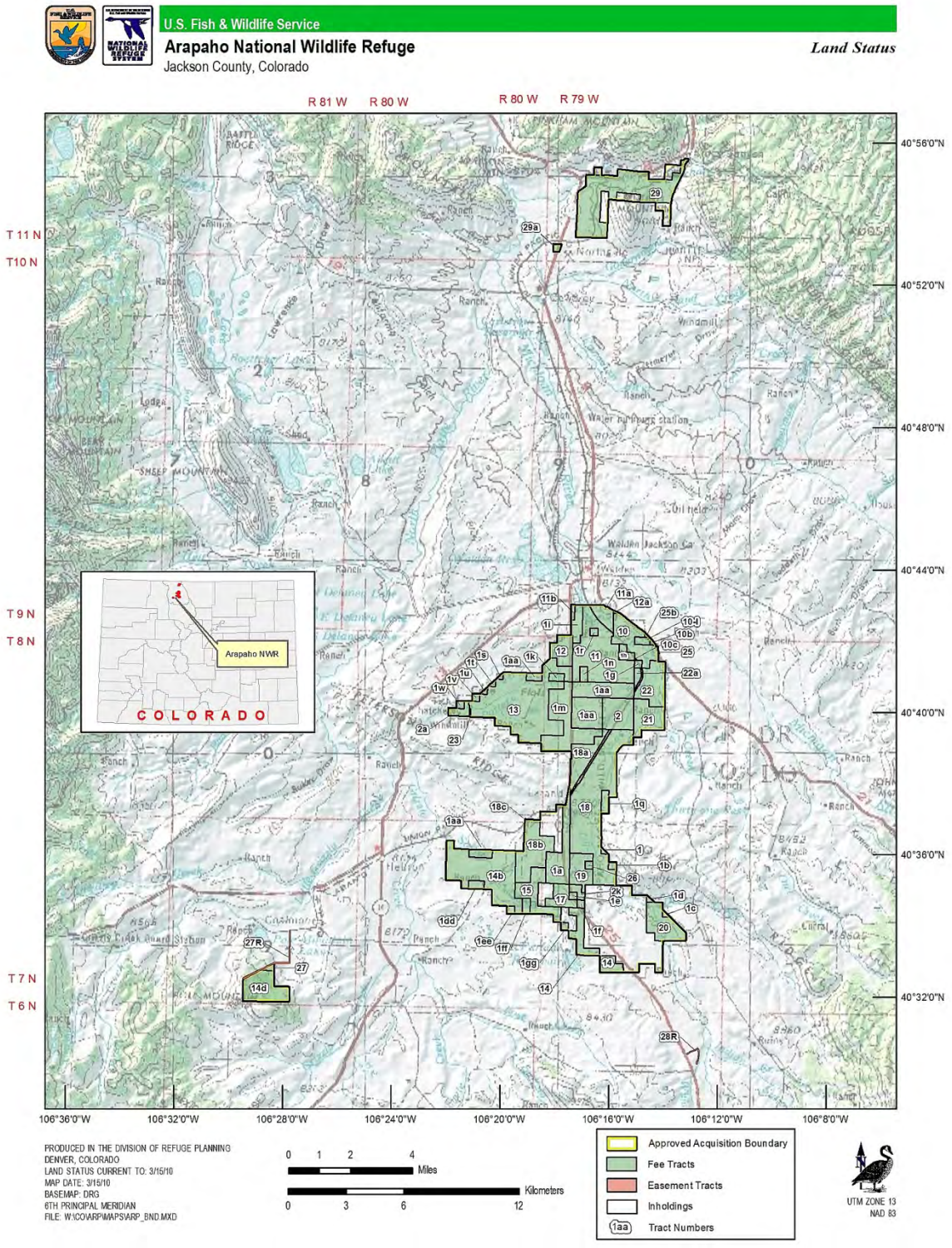
Therefore, Alternative B includes a description of several possible real estate processes that could be used to expand the overall size of the Refuge and acquire essential mineral rights beneath the Refuge.

2.4 Alternative C – No Change to the Administrative Boundary of the Refuge and Complete a Land Exchange for Holdings at Other Refuges in Colorado

Under this alternative, the Service would make no change to the administrative boundary of the Refuge. The Service would use its existing exchange authority to acquire additional lands for the Refuge System within the State of Colorado. Similar to the exchange described under Alternative B, the Service would complete an exchange of lands to facilitate the sale of the 300 feet of the eastern boundary of the Refuge in exchange for equal interests in lands. This alternative relates to Golden's proposal outlined in Appendix E. However, under this alternative, the exchange would be for lands at a unit of the Refuge System other than Rocky Flats NWR.

There are currently eight units of the Refuge System located in the State of Colorado. The Service has ongoing land acquisition programs at many of these units. Under this alternative, the Service would use its preexisting exchange authority to dispose of the transportation corridor and add lands to either the Arapaho NWR in Jackson County, Colorado, or the Baca NWR located in Alamosa and Saguache Counties, Colorado. Such a decision would be based upon a determination that no further land protection is required at the Refuge.

At the Arapaho NWR, near Walden, Colorado, a 3,687-acre inholding is available for purchase from a willing seller. The property is the largest remaining inholding within the Refuge's acquisition boundary, and has an appraised value of $7.1 million. The Trust for Public Land (TPL) has expressed its willingness to assist with this acquisition and has received a letter from the Service requesting their assistance. If this property is selected for an exchange under this alternative, a three-way exchange between the successful applicant, TPL, and the Service would provide for a portion of the inholding at Arapaho NWR. The TPL would locate another funding source for the remainder of the purchase price of the property, as the landowner is not willing to divide the tract.



Araphao NWR including inholdings

At Baca NWR, near Moffat, Colorado, The Nature Conservancy (TNC) owns approximately 103,000 acres, known as the Zapata Ranch. A portion of the ranch is within the Refuge's acquisition boundary. TNC has expressed interest in conveying this property to the Service. The TNC property has not yet been appraised, however, the value of TNC land is likely to be closer to the $2.8 - $3.0 million value of the transportation corridor than the Arapaho property value. If the property is selected for an exchange under this alternative, a three-way exchange between the successful applicant, TNC, and the Service would provide this inholding without requiring additional funding. Once appraised, if the value of lands is in excess of the exchange, it is anticipated the TNC will work with the Service to transfer the property in phases over several years.

2.5 Alternative D - Expand the Administrative Boundary of the Refuge and Complete a Land Exchange for Holdings at Other Refuges in Colorado

A combination of Alternative B and Alternative C could be derived whereby the Service would complete land acquisition planning to expand Rocky Flats NWR and use the Service's preexisting exchange authority to add lands to either the Arapaho NWR located in Jackson County, Colorado, or the Baca NWR in Alamosa and Saguache Counties, Colorado. Such a decision would be based upon a determination that further land protection is required at Rocky Flats NWR, but that the urgency of land protection at these alternate locations is greater, or that land acquisition at the Refuge falls on a different timeline than is necessary to properly dispose of the transportation corridor.

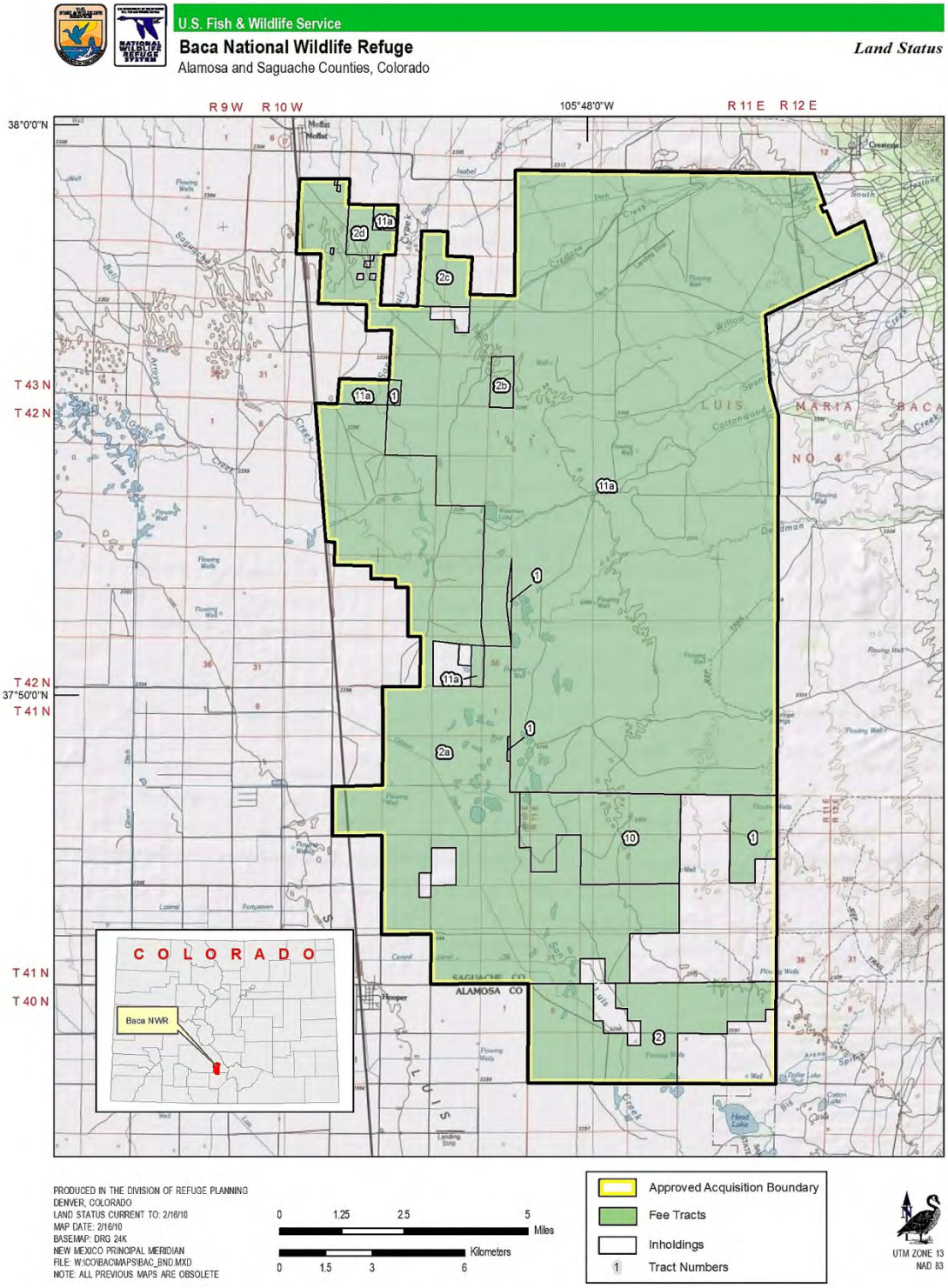
2.6 Alternatives Considered but Eliminated from Further Analysis

Return Management Authority Over Certain Lands to the Department of Energy

The Rocky Flats Act required the Secretary of Energy to be responsible for disposal of the transportation corridor. The transportation corridor was contemplated in the Corrective Action Decision/Record of Decision for the Rocky Flats Plant Peripheral Operable Unit and Central Operable Unit and lands were transferred to the Service in 2007 (DOE 2006). This alternative would require that management authority over lands be transferred back to DOE. Transfer of management authority from FWS to DOE is not in the interest of any party and would result in increased overall costs.

Retain Transportation Corridor Lands

Section 3174 of the Rocky Flats National Wildlife Refuge Act of 2001 requires the Service to make land available by easement or sale to one or more entities. Such a sale must be in accordance with the conditions described by the Rocky Flats Act and may not extend beyond 300 feet from the west edge of the Indiana Street transportation corridor. Since the establishment of the Refuge, clear legislative direction has been provided which indicates that the Service must make these lands available for the purpose of transportation improvements along Indiana Street. An alternative to retain the eastern edge of the Refuge is contrary to congressional intent.



Baca NWR including inholdings

Disallow Transportation Improvements along Indiana Street

Section 3174 of the Rocky Flats National Wildlife Refuge Act of 2001 requires the Service to make land available by easement or sale to one or more entities. Such a sale must be in accordance with the conditions described by the Rocky Flats Act and may not extend beyond 300 feet from the west edge of the Indiana Street transportation corridor. Since the establishment of the Refuge, clear legislative direction has been provided that the Service must make these lands available for the purpose of transportation improvements along Indiana Street. Once sold, the Service would be required to monitor any transportation improvement project to ensure minimal adverse effects on the management of the Refuge; would review any wetlands or other habitat mitigation plans that may be required; would consult on any project that may affect a threatened or endangered species, such as the Preble's meadow jumping mouse. However, the Service does not believe it can or should disallow transportation improvements along Indiana street.

Expand the Administrative Boundary of the Refuge and Direct Sale of the Transportation Corridor

A combination of Alternative A and Alternative B could be derived whereby the Service would complete land acquisition planning to expand the Refuge and dispose of the transportation corridor by direct sale. Analysis of potential impacts associated with disposal of lands within 300 feet of Indiana Street is included as a part of the Refuge's 2004 EIS. If the decision is made to pursue a direct sale of the transportation corridor, the Service would not continue its action of planning for an expansion of the Refuge because the funds derived from the sale would go to the Treasury and could not be used for the expansion.

Retain a Limited Interest in the Transportation Corridor

As described previously, the Service must make lands available for transportation improvements along Indiana Street. The Rocky Flats Act states that lands must be made available by sale or easement. The Service's land acquisition policy, 341 FW 1.3A(1), states that when lands are to be acquired, the minimum interest necessary to reach management objectives is to be acquired or retained. The Refuge's 2004 EIS discusses possible transportation improvements near the Refuge and displays the potential resource impacts associated with a range of options. This analysis shows that these lands are not essential in achieving the purposes for which the Refuge was established and the Refuge would not benefit from retaining an interest in these lands.

3.0 Affected Environment

This chapter describes the physical, biological, cultural, and socioeconomic resources most likely to be affected by the proposed land exchange and expansion of Rocky Flats NWR, with a brief summary of Baca and Arapahoe NWRs. For additional information on lands elsewhere in Colorado that are proposed for exchange under Alternatives C and D, please reference the conceptual and current Comprehensive Conservation Plans for the Baca NWR and Arapaho NWRs, at <http://www.fws.gov/mountain-prairie/planning/plans_co/index.html>.

3.1 Physical Environment

This section describes the physical features of the Rocky Flats NWR and adjoining land within the proposed boundary expansion, including geology, climate, and anticipated climate change.

Physiographic and Geological Features

The Rocky Flats NWR sits at the interface of the Great Plains and Rocky Mountains, about 2 miles east of the foothill escarpment in Jefferson County, Colorado. The elevation of the Refuge ranges from 5,500 feet in the southeastern corner to 6,250 feet on the western edge of the adjacent section 16 property. The western half of the site is characterized by the relatively flat Rocky Flats pediment, which gives way to several finger-like drainages that slope down to the rolling plains in the eastern portion of the site.

Geological units at the Rocky Flats site range from unconsolidated surficial deposits to various bedrock layers. Surficial deposits in the western portions of the site are characterized by Rocky Flats Alluvium, clayey and sandy gravels up to 100 feet thick. The steeper slopes below the Rocky Flats Alluvium in the central portion of the site generally consist of landslide deposits. Surficial deposits in the eastern portion of the refuge consist of colluvium 3 to 15 feet thick and terrace alluvium 10 to 20 feet thick (Shroba and Carrara 1996).

Mineral resources

The Rocky Flats Alluvium is believed to be the only mineral resource feasible for development at the Refuge. Historically, uranium, coal, oil and natural gas have been extracted near the Rocky Flats site. At present, mineral leases for Rocky Flats Alluvium are held within the proposed acquisition on section 16, as well as within DOE-administered properties within the current approved acquisition boundary.

Soils

The soils at the site formed from alluvium (stream deposited), colluvium (gravity deposited), or residuum (bedrock material that weathered in place). Soils in the western half of the site formed from alluvium, while those in the eastern half of the site formed from colluvium and residuum. Soils in the western half of the site are primarily the Flatirons and Nederland soils that formed in the Rocky Flats Alluvium (Figure 5). Flatirons soils consist of very cobbly to very stony loamy surface soils and clayey subsoils. These soils are deep and well drained. Flatirons soils are located on western pediments and ridgetops, as well as the upper portions of hillsides. Nederland soils have very cobbly loamy surface and subsoils. They

are deep and well drained. Nederland soils are located on steeper hillsides and valley slopes in the western portion of the Refuge.

Soils in the eastern portion of the site consist primarily of Denver, Kutch, Midway, Valmont, Haverson, and Nunn soils. The Denver-Kutch-Midway complex consists of soils with loamy surfaces and clayey subsoils. The Denver soils are deep and well drained, the Kutch soils are moderately deep and well drained, and Midway soils are shallow and well drained. The Denver-Kutch-Midway complex is the dominant soil map unit in the eastern portion of the Refuge, although it also occurs in the western half along hillsides. Denver and Kutch soils are found on side slopes, and the Midway soils occur on steeper slopes. Valmont soils consist of deep, well-drained soils with loamy surfaces and loamy to clayey subsoils. This soil type is found in the northeast corner of the Refuge on the eastward extension of the Rock Creek/Walnut Creek drainage divide. Haverson soils are loamy soils located in floodplains or low terraces. Nunn soils consist of deep, well-drained soils on lower slopes adjacent to drainage bottoms. They have loamy surface surfaces and loamy to clayey subsoils.

Surface water

Three drainages originate on or near the Refuge: Rock Creek, Walnut Creek, and Woman Creek. Stream levels fluctuate depending on the season and amount of precipitation. Most streamflow is controlled by groundwater discharge. Streamflow is greater when groundwater levels are higher, such as in the spring. Surface sheet flow is only a significant contributor to stream flows during high precipitation events (Kaiser-Hill 2002a).

There are four ponds on the Refuge: the two Lindsay Ponds on Rock Creek and ponds D-1 and D-2 on the Smart Ditch. Several additional ponds are found within the DOE Retained Area.

The Rock Creek basin drains the northwest portion of the Refuge. This drainage has a relatively flat headwater area to the west, but has steep gullies and channels to the east where it cuts below the Rocky Flats Alluvium into bedrock formations. Rock Creek is hydrologically isolated from the rest of the site and receives no water from the DOE Retained Area. Surface water generally originates from shallow groundwater discharge as well as precipitation. Rock Creek continues off-site to the northeast, where it joins Coal Creek in the Boulder Creek basin.

Walnut Creek consists of three tributaries that drain the central portion of the Refuge, including most of the Core Operable Unit. The northernmost branch, No Name Gulch, begins at the outfall of the East Landfill Pond. The central branch, North Walnut Creek, begins at the northern edge of the Industrial Area and flows through the “A” series ponds. South Walnut Creek begins in the Core Operable Unit and collects discharge from the Rocky Flats Wastewater Treatment Plant before flowing through the “B” series ponds. The three branches converge near the eastern Refuge boundary before flowing off-site to the east. Walnut Creek is typically dry during most of the year.

The Woman Creek basin drains the southern portion of the Refuge. The Woman Creek drainage consists of two major branches that begin off of the Rocky Flats site to the southwest. The main stem of Woman Creek flows across the site, passing south of the DOE Retained Area and flowing through the C-1 pond. The Mower Ditch diverts most of the Woman Creek flow into Mower Reservoir, east of the Refuge. Typically, Woman Creek has no streamflow in late spring and summer. All surface flows are lost to

groundwater in the warmer months. In the winter, most of the baseflow is from Antelope Springs. Woman Creek is largely unaffected by pond releases from the DOE Retained Area.

A small portion of the Refuge near its southern boundary lies within the Big Dry Creek drainage, although the creek itself does not flow through the Refuge. Big Dry Creek flows into Standley Lake about 1 mile east of Indiana Street.

Besides the three principal natural drainages, several ditches cross the Refuges. The South Interceptor Ditch currently collects runoff from south of the Core Operable Unit, which channels surface runoff into the C-2 pond. The Smart Ditch originates at Rocky Flats Lake, which is to the southwest of the Refuge, then it enters the Refuge and flows through the South Woman Creek drainage for almost 2 miles before splitting off toward Standley Lake to the southeast. The Mower Ditch diverts most of Woman Creek toward Mower Reservoir to the east. The Upper Church Ditch enters Rocky Flats from the west and traverses the Rock Creek/Walnut Creek drainage divide until it exits the Refuge in the northeast corner. The McKay Ditch runs from the west side of the Core Operable Unit into the Walnut Creek drainage. The Kinnear Ditch diverts water from Coal Creek west of the Refuge and conveys it to the Woman Creek channel. The South Boulder Canal runs from north to south across section 16 and conveys water to Ralston Reservoir to the south of the Refuge.

Groundwater

Hydrogeology at the Rocky Flats NWR is characterized by three distinct units: the upper alluvial aquifer, lower aquitard, and the Laramie-Fox Hills aquifer. An aquifer is a geologic formation that has sufficient permeability to store and/or convey water. An aquitard is a confining layer with low permeability that can store water but does not allow water to readily pass through it.

The upper alluvial aquifer is comprised of unconsolidated materials, which can be as much as 100 feet thick in the western portions of the Refuge. This aquifer is generally recharged from precipitation or surface water. Groundwater in the unconsolidated alluvial aquifer is generally close to the land surface, with an average depth of 11 feet below ground surface.

The lower aquitard is composed of the deeper claystones and siltstones of the Laramie and Arapahoe Formations. Combined, these formations combined are up to 800 feet thick below the Refuge. Recharge of the lower aquitard occurs from downward flow through the upper aquifer, or directly through precipitation in areas where the bedrock is exposed. Beneath the aquitard lies the regional Laramie-Fox Hills aquifer. It is composed of the lower sandstone unit of the Laramie Formation and the Fox Hills Sandstone and is confined by the overlying aquitard. Groundwater levels in the bedrock aquifers are generally greater than 100 feet.

Several springs have emerged where the upper aquifer and the lower aquitard are exposed at the surface. While most of these springs occur within the Rock Creek drainage, Antelope Springs in the Woman Creek drainage has the largest discharge at the site. Antelope Springs discharges continuously over several acres.

Several portions of the upper alluvial aquifer east and northeast of the DOE Retained Area are known or suspected of being contaminated with radionuclides, volatile organic compounds, and metals. The aquitard is less contaminated than the upper alluvial aquifer. No contaminant plumes have been identified

in the aquitard. The Laramie-Fox Hills aquifer beneath the site is unlikely to be contaminated (IATTF 1998).

Air Quality

For air quality planning purposes, Rocky Flats is located within the boundary of the Denver Metropolitan Area. For many years, the Denver metropolitan area has experienced carbon monoxide, ozone, and particulate matter air pollution as well as visibility problems. This region is considered an air quality attainment city by the EPA (USFWS 2004a), meaning it currently meets EPA air quality standards. The Rocky Flats NWR is almost entirely in Jefferson County, Colorado. In 2008, air quality was good or moderate in Jefferson County on 264 out of 274 days for which data is available. The primary air quality concern in the region is ozone (EPA 2011).

Noise

Noise levels on the north, west, and east perimeter are affected by traffic on the highways adjacent to these locations. Because traffic volumes are higher on SH 93, noise levels are higher on the western perimeter than at other locations. Noise levels are lower on the southern perimeter because SH 72 is farther from the site boundary. Wind generators at the National Wind Technology Center (NWTC) also generate noise. The Refuge is typically a very windy location and wind noise contributes to the overall ambient noise levels. Noise levels decrease away from the area highways and NWTC wind generators (USFWS 2004a).

Climate

Rocky Flats NWR, including the proposed expansion area, lies within the semi-arid, continental climate zone (Peel et al. 2007). Temperatures range from an average high of 43^{o}F and low of 15^{o}F in January, to an average high of 88^{o}F and low of 57^{o}F in July. However, the temperatures can be much more extreme, with a record high of 105^{o}F and a record low of -29^{o}F. This area has low mean annual precipitation, with an average of 15 inches per year (NWS 2011). Most of the overall precipitation falls in the summer, but because of its elevation, much of the winter precipitation falls as snow.

Climate Change

Broad scale climate prediction models anticipate that the climate of Rocky Flats NWR will warm between 3-7^{o}F by the 2080s. Regardless of the emissions scenario used in individual climate models, the amount of precipitation in the Refuge area is expected to remain about the same or slightly decrease (Maurer et al. 2007).

Physical Environment of Baca National Wildlife Refuge Inholdings

One of the properties described for Alternatives C & D is part of the 103,000 acre Medano-Zepata Ranch, owned by The Nature Conservancy (TNC). Three inholding parcels, totaling about 6,490 acres, are within the Baca NWR administrative boundary. These parcels, located in the southern portion of the refuge, are relatively close to one another.

The Baca NWR located in Saguache and Alamosa Counties in the San Luis Valley (SLV) of southern Colorado. The San Luis Valley is a high mountain desert surrounded by two 14,000 foot mountain ranges. Elevations on the valley floor average about 7,500 feet above sea level. The Baca NWR contains a highly diverse suite of habitats including desert shrublands, grasslands, wet meadows, playa wetlands, and riparian areas. Combined with other adjacent conservation-focused lands including the Great Sand Dunes National Park and Preserve, the Rio Grande National Forest, Colorado State Lands, and The Nature Conservancy, this region of the San Luis Valley contains one of the largest and most diverse assembles of wetland habitats remaining in Colorado.

The climate of the San Luis Valley is arid, with cold winters and moderate summers. Much of the valley floor receives between 7-8 inches of precipitation annually while the surrounding mountain ranges receive upwards of 60 inches. Thus water resources in the San Luis Valley are almost exclusively driven by snow melt throughout the spring and summer months for both available surface water and subsurface groundwater recharge. The Rio Grande River is the largest river bisecting the valley floor with numerous tributary streams and creek feeding in to it. Flowing onto the Baca NWR, major creeks include Cottonwood, Deadman, Crestone, and Willow Creeks. These creeks provide critical water which sustains wetland and riparian habitats and help replenish groundwater resources.

The San Luis Valley is part of the Rio Grande Rift Zone that extends from southern New Mexico north through the valley to its terminus near Leadville, Colorado. The valley is bordered on the east by the Sangre de Cristo mountain range and on the west by the San Juan mountain range. The valley floor contains deep deposits of alluvium fill material comprised of a variety of materials ranging in size from fine clays and sands to small and medium cobbles and boulders. The groundwater system is very complex containing both a confined and unconfined aquifer system. The Baca NWR is largely comprised of either shallow or deep sands where water drainage is generally rapid or cemented sands where drainage is poor. Playa wetlands are typical of the areas with cemented sands as the primary substrate.

Physical Environment of Arapaho National Wildlife Refuge Inholding

The second property mentioned in Alternatives B & C is an inholding at Arapahoe NWR known as the Yarmony Ranch. It is located in an intermountain, glacial basin south of the town of Walden, the county seat of Jackson County. The 8,200-foot elevation basin is approximately 30 miles wide and 45 miles long, and is commonly known as “North Park” since it is the most northern of three such “parks” in Colorado. The elevation in North Park ranges from slightly below 8,000 feet on the valley floor to 12,965 feet on Clarks Peak.

The climate is semiarid—characterized as having short, cool summers with an average growing season of only 43 days a year followed by long, cold winters. The mean rainfall in Walden is 10.83 inches of precipitation annually, 70 percent of which falls as snow (Lischka et al. 1983).

North Park is a structural basin between the Precambrian granites, gneisses and schists of the Medicine Bow and Park Ranges and Independence Mountain. The sandstones, conglomerates, and shales of the Tertiary Coalmont Formation dominate the surface geology of the North Park floor. Coal is found in the lower members of the formation (Hail 1968).

The Yarmony Ranch is an approximately 3,000-acre inholding located within the Arapaho National Wildlife Refuge administrative boundary. The Ranch parcel contains mostly meadow (70%) and important riparian-willow and sage upland habitat.

The water table is shallow, with the elevation of the groundwater table approximating the water-surface elevations in nearby rivers, creeks, reservoirs, and ponds. The flooded meadows and riparian area allow the Refuge and Ranch to support abundant wildlife resources, producing thousands of ducks annually, and a diverse wildlife community that is common to high mountain valleys in the central Southern Rocky Mountains.

3.2 Biological Environment

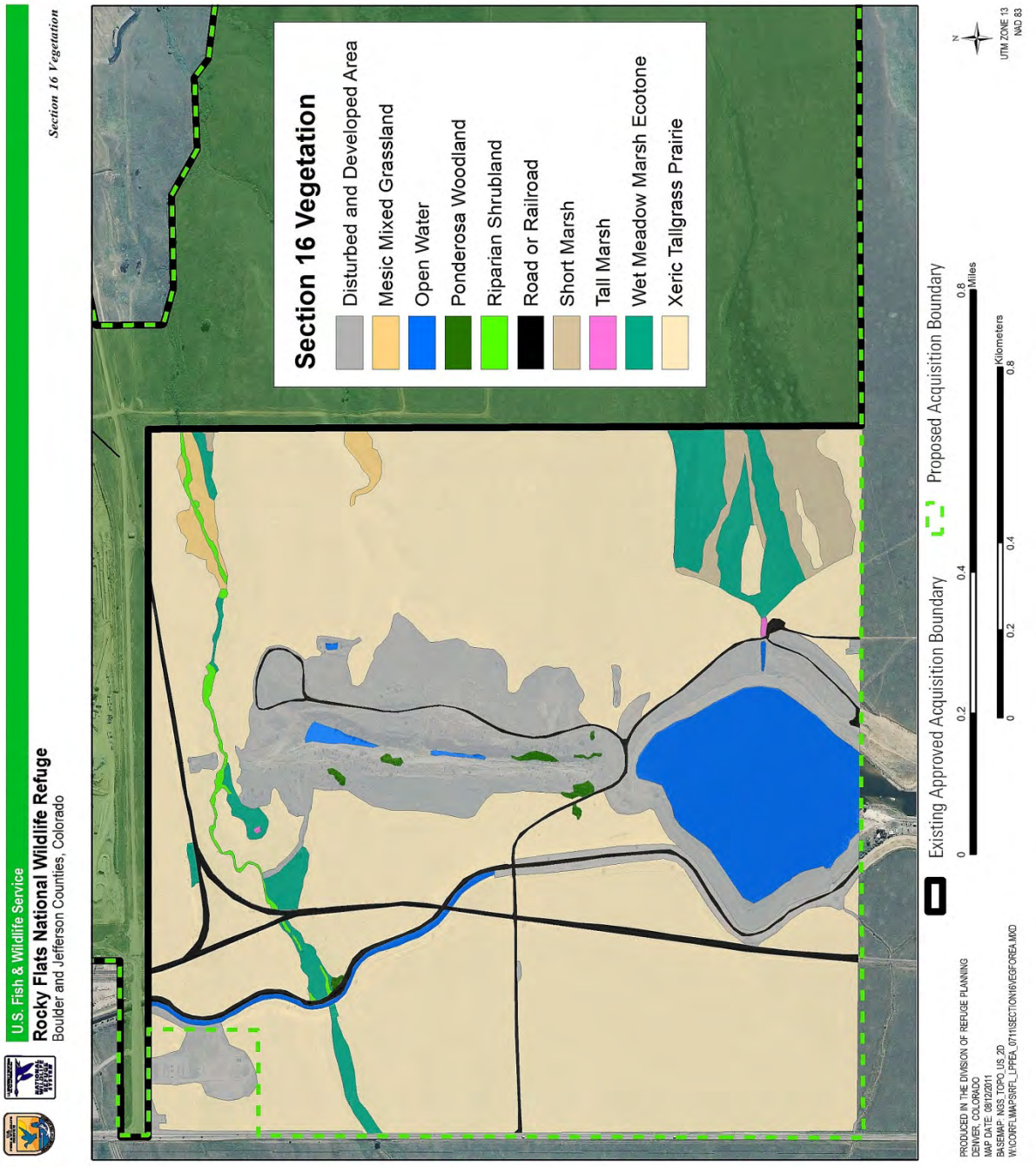
Vegetation

Rocky Flats is found in the Front Range Fans subregion within the broader high plains ecogregion. An ecoregion is a major ecosystem (a biological community of interacting organisms and their physical environment) that is defined by a distinctive geography. This area has seen substantial urbanization and other land conversion along the Front Range Urban Corridor. According to Nelson (2010), the Refuge likely serves as "a refugium for plants and animals that were once much more common." The Refuge is home to some 630 plant species, of which 7 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% of its original area (Robinson et al. 1995) due to land cover and land use changes associated with factors such as agriculture and urbanization. Wildlife dependent on prairie habitats are thus dependent on a substantially shrunken ecosystem.

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. Other significant vegetation communities include the riparian woodland, riparian shrubland, wetlands, mesic mixed grassland, xeric needle and thread grassland, reclaimed mixed grassland and ponderosa pine woodland.

Xeric Tallgrass Grassland

This rare plant community is found on the rocky plains and ridgelines in the western portions of the Refuge and in the proposed acquisition area in section 16. Covering about 2,000 acres, it contains several different plant associations that include combinations of big bluestem, little bluestem, mountain muhly, sun sedge, Fendler's sandwort and Porter's aster. Other tallgrass prairie species include Indian-grass, prairie dropseed, switchgrass, and needle-and-thread grass. Species richness is high; 285 species have been recorded within the xeric tallgrass community at the Refuge, of which about 80% are native. Interestingly, the big bluestem grass-dominated plant communities show a negative relationship between the age of the underlying alluvial soil and both the overall species richness and the invasibility of those habitats. Therefore, the Refuge, with its 2.2 million year old soils, has lower overall species richness but also far lower prevalence of invasive plant species than other nearby communities with younger soils (Buckner and Odasz in review). Differences in species composition are attributable to annual variations in climate and precipitation (Kaiser-Hill 2002b). The xeric tallgrass grassland is found primarily on Flatirons and Nederland soils and is believed to be a relict once connected to the tallgrass prairie hundreds of miles



The vegetation and land cover of the proposed acquisition in Section 16

to the east (Nelson 2003; Essington et al. 1996). About 5% of the plant species in this community are associated with eastern North American prairies and woodlands (Weber 1965, 1976).

The CNHP has found that much of the xeric tallgrass grasslands along the Colorado Front Range have been disturbed by urban development and agricultural conversion over the last century. In addition, aggressive weed species such as cheatgrass, Japanese brome and diffuse knapweed have degraded many areas of this community throughout the region (Essington et al. 1996). The CNHP believes that the xeric tallgrass grassland community exists in fewer than 20 places globally and that the Refuge has the largest example of this community remaining in Colorado and perhaps North America. The CNHP ranks this community as imperiled within the State (Essington et al. 1996)

The xeric tallgrass grassland community is comprised of several sub-communities (Nelson 2003). One of these sub-communities was identified by ESCO during a five-year evaluation of bluestem-dominated grasslands in the Rocky Flats area, including in the potential acquisition area in section 16. This study found that the major distinguishing feature of what ESCO calls the rare "Rocky Flats Bluestem Grassland" community is the abundance of big bluestem with little bluestem, mountain muhly, and Porter's aster. While big and little bluestem are characteristic of midwestern tallgrass prairies, mountain muhly and Porter's aster are characteristic of mountain environments. This unusual combination of mountain and plains grassland species in a consistent and recurring pattern across the Rocky Flats alluvial surface, along with evidence of exceptional stability, makes this vegetation community a rare, if not unique, resource (ESCO 2002).

Rocky Flats NWR and section 16 contain approximately 2,000 acres of Rocky Flats bluestem grassland.

Riparian Woodland

The riparian woodland community is characterized by a diverse mixture of plains cottonwood, peachleaf willow, Siberian elm, and coyote willow, with an understory of various shrubs such as leadplant and snowberry. It is found primarily along the drainage bottoms of the Refuge, with the most significant stand occurring in the Rock Creek drainage (Essington et al. 1996; PTI 1997).

The most significant threat to the riparian woodland community is from exotic species such as Russian olive, tamarisk, Siberian elm, Canada thistle, musk thistle, smooth brome, and Kentucky bluegrass. Preservation of this woodland community depends on the preservation of associated streamflow (Essington et al. 1996; PTI 1997).

Riparian Shrubland

Riparian shrubland forms extensive, dense thickets of shrubs along the stream bottoms of the Refuge as well as along Woman Creek in section 16. It is dominated by narrowleaf willow, coyote willow, and indigo bush and generally has an understory consisting of leadplant, Baltic rush and various sedges (Kettler et al. 1994).

Tall Upland Shrubland

Tall upland shrubland occurs on north facing slopes above seeps and along streams, primarily within the Rock Creek drainage. The tall upland shrubland consists of a rare association of hawthorn, chokecherry, and occasionally wild plum. This shrubland is associated with groundwater seeps that form at the contact of the Rocky Flats Alluvium and the underlying, relatively impermeable Arapahoe Formation. The herbaceous understory contains a number of species that are restricted to the cool, shaded microhabitat provided by the canopy. Understory species include Fendler waterleaf, spreading sweetroot, anise root, carrionflower greenbriar, fragile fern, Colorado violet, Rydberg's violet and northern bedstraw. Although the tall upland shrubland represents less than 1% of the total area of the Refuge, it contains 55% of the plant species on the site (DOE/Service 2001). This shrubland community is believed to be rare and may not occur anywhere else (DOE/Service 2001; Essington et al. 1996).

Other Shrubland

Other shrubland communities include short upland shrubland and savanna shrubland, which are found primarily in the Rock Creek drainage. Short upland shrubland is characterized by stands of snowberry and occasional Wood's rose and is often found in association with wet meadows and other wetland or riparian communities. Savanna shrubland occurs in drier areas where scattered shrubs are interspersed with grasslands. Three-leaf sumac is the predominant shrub in this community.

Wetland Communities

Wetland communities play an important role in sustaining the diverse vegetation and habitat types found on the Refuge. The two most significant wetland complexes at Rocky Flats are the seep-fed wetlands along the hillsides of the Rock Creek drainage and the Antelope Springs complex in the Woman Creek drainage. These wetlands areas are the most significant because they have the largest contiguous areas and the most complex plant associations (PTI 1997). Three wetland types, tall marsh, short marsh and wet

meadow, are found at the Refuge. These wetland types occur both in streamside areas along the valley floors as well as near the seeps and springs that occur along many of the hillsides.

Tall marsh wetlands generally occur along ponds and ditches and in persistently saturated seeps. These wetlands are dominated by cattails, bulrushes, and associated forbs such as watercress, showy milkweed, swamp milkweed and Canada thistle (a noxious weed). Antelope Springs in the Woman Creek drainage is the best example of a saturated slope wetland and tall marsh community at the Refuge.

Short marsh wetland is commonly associated with seasonally inundated or saturated areas, such as hillside seeps. Prevalent species include Nebraska sedge, Baltic rush, and spike rush as well as forbs such as watercress and speedwell.

The seasonally saturated wet meadow wetlands occur on the perimeter of saturated wetlands and contain elements of both the short marsh wetland and upland mixed grassland communities. Prevalent species include redtop, prairie cordgrass, and solid stands of Canada bluegrass and western wheatgrass. Other species commonly found in this community include common milkweed, wild iris, Canada thistle, dock, and occasionally arnica (Nelson 2003).

Mesic Mixed Grassland

The mesic mixed grassland community is the largest vegetation community at the Refuge, covering much of the broad ridges, hillsides, and valley floors throughout the site and the rolling plains in the eastern portions of the Refuge. This community is characterized by western wheatgrass, blue grama, side-oats grama, prairie Junegrass, Canada bluegrass, Kentucky bluegrass, green needlegrass and little bluestem. This grassland occurs on clay loam soils that have relatively higher soil moisture content than other upland areas. The higher soil moisture results from subirrigation from the coarse alluvial soils, snow accumulation, and protection from wind (DOE 1997). The mesic mixed grassland is very important to wildlife species including grassland birds, small mammals and larger mammals such as mule deer.

The quality of the mesic mixed grassland habitat varies considerably across the site. In the western parts of the site, this community has been degraded by diffuse knapweed, while in the eastern portion of the site, some areas have been degraded by weed species such as Japanese brome, alyssum, and musk thistle (PTI 1997).

Xeric Needle and Thread Grassland

Several patches of xeric grassland dominated by needle-and-thread grass occur in the eastern half of the Refuge. Other dominant grass species include New Mexico feathergrass, Canada bluegrass, Kentucky bluegrass, and Japanese brome (Nelson 2003). This grassland occurs primarily on the eastern extensions of the Rocky Flats pediment, an area that is characterized by very cobbly sandy loam soils. These soils are very similar to the soils that support the xeric tallgrass grassland community (Kaiser-Hill 1997). The largest expanse of needle-and-thread grassland at the Refuge occurs along the ridgetop north of the east access road.

Reclaimed Mixed Grassland

Reclaimed mixed grassland occurs primarily in the southeastern portion of the Refuge which was formerly cultivated. Most of these areas have been re-seeded with a mixture of smooth brome and intermediate wheatgrass, both introduced species. Other common species include crested wheatgrass, sweetclover, and field bindweed (Kaiser-Hill 1997).

Short Grassland

This grassland is typified by buffalograss and blue grama, both short grass prairie species (Kaiser-Hill 1997).

Ponderosa Pine Woodland

Isolated patches of ponderosa pine woodland cover 9 acres in the uppermost reaches of the Rock Creek and Woman Creek drainages near the western edge of the Refuge, as well as nearby areas in the section 16 parcel. These scattered pines represent an eastward extension of the nearby foothill forests. While much of the understory is similar to the adjacent grassland communities, other associated plants are more likely to occur in foothills environments (DOE 1997).

Disturbed and Developed Areas

Disturbed and developed areas consist of existing or former facilities associated with the previous use of the Rocky Flats site. They include roads, landfills, dams, and other facilities. They also include former facilities that have been revegetated with native and introduced grass species.

Noxious Weeds

Noxious weeds are exotic, aggressive plants that invade native habitat and cause adverse economic or environmental impacts. Since 1990, the Refuge has experienced a large increase in noxious weeds (DOE 1997). At the Refuge, the noxious weed species with the greatest potential to degrade the native plant communities and that are the most difficult to control include diffuse knapweed, musk thistle, Dalmatian toadflax, and Canada thistle. Other increasingly problematic weeds are downy brome (cheatgrass), field bindweed, and jointed goatgrass (Lane 2004). Diffuse knapweed, an aggressive tumbleweed, is currently given highest control priority. Canada thistle is common in and around most of the wetlands, musk thistle is found across mesic grasslands, and Dalmatian toadflax is common in xeric grasslands and other areas. Sulfur cinquefoil is a new invader to the area that may have already established populations on the Refuge (Lane 2004).

While the grasslands on the western part of the Refuge and section 16 currently have relatively few invasive species, possibly due to lower invasibility of these older assemblages (Buckner and Odasz In Review), this is likely to change if the threat posed by invasive species on the Refuge is not addressed.

Rare Plants

No Federally listed plant species, such as the Ute ladies'-tresses orchid or Colorado butterfly plant, are known to occur at the Refuge. Aside from the rare xeric tallgrass prairie and tall upland shrubland communities, the Refuge also supports populations of four rare plant species that are listed as rare or

imperiled by the CNHP. These species are the mountain-loving sedge, forktip three-awn, carrionflower greenbriar, and dwarf wild indigo. Forktip three-awn primarily occurs in previously disturbed sites near the western edge of the DOE Core Operable Unit. The other three species occur primarily along the pediment slopes in the Rock Creek drainage (Kaiser-Hill 2002b).

Fire History

Historical documentation indicates that the grasslands in the Rocky Flats area have been subjected to lightning and human-caused fires for thousands of years (DOE 1999). These fires likely played a major role in promoting native vegetation growth and diversity (DOE 1999). Since 1972, wildfires have not been allowed to burn and only one controlled burn has been conducted in the grasslands at the Refuge. As a result, a fuel load of dead vegetation has been building up in the grasslands of Rocky Flats for almost 30 years. This buildup of dead vegetation has contributed to an invasion of noxious weeds on the site, particularly in the last 10 years (DOE 1999).

Several wildfires have been documented on the site since 1993. In 1994, the Spring Grassland fire burned 70 acres between SH 128 on the north boundary and the north access road. In 1996, the 104-acre Labor Day Grassland Fire burned much of an area penned in by access roads in the southern portion of the site. In February 2002b, a 27-acre fire burned through portions of the Rock Creek drainage on the south side of SH 128. A 48-acre prescribed burn was conducted on April 6, 2000. The prescribed burn took place in the same area as the 1996 wildfire (Kaiser-Hill 2002). A fire caused by a faulty power line burned 852 acres on Rocky Flats and another 140 acres outside of Federal ownership (USFWS 2006). The most recent fire burned between 10-15 acres on September 28, 2011 (Dixon, pers. obs.)

A recent wildfire on September 28, 2011, was actively suppressed at less than 15 acres.

Wildlife Resources

Many areas of the Refuge have remained relatively undisturbed for the last 40 to 60 years, allowing them to retain diverse habitat and associated wildlife communities. These wildlife communities are supported by the regional network of protected open space that surrounds the site on three sides, buffering wildlife habitat from the surrounding urban development.

Mammals

One of the most abundant and conspicuous mammal species at the Refuge is the mule deer. A resident herd of about 160 individuals inhabits the site. In the spring, mule deer prefer woody habitat followed by grasslands. In summer, deer use is typically divided among a more diverse range of habitats. In the fall, mule deer primarily use woody habitats, with grasslands also being important. In the winter, mule deer are commonly observed in grasslands and tall upland shrublands (Kaiser-Hill 2001).

Whitetail deer have become more common at the site and are often observed in company with mule deer. The Refuge is in the Colorado Parks and Wildlife (CPW; formerly known as the Colorado Division of Wildlife [CDOW]) Game Management Unit (GMU) #38 and is adjacent to GMU#29, which collectively make up the Boulder deer herd. Elk actively use the Refuge, possibly for calving, and at least two herds are using the Refuge (M. Dixon, personal observation).

Rocky Flats provides important elk habitat, particularly for cows and calves

Other mammals observed at the Refuge include desert cottontail, white-tailed jackrabbits, blacktailed jackrabbits, muskrat, and porcupine. Muskrats generally occur in and around the ponds, while porcupine

populations are limited to the shrubland and ponderosa pine habitats in the upper Rock Creek drainage (DOE 1997). Porcupines are also likely to occur in the ponderosa pine woodland on section 16. Black-tailed prairie dogs once inhabited the Refuge in limited numbers but were largely extirpated from the Refuge by a plague outbreak in the early 2000's. Numerous small mammal species, such as mice and voles, inhabit all vegetation community types at the Refuge. Preble's meadow jumping mouse, a threatened species, is described below.

Two commonly observed carnivore species at the Refuge are coyote, which occurs throughout the site, and raccoon, which is often seen in the DOE Core Operable Unit and near watercourses. Three to six coyote dens on the Refuge support an estimated 14 to 16 individuals at any given time (Kaiser-Hill 2001). Twenty-two historic coyote dens used between 1991 and 2002 have been identified at the Refuge. The coyote dens generally occur on hillsides near watercourses. Six dens were active in 2002. One active den was located in the upper Rock Creek drainage, two were located on the slopes above either side of Walnut Creek near Indiana Street, one was near the D-1 pond, one was near Antelope Springs, and one was in the upper South Woman Creek drainage (Nelson 2003). Other carnivores include striped skunk, gray fox, red fox, long-tailed weasel, American badger, and mink. Black bears and mountain lion tracks are occasionally seen at the site (Kaiser-Hill 2000; 2001).

Birds

The most commonly observed raptors at the Refuge are red-tailed hawk, great horned owl, and American kestrel. Other less abundant raptors include Swainson's hawk, prairie falcon, and long-eared owl. Most raptor species use riparian woodlands or tall upland shrublands for nesting and roosting habitat and forage in all habitats at the site. In addition, the burrowing owl (Colorado threatened) has been observed using grasslands, and the ferruginous hawk uses riparian areas of the Refuge (PTI 1997; DOE 1997).

More than 185 species of migratory birds have been recorded at the Refuge, of which about 75 are believed to breed at the site. Of the estimated 100 neotropical migrants (migratory birds that breed north of the U.S./Mexico border and winter south of the border) at the Refuge, about 45 are confirmed or suspected breeders at the site (PTI 1997).

Commonly observed bird species in wetland habitats include the red-winged blackbird, song sparrow, common yellowthroat, and common snipe. Common birds in riparian woodland areas include the northern oriole, American goldfinch, house finch and yellow warbler. The tall upland shrubland habitat is inhabited by the song sparrow, rufous-sided towhee, black-billed magpie, yellow-breasted chat, and black capped chickadee. Common grassland birds include the vesper sparrow, western meadowlark, grasshopper sparrow, and mourning dove (DOE 1997). The reclaimed mixed grassland provides habitat for birds such as the western meadowlark and vesper sparrow (PTI 1997). Several waterfowl species use the ponds at the Refuge. The most common waterfowl are mallards and Canada geese (DOE 1997). Great blue herons feed in mudflats and short marshlands, while double-crested cormorants are common summer residents.

Reptiles and Amphibians

In general, reptiles and amphibians are found in small numbers at the Refuge due to an absence of suitable habitat. The most common reptiles are the bullsnake, yellow-bellied racer, plains garter snake, and prairie rattlesnake. All of these species occur in the open grassland habitats, although the plains garter

snake typically lives close to water bodies. Other reptiles include the short-horned lizard which occurs in open grasslands, the eastern fence lizard which occurs in rocky shrublands, and the western painted turtle which occurs in Refuge ponds (DOE 1997) and in the clay mine pool on Section 16 (M. Dixon, personal observation). The most abundant amphibian at the Refuge is the boreal chorus frog, which breeds in water bodies throughout the site. The northern leopard frog is less common and is found only in permanent water bodies such as ponds (DOE 1997). The boreal chorus frog is relatively abundant in the streams and wetlands at the Refuge (Kaiser-Hill 2000). Other amphibians include the bullfrog, Woodhouse's toad, plains spadefoot, and tiger salamander (DOE 1997).

Aquatic Species

Aquatic species at the Refuge are limited in drainages and ditches by low and irregular flows. The most common aquatic macroinvertebrates (aquatic insects) are the larvae of the blackfly, midge and mayfly (DOE 1997). Other species include caddisflies, craneflies, and damselfly larvae, as well as snails and amphipods. Large macroinvertebrates such as crayfish and snails are potentially important prey for fish, waterfowl, and mammal species.

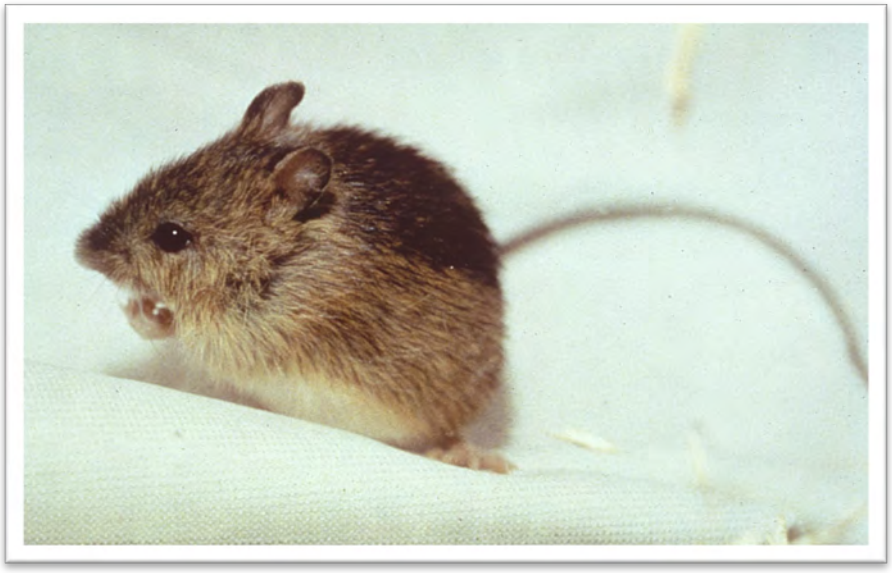
Each of the three primary drainages at the Refuge contains a variety of pond and stream habitats, varying amounts of habitat modification, and seasonal water flows. The Walnut Creek drainage has been highly modified as part of the development of the Refuge. The upper section of the drainage was filled and the lower section was modified into a series of small reservoirs that can retain water released from the Industrial Area. A variety of non-native fish species (rainbow trout, carp, and bass) were introduced into the Walnut Creek reservoirs. Although all introductions did not establish reproducing fish populations, carp, goldfish, and fathead minnows are present in these reservoirs. Woman Creek retains a significant amount of stream habitat and holds the majority of Refuge fish species. Native fish species that reproduce within Woman Creek include white suckers, fathead minnows, green sunfish, stonerollers, and creek chubs. Two nonnative fish species, golden shiners and largemouth bass, also are found in the drainage.

Three Refuge fish species are considered imperiled by the CPW: the redbelly dace (endangered), the Iowa darter (special concern), and the common shiner (threatened) (CDOW 2011). Threats to these species include extirpation through habitat degradation (e.g., siltation, pollution and/or bank destabilization), the effects of urbanization, and predation by introduced non-native fish.

Special Status Species

Preble's Meadow Jumping Mouse

Preble's meadow jumping mouse occurs in every major drainage on the Refuge. Listed as a threatened species in 1998, the mouse occurs in habitat adjacent to streams and waterways along the Front Range of Colorado and southeastern Wyoming. At the Refuge, Preble's meadow jumping mouse has been found in wetlands and shrubland communities adjacent to the Rock Creek and Woman Creek drainages. Approximately 1,108 acres on 12 miles of Rock, Walnut, and Woman creeks are designated as critical habitat (USFWS 2010).



Preble's meadow jumping mice inhabit the riparian corridors of the Rocky Flats area

Bald Eagle

The bald eagle occasionally forages at the Refuge although no nests have been identified. An active nest is located to the east of the Refuge near Standley Lake. Eagles feed primarily on fish and waterbirds but also on small mammals and mammal carcasses (DOE/Service 2001). The bald eagle was Federally listed as endangered in 1967 was downlisted to threatened in 1994, and was officially delisted from the Endangered Species Act on August 8, 2007 (72 FR 37346). The bald eagle remains a special status species due to its ongoing protections provided under the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act.

Bald eagles nest near the refuge and are occasionally observed hunting in Rocky Flats

Burrowing Owl

The burrowing owl has a broad range across North and South America, but it is listed as threatened by the state of Colorado because of habitat loss due to suburban development and agriculture along the Front Range (CDOW 2011). Colorado's burrowing owls are present from April to October, and in the months between, they migrate to Mexico and Central America. The burrowing owl is found in grassland areas of the Refuge where it roosts in burrows, particularly those of prairie dogs. Due to the recent decline in prairie dogs on the Refuge, its range on the Refuge may be restricted relative to its historic use of the area. Burrowing owls feed primarily on invertebrates and small vertebrates.

Burrowing owls often roost in prairie dog burrows, but are presently uncommon at Rocky Flats because of a decline in black-tailed prairie dogs on the Refuge

Biological Environment of Baca National Wildlife Refuge Inholdings

The vegetation communities within the three Baca NWR inholding parcels mentioned in Alternatives C & D are described in detail in Salas et al. 2010. These three TNC parcels are largely comprised of open to moderately dense shrub steppe or shrublands dominated by rabbitbrush occurring widely on the stabilized sandsheet and sand ramp. Intermixed within the rabbitbrush is black greasewood and winterfat. Herbaceous species include Indian ricegrass, needle and thread, Sandhill muhly and alkali sacaton. As the shrubland community transitions into herbaceous dominate community types, species such as Indian ricegrass and needle and thread are much more common. Mesic meadows, emergent marshes, and playa wetland also comprise a portion of the parcels with species like sedges, Baltic rush, saltgrass, and western wheatgrass occurring throughout.

These vegetation communities support a variety of migratory birds including grassland songbirds, shrub-obligate species such as Brewer's sparrow and sage thrasher, and wetland-dependent birds such as American avocets, white-faced ibis, sandhill crane, and numerous waterfowl species. Other wildlife species known to occur in these habitats include rare species such as slender spiderflower, a silky pocket mouse, and a sandhill skipper (butterfly). These species occur throughout the transition areas between playa and wet meadow habitats and the surrounding upland grassland and shrub habitats. Slender spiderflower is locally abundant on Baca NWR and surrounding lands, however, it has very limited a range outside of the San Luis Valley (Rondeau et al 1998). Elk, pronghorn, and coyotes are also common throughout the refuge including these parcels.

Biological Environment of Arapahoe National Wildlife Refuge Inholding

The inholding in Arapahoe NWR provides quality habitat for many birds common to the sage-brush steppe including sage thrasher, Vesper sparrow and Brewer's sparrow. Greater sage-grouse are common, and provides critical feeding areas for sage grouse young. Mammals using the sage habitat include white-tailed prairie dogs, Wyoming ground squirrel, and pronghorn.

The Illinois River, which is tributary to the Michigan River, supports 7 species of native and non-native fish. Willow flycatcher, yellow warbler, black-crowned night-heron, sora, along with moose, river otter, beaver and wintering elk extensively use the riparian and willow habitat found along the river.

Moose, mule deer, elk and pronghorn are common. These animals migrate between the Refuge, Ranch and adjacent areas, with an average of 1200 elk, 200 pronghorn and 20 moose inhabiting the area at any one time.

Special Status Species

Species that are known, or believed to occur in Jackson County, and possibly on the Ranch and Refuge, include; American wolverine (candidate), piping plover and Canada lynx (threatened); and least tern, (endangered). An endangered plant, North Park phacelia is found on the Refuge and several other areas in Jackson County. A number of species of State concern are found in the area include western burrowing owl, ferruginous hawk, long-billed curlew, peregrine falcon, northern leopard frog, and American white pelican.

3.3 Cultural Resources

The following brief summary of the prehistory and history of the Rocky Flats NWR region is primarily an abridgment of the extensive background research done as a part of the archaeological investigations for the then-proposed Northwest Parkway (Painter et al. 2005). Additional detailed information is available in that publication and in the numerous sources cited as a part of that research.

Prehistory

Current archaeological evidence indicates that the earliest humans migrated to the Rocky Flats NWR region near the close of the last ice age approximately 14,000 years ago. The sites and artifacts left by these early peoples are divided into five general stages:

Paleoindian	12,000 BC – 5,700 BC

Archaic	5,700 BC – AD 150
Late Prehistoric	AD 150 – AD 1540
Protohistoric	AD 1540 – AD 1750
Early Historic	AD 1750 - 1850

Artifacts from the Paleoindian stage provide the earliest evidence of human occupation in Colorado. The traditional view of the Paleoindian pattern emphasizes a nomadic culture tied to the migration of large game, most notably extinct "Pleistocene megafauna," such as mammoth and *Bison antiquus*. Recent studies, however, indicate that Paleoindians also exploited smaller game, fish, and waterfowl, although on a much reduced scale (Kuehn 1998; Walker 1982; Wheat 1979; Wilmsen and Roberts 1978). Perhaps the most readily recognized stone tools in the Americas are associated with the Paleoindian stage, specifically the well-crafted, large, lanceolate, and often fluted projectile points (i.e., large, longitudinal flake scars extending from the base of the point along its centerline). Paleoindian lithic assemblages are composed predominantly of flaked stone tools believed to have been used primarily for hide and meat processing. Population densities were low during the Paleoindian stage, and therefore sites (particularly camp sites) dating to this period occur less frequently than those of the subsequent stages.

The Archaic stage is marked by an increasingly diverse subsistence base, an extensive feature assemblage, and a variety of stone tool and projectile point styles. The beginning of the Archaic stage coincides roughly with the onset of the Altithermal climatic episode (approximately 7,000 BC - 4,000 BC): a prolonged period of general warming and drying in western North America (Frison 1991). The change in weather patterns and environments resulted in the total replacement of Pleistocene fauna with generally modern species. Collected wild plant foods made up a significant portion of the human diet during the Archaic stage and small mammals, reptiles, and even insects were eaten. Ground stone implements used to process floral material such as nuts, seeds, berries and fruits became common. Stone boiling pits, storage cists, and architectural features such as basin houses are also associated with the Archaic stage and are likely the result of increasing population density and a general shift toward increased levels of sedentism (Frison 1991; Metcalf and Black 1991; Shields 1998). Archaic projectile points are generally large and often are not as well crafted as points of the preceding Paleoindian stage.

The Late Prehistoric stage is generally defined as the time from the introduction of the bow and arrow and the start of the use of pottery to the earliest contacts of the native population with Europeans. Throughout the region this was a time of important changes in economic patterns, artifact complexes, and population distribution. During this stage material traits and possibly certain economic patterns believed native to areas farther east were adopted by the local hunter-gatherers. This time period coincides with the introduction of the bow and arrow, and, although large spear points are associated with the early years, the most distinctive lithic characteristic of the period is the small triangular projectile point. A range of habitation sites with structures has been recorded in eastern Colorado, but there is no evidence of permanently settled horticultural villages. Ceramics are varied but in general consist of cord-marked jars. Bone artifacts are common and include awls, fleshers, wrenches, and beads. Ground stone is abundant and varied, including not only manos and metates but also shaft abraders.

The Protohistoric stage encompasses the span of time between the earliest European influences on the Native Americans and the onset of regular, direct contacts between Native Americans and Euro-Americans. The AD 1540 date for the beginning of this stage corresponds with Coronado's first expedition to the Southern Plains of North America and, although the Spanish did not make it to the Rocky Flats region, it is the beginning of potential influences. Euro-American incursions into the central

and western high plains are known to have occurred on an infrequent basis during the latter half of the 18th century. External pressures in addition to the introduction of the horse and other material goods led to accelerated changes to the traditional cultures. A nomadic, equestrian lifestyle emphasizing bison hunting, generally with firearms, became pervasive among tribes occupying eastern Colorado. The circular arrangements of rock often associated with Protohistoric sites are thought to be primarily the remnant "footprints" of tipi structures - representing rock weights used to secure the structure coverings.

Much more information is available for the post-AD 1725 periods. Most notably, historically identifiable tribes established a presence in the region. Historical records indicate that this particular span of time is characterized by successive incursions and retreats by various tribes. By 1725, incursions by Comanches and their Ute allies had forced the Apache to withdraw from Colorado. The short-lived Ute/Comanche alliance that successfully pushed the Apache south disintegrated by the late 1740s (Anderson 1989:34). The Comanche subsequently controlled southeastern Colorado until they were pushed south by the Kiowa and Kiowa Apache in the late 1780s (Jones et al. 1998). A later alliance among the Comanche, Kiowa, and Kiowa Apache was, in turn, challenged by Cheyenne and Arapaho entering the region in the first quarter of the nineteenth century. Although the Ute remained the primary occupants of the mountainous regions, the Shoshone and various plains-oriented groups were known to have used the mountains on a more limited basis. During this rather turbulent period of history, however, trade networks between Native American and Euro-American groups became well established despite the ongoing hostility.

History

Although Euro-Americans had been in the area sporadically for several decades, in 1806 the U.S. Government funded the first major expedition to investigate central and southern portions of the newly acquired Louisiana Purchase. Led by Lieutenant. Zebulon Pike, the expedition explored both the Arkansas River and South Platte River basins and, along the eastern slope of the Rocky Mountains, came as far north as the Colorado Springs area before heading west. After Pike's foray, the next significant expedition to the Front Range area occurred in 1820. Commanded by Major Stephen H. Long of the U.S. Army, the exploration had a decided scientific emphasis and traveled west along the South Platte River to the foothills before heading south. The first accounts of the Denver area and the foothills to the west were provided by the Long expedition. It is interesting to note that neither man ever set foot on the peaks that were later named after them.

The 1820s and 1830s were also characterized by a flourishing fur trade. Notable mountain men such as Andrew Sublette and Louis Vasquez exploited the abundant animal resources present along the Front Range. Vasquez and a band of trappers are reported to have camped at the confluence of the South Platte River and Clear Creek (known originally as the Vasquez River or Vasquez Fork), and from there followed Clear Creek to its source in the mountains. The booming fur trade led to the establishment of a series of trading posts bordering the eastern flanks of the Rocky Mountains from southeastern Colorado to southeastern Wyoming. By the early 1840s, a growing scarcity of beaver and changes in European fashion led to a significant decrease in the fur trade.

Throughout much of the 1850s, the Colorado Piedmont and adjacent foothills remained devoid of permanent settlements. The discovery of gold quickly changed this situation. Gold was reportedly first found along the Front Range creeks sporadically during the late 1840s and early 1850s (Mehls 1984:33), particularly by miners on their way to the gold fields of California. However, the 1858 discovery of gold

near the confluence of the South Platte River and Cherry Creek provided the initial impetus for large-scale mining in the region (Ubbelohde et al. 1995:56-57).

During the initial gold rush years, northeast Colorado above the fortieth parallel (Baseline Road in Boulder, Colorado) was included within the Nebraska Territory, and the portion below the fortieth (which includes Rocky Flats) parallel was part of the Kansas Territory. Colorado was proclaimed an official territory by the U.S. Congress after Kansas entered the U.S. in 1861 and became the 38th State in 1876.

Towns such as Golden, Boulder, and Arvada (known for being the "Celery Capital of the World") sprang up in the areas surrounding the Rocky Flats NWR. Transportation networks consisting primarily of trails and later roads and railroads connected the growing population with the agricultural, mining, and ranching products produced throughout the State. Based on the U.S. Census the Denver Metro area, consisting of the seven counties of Adams, Arapahoe, Boulder, Denver, Douglas, Jefferson, and (after 2001) Broomfield, had a combined population of 186,987 people in 1900, 615,645 people in 1950, and 2,784,228 people in 2010.

The growing numbers of settlers and gold miners led to increasing conflicts with the Native American populations. A series of clashes culminated in both the 1864 massacre at Sand Creek, where more than 100 Native American men, women, and children were killed, and the sacking of Julesburg, Colorado, by Cheyenne, Arapaho, and Sioux attackers the following year (Anderson 1989). Finally, the diminution of bison herds and continuous strife, in combination with disease and hunger, took its toll on the Native American population. The Medicine Lodge Treaties of 1867 provided for the final removal of the various Plains tribes to reservations located primarily in Oklahoma.

History of the Rocky Flats Plant

There are numerous documents and publications that provide a detailed history of the Rocky Flats Plant. There is also a diverse range of opinions and emotions concerning that history. Only a brief review of key events is presented here but additional details are available through several on-line and hardcopy publications. A list of these resources is available on the Rocky Flats Stewardship Council web page: http://www.rockyflatssc.org/rockyflats_history.html.

The Rocky Flats Plant was approved for construction in March 1951 with the primary mission of building triggers for nuclear weapons. Ground was broken in July of that year and by April 1952 the Plant was fully operational. A major fire in 1969 heightened the public's awareness of the possible dangers and a 1989 raid to investigate environmental crimes led to a temporary closure that became permanent in 1992. A twelve-year cleanup process began in 1993. The Rocky Flats National Wildlife Refuge Act of 2001 set forth the creation of the refuge following the completion of the clean-up. In July of 2007 the Refuge, covering nearly 4,000 acres, was officially established.

The following information outlines some important features of the Plant (HAER CO-83):

- There were 436 structures including 150 permanent buildings and 90 temporary trailers.
- The original site was 1,900 acres and an additional 4,600 acres were purchased in 1972.

- From 1951 to 1975 the Plant was operated under the Atomic Energy Commission; from 1975-1977 the Energy Research and Development Administration; and from 1977 to 1992 the DOE.

- In 1951 the Plant employed 133 people; 1,059 employees by 1953; 3,000 employees between 1957 and 1963; 3,700 employees in 1970; 2,750 employees in the mid-1970s, 6,000 employees during much of the 1980s, 7,100 employees in 1991.

Previous Cultural Resource Investigations in Proposed Divestiture Lands

The Refuge was created in 2007 from lands that were once a part of the Rocky Flats Plant. Prior to the establishment of the Refuge, the DOE, through the private firm of EG&G who was operating the Plant at the time, hired the environmental consulting firm of Dames & Moore to conduct a cultural resource inventory of all accessible lands on the Plant. That survey and the subsequent report include the 300-foot-wide strip of land currently proposed for divestiture (Dames and Moore 1991). Information from earlier surveys is incorporated into the findings of the 1991 report.

The following table summarizes information concerning the cultural resources located within the 300-foot-wide strip of land. The information is based on Figure 3 of the 1991 report and a review of information on the Colorado Office of Archaeology and Historic Preservation on-line database (Compass) on August 1, 2010. The eligibility information refers to the National Register of Historic Places (NRHP). These results are typical of investigations in the region: there are few sites, mostly from the historical period, and they are not eligible for the NRHP.

SITE #	SITE NAME	LOCATION IN PROJECT AREA	DETERMINATION OF NRHP ELIGIBILITY
5JF512.1	Upper Church Ditch	Section 1, northeast corner of project area	Officially Not Eligible February 28, 1992
5JF513.1	McKay Ditch	Section 1, south 1/3	Officially Not Eligible February 28, 1989
5JF734.1	Mower Ditch	Section 13, north 1/3	Officially Not Eligible August 26, 1992
5JF484	Stone House – Church Ranch	Section 13, north 1/2	Officially Not Eligible July 20, 2006
5JF514.3	Smart Ditch	Section 13	Officially Not Eligible February 28, 1989

The divestiture of Federal land constitutes an undertaking under section 106 of the National Historic Preservation Act (NHPA). On August, 25, 2010, as a part of the review process required by NHPA, the Service initiated consultation with the Colorado State Historic Preservation Officer (SHPO) with a letter recommending that no further cultural resource work was necessary as the land was previously surveyed and no historic properties were located. The SHPO responded on September 8, 2010 noting that the previously recorded linear resources (ditches) in the project area were recorded prior to the establishment of the current standards and requesting that the ditches be reconsidered. Three possible options for protection or re-evaluation of the resources were outlined in the letter. The Service decided to make use of the third option and re-evaluate the linear resources.

In October of 2010, Dr. John Hoffecker of Historic Preservation Consultants completed the necessary re-evaluations. In discussions with Shin duVail (SHPO staff) it was decided that two resources, the Upper Church Ditch segment (5JF512.1) and the McKay Ditch segment (5JF513.2) would be re-evaluated. Both of the re-evaluated segments are in poor condition and neither supports the NRHP eligibility of the ditch. These findings were sent to the SHPO on November 1, 2010, with a request for their concurrence. The SHPO concurred with the finding of no adverse effect for the proposed land disposal on November 5, 2010.

Previous Cultural Resource Investigations in Section 16

Section 16 (Township 2 south, Range 70 west) is what is often referred to as a "school section." School sections were initially established under the Federal Land Ordinance of 1785 which set aside section 16 of each township to provide income and, in some cases, a location for local schools. As western states were admitted to the Union, section 36 in each township was also established as a school section. The section 16 in question was designated a school section when Colorado became a state in 1876. The section is referred to as the Rocky Flats school section and is part of the State Trust Lands managed by the Colorado State Board of Land Commissioners.

There has been one cultural resource survey done in section 16. In January of 1998, the Colorado Department of Transportation archaeological staff surveyed the very disturbed SH 93 transportation corridor through the section in preparation for proposed shoulder work. No cultural resources were located (Hand 1998).

A cultural resource survey was also done for the 35-mile long proposed W470 corridor in 1988 and 1989. The corridor was located just south of section 16. No cultural resources were located in the vicinity, however most of the corridor in the Rocky Flats area was excluded from the survey (Joyner 1989).

3.4 Socioeconomic Environment

The Rocky Flats NWR is at the intersection of Jefferson, Boulder, and Broomfield counties, in the northwest portion of the Denver metropolitan region. It is surrounded by open space to the north, east, and west and urban development to the northeast and southeast. Although there are no active developed uses within the Rocky Flats NWR, the DOE does retain some land within the middle of the site. Other nearby land uses include mining operations, wind energy research, and water collection and storage facilities.

Surrounding Communities

Five principal cities and towns (Arvada, Westminster, Broomfield, Superior, and Boulder) are located within close proximity to the Rocky Flats NWR. The general land uses of those portions of these municipalities located near the site are described below.

- The City of Arvada is located southeast of the Refuge. While most of Arvada's residential and commercial development is over 1 mile from the Refuge, the City's incorporated boundary directly abuts the site. A large area immediately south of the Refuge and east of SH 93 has been annexed by the City and is planned for residential and mixed development. This area, known as the Vauxmont property, is currently vacant and used is for livestock grazing.

- The City of Westminster is located directly east of the Refuge and north of Arvada. However, most of the western portions of Westminster's incorporated area consist of open space, including the Westminster Hills Open Space which is being restored as a native grassland and prairie dog habitat. Residential land uses begin about 1.5 miles east of the Refuge.

- The City and County of Broomfield is located immediately east and northeast of the Refuge. The area to the east is dominated by open space associated with Great Western Reservoir and undeveloped land. Other portions of this area are planned for development supporting office complexes. An existing office complex is located about 1 mile northeast of the Refuge on the north side of SH 128.

- The Town of Superior is north and northeast of the Refuges' northeastern corner. Existing residential areas are about ¼ mile north of the Refuge and future residential developments are proposed for the area. Superior's town center is located about 2 miles north of the Rocky Flats NWR boundary.

- The City of Boulder is north and west of the Refuge's northwestern corner. Much of the open space adjacent to the Refuge in this general area is owned or managed by the City of Boulder as open space, both for recreational and wildlife habitat purposes. The Flatirons Vista and Greenbelt Plateau trail systems are located in areas adjacent to the northern boundary of the Rocky Flats NWR.

Population and Demographics

The population in Jefferson County grew from 527,056 in 2000 to 534,543 in 2010 (U.S. Census Bureau), a total increase of 7,487 people. Population in the County is projected to continue growing over the long term, and reach more than 700,000 by the year 2040 (Colorado State Demography Office).

The communities nearest to Rocky Flats NWR also exhibit strong growth trends. The surrounding communities have experienced tremendous growth over the past several years and this trend is expected to continue. This anticipated growth is considered in city, county, and regional plans. Census data for these communities can be found in the table below.

			CHANGE BETWEEN 2000 AND 2010	
CITY / TOWN	2000 POPULATION	2010 POPULATION	#	%
Arvada	102,153	106,433	+4,280	+4.2%
Boulder	94,673	97,385	+2,712	+2.9%
Broomfield	38,272	55,889	+17,617	+46.0%
Superior	9,011	12,483	+3,472	+38.5%
Westminster	100,940	106,114	+5,174	+5.1%
Total	**345,049**	**378,304**	**+33,255**	**+9.6%**

Within the surrounding communities noted in the table above, approximately 80% consider themselves to be non-Hispanic whites (Census 2010). Within the communities, approximately 13% of the population is Hispanic, with the highest proportion (21%) in Westminster.

Employment

As designated by the State of Colorado, Rocky Flats NWR is located in the Tri-County Workforce Region (Jefferson, Gilpin, and Clear Creek Counties). In June 2011, the average unemployment rate for this area was 8.3%, while the State average was 8.7% (Colorado Department of Labor and Employment). In the fourth quarter of 2010, the largest employment sectors were retail trade (29,098 employees), health care and social assistance (22,974), and accommodation and food services (21,901). (Colorado Department of Labor and Employment 2011).

WORKFORCE REGION	NUMBER EMPLOYED	NUMBER UNEMPLOYED	UNEMPLOYMENT RATE
Boulder	160,804	11,986	6.9%
Broomfield	28,069	2,429	8.0%
Tri-County (Jefferson, Gilpin, Clear Creek)	284,143	25,668	8.3%
Colorado	2,687,828	2,453,351	8.7%

Income

In 2009, per capita personal income was $45,834 in Jefferson County, a 2.8% annual increase since 1999. Total personal income in Jefferson County was $24.6 billion in 2009, up from about $18.3 billion in 1999, reflecting an average annual growth rate of about 3.0% (Bureau of Economic Analysis).

In 2008, median household income in Jefferson County was $66,627. This was 9% higher than the median household income across Colorado, and 32% higher than the median figure for the United States as a whole (Colorado Department of Labor and Employment). These figures are also substantially higher than Federal poverty thresholds for the same year. In 2008, Federal poverty thresholds for households of two and three persons were annual income of $14,051 and $17,163, respectively (U.S. Census Bureau).

	TOTAL PERSONAL INCOME		PER CAPITA PERSONAL INCOME	
COUNTY	2009 TOTAL	AVG ANNUAL GROWTH (1999-2009)	2009 TOTAL	AVG ANNUAL GROWTH (1999-2009)
Boulder	$14.6B	3.4%	$48,056	+2.8%
Broomfield	$2.1B	n/a	$37,135	n/a
Jefferson	$24.6B	3.0%	$45,834	+2.8%

Land Ownership

The existing administrative boundary of the Refuge includes 6,240 acres of Federally-owned land, part of which is managed by the Service and part of which is managed by DOE. A substantial portion of the

subsurface mineral rights on DOE-managed land within the Refuge acquisition boundary is privately owned or encumbered by leases. Existing Service policy states that it will not accept the transfer of jurisdiction from DOE if the land is subject to the mining of gravel or other aggregate materials. There are currently efforts underway to acquire mineral rights to the areas within the Refuge acquisition boundary.

Section 16

The State of Colorado currently owns section 16, including the 617 acres that have been proposed for exchange, and the land is managed by the State Land Board. Portions of section 16 have been mined for clay and aggregates and most of the land is leased for grazing livestock.

Land Ownership at Other Potential Refuge Expansion Sites within Colorado

There are two options under consideration for adding lands to existing wildlife refuges in the State of Colorado at either the Arapaho NWR in Jackson County or the Baca NWR in Alamosa and Saguache Counties.

- The 3,687-acre land holding within the Arapaho NWR is available for purchase from a private land owner, and represents the largest remaining inholding within the Refuge's acquisition boundary.

- A portion of a 103,000-acre property owned by The Nature Conservancy is within the Baca NWR's acquisition boundary, and The Nature Conservancy (TNC) has expressed an interest in conveying this property to the Service.

Property Tax

The Rocky Flats NWR is Federally owned, and section 16 area is State-owned, meaning that there are no property taxes paid on these sites, and there would be no impacts from the changing of the acquisition boundary for the Refuge. Properties that are under consideration for acquisition at other refuges in the State may involve a change in land ownership status from private to public, meaning a net loss in property tax revenues for local jurisdictions.

Public Use and Wildlife-dependent Recreational Activities

The Refuge is currently not open to the public. However, the plan for public use and recreational opportunities is defined within the Rocky Flats NWR 2004 Comprehensive Conservation Plan for the site, which outlines how visitors will access the site, what activities they will enjoy, and what facilities they will encounter.

- **Access:** Access to the site will be obtained via a two-lane road off SH 93. The access road will direct visitors to orientation information, trailheads and parking areas. To tie into surrounding existing and proposed trail systems, additional trailheads will be built on the north, east, and south boundaries of the Refuge. Strategically located to provide links to proposed trail networks, the secondary access points along the Refuge boundary will permit visitors to enter the site on foot, bike, and in some cases by horse.

The Refuge will remain open from sunrise to sunset. Since visitors will be able to enter the site from a number of access points, each entry will serve as a "use portal" where signage will inform users about the distinction between where they came from (e.g., municipal open space) and where they are going (a National Wildlife Refuge). In addition to clarifying access opportunities and restrictions as well as information on the site's history and cleanup, the signage will inform visitors about the conservation practices and priorities that may differ from those of surrounding open space areas.

- **Wildlife-Dependent Public Uses:** The Refuge will provide a spectrum of wildlife recreation opportunities ranging from guided tours, to hiking, to interactive interpretation programs. Visitors will explore and learn about the site independently with the aid of interpretive facilities including signage, kiosks, and printed materials. Through the careful siting of trails and the design of visitor use facilities, it will be possible to shape the Refuge environment so that it invites exploration and reveals natural processes while minimizing impact to sensitive areas. Interpretive and educational programs will promote appreciation of the ecology of the prairie environment and inspire a greater appreciation for the Front Range's remaining grassland habitat. Dogs and other pets will not be permitted on the Refuge. The visitor experience will include opportunities for the public to engage in wildlife observation, photography, interpretation, environmental education, and possible hunting. The public use activities will be carefully managed to avoid harmful impacts to wildlife and their habitat. Because the Service will focus on restoration and facility development during the first 5 years of Refuge operation, most of these activities will not be instituted until the Refuge is fully open to the general public.

- **Facilities:** Facility development will carefully balance habitat conservation with opportunities for visitors to explore the prairie. Facility development will include trails, trailheads (with portable restrooms) overlooks, information kiosks, viewing blinds, contact station (with restrooms) and parking areas. Initially, the site will only be open to the general public at scheduled times and only one trail (1.75 miles) to Lindsay Ranch will be open to pedestrians. The initial trail will extend from the parking area to the Rock Creek overlook and make a loop within the Rock Creek drainage. Outlined below are all facilities that will be developed and open to the public once adequate funding is available to manage the refuge for public access:

  - Trails: Approximately 12.8 miles of multi-use trails and 3.8 miles of pedestrian-only trails will be developed. The majority of the trails will follow converted road corridors away from riparian areas. Trails within the Rock Creek drainage and other sensitive areas will be subject to seasonal closures as needed to protect wildlife. Looped pedestrian-only and multi-use trails as well as connections to adjacent trail systems will accommodate a variety of trail users.

  - Kiosk: Within a kiosk located outside the contact station, visitors will find maps of the trail system, rules and regulations, and information on Refuge wildlife and habitat. The kiosk will consist of three sign panels hung on a wooden structure. The kiosk will be accessible to all visitors when the contact station is closed. During the early years of visitor use of the refuge before development of the contact station and when access is limited, the kiosk will provide information on current and future public use opportunities.

- Equestrian Uses: Only multi-use trails in the southern portion of the site will be open to equestrian uses. Hitching posts will be located near the contact station, allowing equestrian users to hike to Lindsay Ranch.

- Trailheads: All entries to the Refuge trail system will be posted with signage that clearly demarcates the visitor's entry into a National Wildlife Refuge.

- Overlook: Three overlooks will provide views of the site and the outlying landscape. The overlooks will be simple and designed to fit into the prairie landscape. They will likely entail a graded, gravel area sited for its nearby and distant views. The Rock Creek and SH 128 overlooks will feature interpretive sign panels. Benches at the Woman Creek and Rock Creek overlooks will provide a resting point for visitors.

- Blinds: Wildlife viewing blinds will be sited to optimize observation opportunities. The blinds will be designed to blend in with the surrounding landscape and minimize disturbances to wildlife.

- Parking: Four parking areas (spaces for about 54 cars and one bus) will be constructed. The largest parking lot (30 spaces) will be located at the entry drive terminus, adjacent to the contact station. This main parking area will be designed to accommodate horse trailers. An additional parking lot (20 spaces) will be situated on the site's northern edge with convenient access from Highway 128. Pull-offs along the main access road, south of the visitor contact station, and along Indiana Street will provide additional parking spaces (3 to 4 spaces each) for visitors using trails in the southern portion of the Refuge. All parking areas will be gravel and will be enclosed by a post and beam fence.

- Contact Station: A small structure (approximately 750 to 1,000 square feet) will house an interpretive display and staff office space. The contact station will be the primary orientation point for visitors where they will collect information about the Refuge. The station also will serve as the meeting ground for guided tours and other Refuge programs. Located outside the main parking area, the contact station will be staffed seasonally (e.g., weekends from May through October), to provide visitor contact with Refuge staff.

4.0 Environmental Consequences

This chapter assesses the environmental impacts that would be expected to occur from the implementation of alternatives A, B, C, and D as described in chapter 2. Environmental impacts are analyzed by issues for each alternative and appear in the same order as discussed in chapter 2. The terms “bike path” and “highway” reference independent transportation use proposals that have been submitted to the Service; for details see a discussion of these proposals in Appendices E and F.

4.1 Effects on the Physical Environment

This section describes the effects of each alternative on the physical environment, including geology, mineral resources, soils, water, and the Service’s ability to address climate change. Further effects on the physical environment that are applicable to all alternatives are discussed below in “Unavoidable Adverse Impacts.”

Alternative A (No Action)

If there is no change to the administrative boundary of the Refuge and the 300-foot-wide transportation corridor is disposed of via direct sale, the existing mineral lease on Section 16 may be exploited to extract marketable resources from the Rocky Flats Alluvium on that parcel. There would be a loss of productive soils on that parcel until mineral extraction is complete and the site has been reclaimed. There would also be a loss of productive soils within a portion of the 300 foot transportation corridor; the amount of loss would depend upon the amount of paved area in that 2.76-mile long parcel, but could range from 15 feet in width for a bike path up to nearly 300 feet for a highway with a multi-use path. Rights to the mineral resources under the 300-foot-wide transportation corridor would be transferred to the party receiving the surface rights, so there could be potential impacts to those resources as long as those uses do not interfere with the mandated use of the parcel for transportation improvements.

The 300-foot-wide transportation corridor includes 5,133 feet of streams and ditches. Besides the potential loss of wildlife habitat associated with those waterways if the corridor is developed, there is the potential for increased downstream sedimentation and turbidity of surface water as a result of ground disturbance and increased erosion via runoff. There may also be effects on water quality due to runoff from the impervious surface of new transportation facilities if constructed, and increased temperatures downstream. It was determined in the Rocky Flats NWR CCP/EIS (USFWS 2004a) that these impacts would not significantly affect the management of Rocky Flats as a wildlife refuge. Development of the 300-foot-wide parcel for transportation purposes would have to be performed in accordance with applicable local, State, and Federal regulations, including state radiation health standards that would be triggered by the disturbance of low-level residual plutonium in the soil as discussed in Appendix G.

Under this alternative, section 16 would remain available for future development which would isolate the Refuge from existing regional open space that runs along much of the foot of the Front Range. One of the primary ecological concerns of climate change is the potential for populations with genotypes that are adapted to specific environmental conditions to die out because they are isolated from the land that will have those conditions under future climate regimes (Loss et al. 2011). Future climate projections suggest a substantial increase in temperature with a slight decrease in precipitation, which would leave the Refuge

vulnerable to more intense and frequent wildfire in the future and exert selection on the existing biodiversity of the Refuge. In Colorado, average temperatures have increased about 2 degrees Fahrenheit (°F) in the past 30 years and future winter projections indicate fewer extreme cold months, more extreme warm months, and more strings of consecutive warm winters (National Research Council of the National Academies 2007; Western Water Assessment 2008). Alternative A would make it more difficult for the Service to manage Refuge resources and adapt to climate change.

Alternative B (Proposed Action)

Under this alternative, the mineral lease held on section 16 would be extinguished, and the mineral rights transferred to the United States along with the surface rights. The Rocky Flats Alluvium on the site would remain unextracted. Some reclamation would likely be necessary because of early and mid-twentieth century clay mining on the site, but the effort required to restore those parts of section 16 to tallgrass and mixed grass prairie would be far less than that required to reclaim the site from the full-scale gravel extraction would be likely to take place under Alternative A. Soil and mineral effects on the transportation corridor would be the same as under Alternative A. One of the existing land exchange proposals (Appendix F) would also provide for an extinguishment of mineral leases on lands within the administrative boundary of the Refuge that are currently administered by the DOE, which would allow the subsurface minerals and surface soils on an approximately 629 additional acres to remain in an undisturbed state and allow them to subsequently become a part of the Refuge.

There would be little difference in direct impacts to water resources between Alternatives A and B because under Alternative B the water rights in section 16 would remain in private ownership. Effects to water quality resulting from potential transportation improvements would be similar to Alternative A, and these development activities would be performed in accordance with applicable local, state, and Federal regulations, including state radiation health standards.

Alternative B would allow section 16 to be protected from development. This would preserve a habitat corridor that may allow future colonization of the Refuge by both new species and other ecotypes of existing species, which may be better suited for future climate regimes. This would allow the Refuge to be managed for greater resilience to climate change.

Alternative C

The effects on section 16 and the transportation corridor would be similar to that described in Alternative A. However, there would be conservation of productive soils on other privately held lands within either Arapaho or Baca National Wildlife Refuges.

Alternative D

Under this alternative, the acquisition of property within Arapaho and Baca National Wildlife Refuges would protect the geological resources of that parcel as under Alternative C, and the Service could potentially pursue the acquisition of an interest in section 16 in the future in order to realize some of the benefits of Alternative B.

4.2 Effects on the Biological Environment

This section describes the effects of each alternative on vegetation, wildlife, and Special Status Species. The Service will complete an intra-Service Section 7 consultation on its proposed activities as they relate to the Preble's meadow jumping mouse and the potential for modification of designated critical habitat. This decision is completed as a part of the final environmental assessment.

Alternative A (No Action)

The No Action Alternative addresses the disposal of the 300-foot-wide transportation corridor along the eastern border of the Refuge, as mandated by the Rocky Flats Act. Therefore, there are few differences in the effect on vegetation or wildlife in the transportation corridor between Alternative A and the other action alternatives.

Vegetation

As previously mentioned, the 300-foot-wide transportation corridor includes 5,133 feet of streams and ditches (USFWS 2004a), the latter of which are mostly dry. Disturbance to the full 300-foot-strip could destroy more than 9 acres of xeric tallgrass prairie and 65 acres of mesic, riparian, and wetland vegetation. The amount of loss would depend upon the amount and location of disturbance, but could be up to 300 feet for a highway. Besides the potential loss of wildlife habitat associated with the streams if the corridor is developed, there also is the potential for increased downstream sedimentation and turbidity of surface water as a result of runoff from disturbed soil and subsequent erosion. This soil disturbance and resultant erosion could affect aquatic vegetation, at least until the affected areas were stabilized. There also is potential for effects on aquatic resources due to runoff from the impervious surface of a new highway. However, the Rocky Flats NWR CCP/EIS (USFWS 2004a) determined that these effects would not significantly affect the management of Rocky Flats as a wildlife refuge.

If there is no change to the administrative boundary of the Refuge and the 300-foot-wide transportation corridor is divested via direct sale, the existing mineral lease on section 16 may be exploited to extract marketable resources from the Rocky Flats Alluvium on that parcel. If that were to happen, vegetation would be lost in upland areas and in wetland and riparian corridors. Loss of uplands would be particularly problematic for the native xeric tallgrass prairie. The Northwest Corridor Transportation Environmental Study (FHWA 2008) identified much of this section as tallgrass prairie, and Artmann and Hannan (2011, unpublished data) estimated that two-thirds of section 16 was dominated by xeric tallgrass prairie. If the site were disturbed, there is no guarantee that it would be adequately restored. In addition, noxious weeds such as toadflax and several knapweed species would likely proliferate and provide a constant source of weed seed to the adjacent Refuge.

Similar destruction of uplands, wetlands, and riparian areas in the DOE-retained land to the northwest of the Refuge will occur if the No Action Alternative is chosen and the mineral leases are not purchased by the Federal Government. If these northwestern areas are quarried, the mining company will be required to revegetate the sites, but the native vegetation would be lost, including the xeric tallgrass prairie and much of the wetland, riparian, and even upland shrub communities. Even restoration by the mining company would likely fall considerably short of the vegetative communities that currently exist there. Prior to restoration, noxious weeds might proliferate and spread seed over the adjacent Refuge.

General Wildlife and Special Status Species

The Service works mostly with Federal trust species. Of particular relevance to this EA are special status species (usually threatened and endangered species and other species of concern) and migratory birds. Special status species for this discussion include the Preble's meadow jumping mouse, the bald eagle, the burrowing owl and due to its relevance to important raptor species, the black-tailed prairie dog. In addition, the Refuge Purposes of the Rocky Flats Act included "providing habitat for, and population management of, … resident wildlife" as well as threatened and endangered and migratory species; therefore some large mammals under State jurisdiction are discussed.

Divestiture and the resulting disturbance to the 300-foot-wide transportation corridor will not likely have a significant effect on wildlife. Most of Rocky Flats NWR has been identified as habitat for ungulates (elk and deer), some of which would be lost by development of the corridor. Also, movements of elk and deer between the Refuge and the open space east of Indiana Street would be hampered, and the impact of this development would likely increase proportionally with increased development of the transportation corridor unless appropriate mitigation measures such as adequate underpasses were included in the transportation plan. However, the Rocky Flats NWR CCP/EIS (USFWS 2004a, p. 193) stated that "the Service does not want to encourage the movement of deer and elk between the Refuge and the open space lands to the east because of the potential for impacts to nearby subdivisions, and efforts to discourage the establishment of a resident elk herd in the grasslands around Rocky Flats. For these reasons the designs of any transportation improvements along the Indiana Street corridor could include crossings that facilitate the movement of smaller species (such as small mammals and reptiles) while prohibiting the movement of deer and elk. Crossings should be located at Woman Creek and Walnut Creek, as well as select upland locations."

The Rocky Flats NWR CCP/EIS (USFWS 2004a) estimated that loss of the entire 300-foot transportation corridor would remove 8.5 acres of Preble's meadow jumping mouse habitat in the transportation corridor portions of Walnut Creek, Woman Creek, and Mower Ditch. After the EIS published, the FWS has designated critical habitat for the Preble's meadow jumping mouse in a portion of the 300-foot transportation corridor, totaling 12.4 acres. However, a visit by Service biologists to these sites on April 27, 2011, revealed that Preble's meadow jumping mouse habitat was almost nonexistent in Mower Ditch and that Walnut Creek and Woman Creek did not appear as optimal as habitat located west of these two parcels and just east of Indiana Street in the Walnut Creek drainage. The Northwest Corridor Transportation Environmental Study (FHWA 2008) suggested that construction of a highway could cause harm to the species from increased mortality of individual mice during construction, but would be designed to facilitate Preble's movement through better culverts at Walnut Creek and Woman Creek. Compliance with the ESA will need to occur should construction of the highway go forward, which would may adversely affect the Preble's meadow jumping mouse.

The black-tailed prairie dog is a Colorado Species of State Concern (FHWA 2008). Although about three-quarters of the transportation corridor area is potential habitat for the prairie dog, less than 2 acres were occupied in 2004 (USFWS 2004a). A recent outbreak of sylvatic plague may have eliminated all of these occupants. Considering the large expanse of unoccupied prairie dog habitat within the Refuge, divesture of the transportation corridor is not considered potentially problematic for this species, or for other special status species such as burrowing owls and bald eagles that prey upon the prairie dog. While the eagle is no longer protected as a threatened or endangered species, it holds its "special" status through specific

legal mandates under the Bald and Golden Eagle Protection Act of 1940. However, the obvious proximity of the transportation corridor to a currently busy road (Indiana Street) and the lack of suitable bodies of water along this corridor diminish the suitability of this area for bald eagles. Better eagle habitat is available in nearby open spaces and reservoirs.

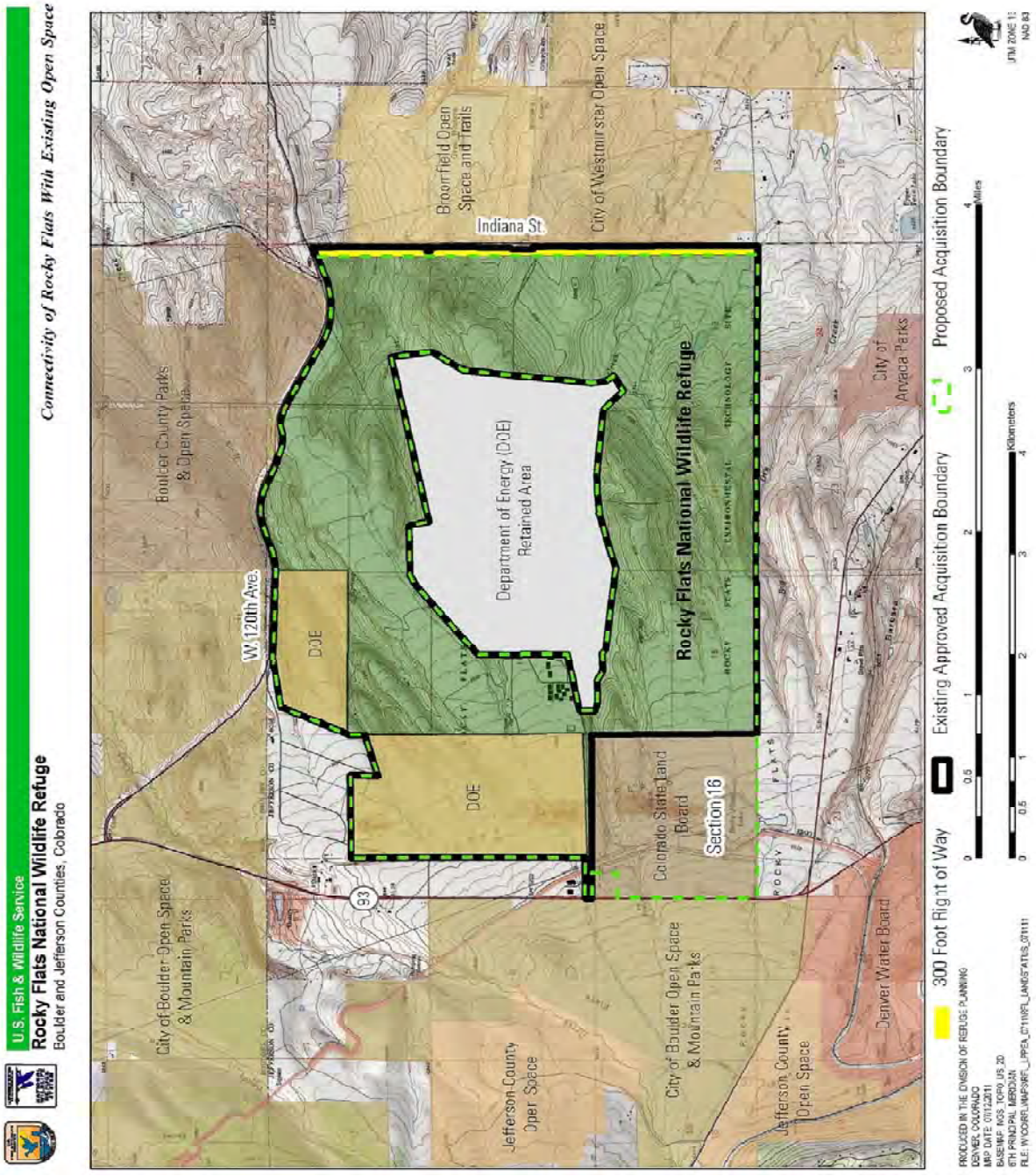
The burrowing owl is listed as threatened by the State of Colorado (CDOW 2011), and is dependent on prairie dog towns for nesting. However, very little prairie dog activity has been observed in the transportation corridor in recent years. With large areas available for prairie dogs elsewhere, burrowing owls should not be adversely affected by any transportation use in the 300-foot-wide corridor.

Similarly, other migratory bird species such as raptors, neotropical migrants, waterfowl, and shorebirds are not likely to be adversely affected by the divestiture. While some grassland and riparian habitats do exist in and near the corridor (USFWS 2004a), the amount of suitable habitat that would be lost is not considered significant enough to adversely affect any species in these groups. Ferruginous hawks rely on prairie dogs for prey, but the transportation corridor does not hold enough prairie dogs (if any) to be essential to these raptors.

Additional noise and light would result from the construction and use of the transportation corridor. This is particularly problematic for birds (USFWS 2004a). These disturbances would be greater on a larger project such as a four-lane highway than a smaller improvements such as a bike path. The Rocky Flats NWR CCP/EIS identified several methods of mitigating these disturbances for both construction (e.g., light positioning) and traffic (e.g., vegetation sound barriers).

Under the No Action Alternative, section 16 would remain available for future development, which would isolate the Refuge from existing regional open space that runs along much of the Front Range. This property is important for current and future movements of wildlife, especially deer and elk, between the foothills and the Refuge. From the standpoint of Federal trust species, section 16 contains some riparian habitat that is considered suitable for Preble's meadow jumping mouse and also possesses excellent shrubby riparian corridors that are potentially important to neotropical migrant bird species. In addition, open native prairie such as found in section 16 is important to various species of grassland birds, and some open water is used by waterfowl and wading birds. Currently, much of this habitat is far enough away from SH 93 to be very useful to these species, all of which could potentially be lost under the No Action Alternative. Also, section 16 provides a mile of buffer to the Refuge, which could be replaced by a mining operation or other development considered inappropriate along the perimeter of a wildlife refuge.

Under the No Action Alternative, there would be no possibility of obtaining the mineral leases and eventually the mineral rights to the land located northwest of and adjacent to the Refuge. Parts of this property are currently very important to Preble's meadow jumping mouse. Both the riparian areas and the upland shrublands are also significant to many species of birds and mammals. Deer and elk are seen in and near these parcels on a regular basis. Some native xeric tallgrass prairie exists in this area and is used by migratory songbirds. All of this could potentially be lost under the No Action Alternative.



Connectivity of Rocky Flats With Existing Open Space

Alternative B (Proposed Action)

Alternative B would expand the administrative boundary of the Refuge and complete a land exchange for holdings at the Refuge. As with all alternatives, land up to 300 feet wide along the eastern border of the Refuge would be divested, as mandated by the Rocky Flats Act. However, the transportation corridor would be exchanged for land and related mineral leases and rights for most of section 16 along the southwestern border and for mineral leases on DOE-retained lands northwest of the current Refuge border.

Vegetation

Impacts to vegetation along the 300-foot-wide transportation corridor in Alternative B would be similar to those in Alternative A.

If Alternative B is selected, the existing mineral lease on section 16 will not be exploited for marketable resources in that parcel. If the Service acquires the lease, vegetation would be preserved and could likely be improved through an Integrated Pest Management (IPM) approach to weed control in upland grassland areas and in wetland and riparian corridors. Protection of uplands would be particularly important for the native xeric tallgrass prairie, which is widespread in this section (FHWA 2008). Noxious weeds such as toadflax and knapweed species would likely disappear over time and quit 'infecting' adjacent Refuge land with a constant source of weed seed.

Similar destruction of uplands, wetlands, and riparian areas in the DOE-retained land northwest of the Refuge could be averted if Alternative B is selected and the mineral leases are purchased by the Federal Government. The xeric tallgrass prairie, the wetland and riparian vegetation and several upland shrub communities would be permanently protected. Future weed infestations would be less likely than under the No Action Alternative, and weed encroachments could be controlled more easily.

Preserving the xeric tallgrass community is not to be taken lightly. Essington et al. (1996) and Nelson (2003) have proposed that this type of grassland is probably a small relict of a community that was once connected to the tallgrass prairie hundreds of miles to the east. The CNHP considers this community to be so rare that it exists in fewer than 20 places globally, and that Rocky Flats has the largest example remaining in Colorado and perhaps North America (Essington et al. 1996). The CNHP ranks the xeric tallgrass community as imperiled within the State. A significant portion of this prairie is located in section 16 and the two DOE parcels northwest and adjacent to the Refuge.

General Wildlife and Special Status Species

Impacts to wildlife along the 300-foot-wide transportation corridor in Alternative B would be similar to those in Alternative A.

Under Alternative B, section 16 would no longer be available for future development and therefore would provide a wildlife corridor between the current Refuge and existing regional open space that runs along much of the Front Range. This property is especially important to deer and elk moving between the foothills and the Refuge. From the standpoint of Federal trust species, expanding the Refuge to include section 16 would protect some existing riparian habitat that is considered suitable for the Preble's meadow jumping mouse and is potentially important to neotropical migrant bird species. Open native

prairie, such as that found in section 16, is important to various species of grassland passerines and raptors, and open water at Rocky Flats Reservoir is used by waterfowl and wading birds. These habitats would remain in their current status or improve if protected. Alternative B would continue to provide a mile of buffer to the existing Refuge, which, if the No Action Alternative were selected, could be replaced by a mining operation or other development considered inappropriate along the perimeter of a wildlife refuge.

Section 16 contains riparian shrubland along Woman Creek, known to be important Preble's mouse habitat

Under Alternative B, the mineral rights to the land located northwest and adjacent to the Refuge would be back in Federal ownership, protecting these important areas. Preserving the xeric tallgrass prairie would protect habitat for some migratory passerines and raptors. Parts of this property are considered very important to Preble's meadow jumping mouse. Both the riparian areas and the upland shrublands are also significant to many other species of birds and mammals. Deer and elk are seen in and near these parcels on a regular basis. All of this important habitat would be preserved under Alternative B.

Alternative C

Alternative C would not expand the administrative boundary of the Refuge but would complete a land exchange for holdings at other refuges in Colorado. As with all alternatives, a strip of land up to 300 feet wide along the eastern border of the Refuge would be divested, as mandated by the Rocky Flats Act. The transportation corridor would be exchanged for an inholding at either Arapaho NWR or Baca NWR.

Vegetation

Impacts to vegetation along the 300 foot transportation corridor in Alternative C would be similar to those in Alternative A, though the construction of a bike path or a bike path coupled with improvements to Indiana Street is likely to have a smaller footprint than the construction of a toll highway with a bike path.

If the 300-foot-wide transportation corridor is divested through an exchange with Arapaho NWR or Baca NWR, and therefore there is no change to the administrative boundary of Rocky Flats NWR, the existing mineral lease on section 16 may be exploited to extract marketable resources from the Rocky Flats Alluvium on that parcel. If that were to happen, vegetation would be lost in grassland areas and in wetland and riparian corridors. Loss of uplands would be particularly problematic for the native xeric tallgrass prairie in section 16 because this vegetation type dominates approximately two-thirds of the section (Artmann and Hannan 2011, unpublished data). If disturbed, there is no guarantee that the site would be adequately restored. In addition, noxious weeds such as toadflax and several knapweed species would likely proliferate and provide a constant source of weed seed to the adjacent Refuge.

Similar destruction of uplands, wetlands, and riparian areas in the DOE-retained land northwest of the Refuge would likely occur if Alternative C is selected and the mineral leases are not purchased by the Federal Government. If these northwestern areas are quarried, the mining company will be required to revegetate the sites, but this would eventually destroy the native vegetation, including the xeric tallgrass prairie and much of the wetland and riparian and even upland shrub communities. Even restoration by the mining company would likely fail to replace the vegetative communities that currently exist there. Prior to restoration, noxious weeds might proliferate and spread seed over the adjacent Refuge.

If Alternative C is selected and the inholding in the southern portion of Arapaho NWR is exchanged for the 300-foot transportation corridor, a large parcel of riparian and upland habitats would become part of the Arapaho Refuge. The riparian, meadow and wetland areas along the Illinois River (a stream at this location) produce six species of willows and numerous species of grasses, sedges, and rushes (USFWS 2004b). The upland areas also have numerous grasses and a number of shrub species. Common weedy species include Canada thistle and some grasses that have been introduced for grazing and haying. Selection of Alternative C / Arapaho would preserve this unique area and provide an opportunity to control the exotic species there.

If Alternative C is selected and The Nature Conservancy (TNC) inholding in the southern portion of Baca NWR was exchanged for the 300-foot right-wide strip, a large parcel of mostly shrubland/grassland mix and herbaceous stabilized areas in sandy soils, with some mesic meadows, playas, and emergent marshes (USFWS 2005b) would be protected. Typical upland species appear to be rubber rabbitbrush (*Chrysothamnus nauseosus*), greasewood (*Sacrobatus vermiculatus*), and numerous native and non-native species of grasses. Weedy species include cheatgrass (*Bromus tectorum*, a highly invasive exotic), and crested wheatgrass (*Agropyron cristatum*, a commonly planted species for grazing, haying, and soil stabilization). Selection of Alternative C / Baca NWR would preserve this site and provide an opportunity to control the existing exotic species.

Wildlife and Special Status Species

Impacts to wildlife along the 300-foot-wide transportation corridor in Alternative C would be similar to those in Alternative A, though as stated above, the footprint of a proposed transportation improvements currently fitting Alternative C would be smaller and effects on wildlife would be lower.

Under Alternative C, section 16 would remain available for future development, which would isolate the Rocky Flats NWR from existing regional open space that runs along much of the Front Range. This property is important for current and future movements of wildlife, especially deer and elk, between the foothills and the Refuge. From the standpoint of Federal trust species, section 16 contains some riparian habitat that is considered suitable for Preble's meadow jumping mouse, and also possesses excellent shrubby riparian corridors that are potentially important to neotropical migrant bird species. In addition, open native prairie such as that found in section 16 is important to various species of grassland birds, and open water at Rocky Flats Reservoir is used by waterfowl and shorebirds. Currently, much of this habitat is far enough away from SH 93 to be very valuable to these species, all of which could potentially be lost under the No Action Alternative. Also, section 16 provides a mile of buffer to the Refuge, which could be replaced by a mining operation or other development considered inappropriate along the perimeter of a wildlife refuge.

Under Alternative C, there would be no possibility of obtaining the mineral leases and eventually the mineral rights to the land located northwest and adjacent to the Refuge. Parts of this property are currently very important to Preble's meadow jumping mouse. Both the riparian areas and the upland shrublands are also significant for many species of birds and mammals. Deer and elk are seen in and near these parcels on a regular basis. Some native xeric tallgrass prairie exists in this area and is used by migratory songbirds. All of this could potentially be lost under Alternative C.

If Alternative C is selected and the inholding in the southern portion of Arapaho NWR is exchanged for the 300 foot corridor, a large parcel of riparian (with some meadow and wetland areas) and upland habitats would become part of that Refuge. Wildlife using these habitats at Arapaho NWR include sage grouse (*Centrocercus urophasianus*), various raptors, numerous species of waterfowl and shorebirds, and at least 40 species of migrating songbirds (USFWS 2004b). Mammals that use the area include beaver (*Castor canadensis*) and several species of large mammals such as moose (Alces alces), pronghorn (*Antilocapra americana*), mule deer, and elk. Selection of Alternative C would provide management opportunities for a variety of wildlife species under Federal and state jurisdiction, such as sage grouse and big game species.

If Alternative C is selected and TNC inholding in the southern portion of Baca NWR was exchanged for the 300-foot corridor, a large parcel of mostly shrublands and grasslands that provide wildlife habitat for a number of avian species, including songbirds such as horned larks (*Eremophilo alpestiris*) would be protected. The wetter areas within the surrounding area provide habitat for numerous other birds including various waterfowl, American avocets (*Recurvirostra americana*), and sandhill cranes (*Grus canadensis*). Globally vulnerable small mammals that live in these environments and which might be protected under Alternative C include the silky pocket mouse (*Perognathus flavus sanluisi*) and the thirteen-lined ground squirrel (*Spermophilus tridecemlineatus blanca*) (USFWS 2005b).

Alternative D

Alternative D would not only exchange land to expand the administrative boundary of Rocky Flats NWR, but also to obtain holdings at another refuge. As with all alternatives, land up to 300 feet wide along the eastern border of the Refuge would be divested, as mandated by the Rocky Flats Act. However, the transportation corridor would be exchanged for up to three other properties: (1) most of section 16, (2) the mineral leases/rights on DOE properties northwest of the Refuge, and (3) an inholding at either Arapaho NWR or Baca NWR. These exchanges would likely be on different timelines. Timing and expense are factors that would dictate the potential to pursue Alternative D.

Vegetation

Impacts to vegetation along the 300-foot-wide transportation corridor in Alternative D would be identical to those in Alternative A and therefore will not be discussed further.

If Alternative D is selected, the existing mineral lease on section 16 will not be exploited for marketable resources in that parcel. If the Service acquires the lease, vegetation would be preserved and probably improved through an IPM approach to weed control in upland grassland areas and in wetland and riparian corridors. Protection of uplands would be particularly important for the native xeric tallgrass prairie, which is widespread in this section (FHWA 2008). Noxious weeds such as toadflax and knapweed species would likely disappear over time and quit infesting adjacent Refuge land with a constant source of weed seed.

Similar destruction of uplands, wetlands, and riparian areas in the DOE-retained land northwest of the Refuge could be averted if Alternative D is selected and the mineral leases are purchased by the Federal Government. The xeric tallgrass prairie, the wetland and riparian vegetation, and several upland shrub communities would be permanently protected. Future weed infestations would be less likely than under Alternatives A or C, and weed encroachments could be controlled more easily.

Preserving the xeric tallgrass community is an important priority of the Service and other agencies. Essington et al. (1996) and Nelson (2003) have proposed that this type of grassland is probably a small relict of a community that was once connected to the tallgrass prairie hundreds of miles to the east. The CNHP reports that this community is now so rare that it exists in fewer than 20 places globally, and that Rocky Flats NWR has the largest example remaining in Colorado and perhaps North America (Essington et al. 1996). The CNHP ranks the xeric tallgrass community as imperiled within the State. A significant portion of this prairie is located in section 16 and the two DOE parcels northwest and adjacent to the Refuge.

If Alternative D is selected and the inholding in the southern portion of Arapaho NWR was part of the exchange for the 300-foot-wide transportation corridor, a large parcel of riparian and upland habitats would become part of the that Refuge. The riparian, meadow and wetland areas along the Illinois River (a stream at this location) produce six species of willows and numerous species of grasses, sedges, and rushes (USFWS 2004b). The upland areas also have numerous grasses, but also a number of shrub species. Common weedy species include Canada thistle and some grasses that have been introduced for grazing and haying. Selection of Alternative D would preserve this unique area and provide an opportunity to control the exotic species there.

If Alternative D would be selected and TNC inholding in the southern portion of Baca NWR were part of the exchange for the 300-foot-wide transportation corridor, a large parcel of mostly shrubland/grassland mix and herbaceous stabilized areas in sandy soils, with some mesic meadows, playas, and emergent marshes would be protected (USFWS 2005b). Typical upland species appear to be rubber rabbitbrush, greasewood, and numerous native and non-native species of grasses. Weedy species include cheatgrass (a highly invasive exotic) and crested wheatgrass (a commonly planted species for grazing, haying, and soil stabilization). Selection of Alternative D would preserve this site and provide an opportunity to control the existing exotic species.

General Wildlife and Special Status Species

Impacts to wildlife along the 300-foot transportation corridor in Alternative D would be identical to those in Alternative C and therefore will not be discussed further.

Under Alternative D, section 16 would no longer be vulnerable to future development and therefore would provide a wildlife corridor from the current Refuge to existing regional open space that runs along much of the Front Range. This property is especially important to deer and elk moving between the foothills and the Refuge. From the standpoint of Federal trust species, expanding the Refuge to include section 16 would protect some existing riparian habitat that is considered suitable for the Preble's meadow jumping mouse and is important to neotropical migrant bird species. Its open native prairie areas are important to various species of grassland passerines and some raptors, and open water at Rocky Flats Reservoir is used by waterfowl and wading birds, the current status of all of which would remain steady or actually improve. Alternative D would continue to provide a mile of buffer to the existing Refuge, which otherwise could be replaced by a mining operation or other development considered inappropriate along the perimeter of a wildlife refuge.

Under Alternative D, the mineral rights to the land located northwest and adjacent to the Refuge would be back in Federal ownership and these important areas would be protected from mining or other disturbance. Protecting the xeric tallgrass prairie would protect habitat for some migratory songbirds and raptors. Parts of this property are considered very important to Preble's meadow jumping mouse. Both the riparian areas and the upland shrublands are also significant to many other species of birds and mammals. Deer and elk are seen in and near these parcels on a regular basis. All of this important habitat would be preserved under Alternative D.

If Alternative D is selected and the inholding in the southern portion of Arapaho NWR were part of the exchange for the 300-foot-wide transportation corridor, a large parcel of riparian habitat (with some meadow and wetland areas) and upland habitats would become part of that Refuge. Wildlife using these habitats at Arapaho NWR include sage grouse, raptors, numerous species of waterfowl and shorebirds, and at least 40 species of migrating songbirds (USFWS 2004b). Mammals that use the area include beaver and several species of charismatic megafauna including moose, pronghorn, mule deer, and elk. Selection of Alternative D NWR would provide management opportunities for a variety of wildlife species under Federal (e.g., sage grouse) and State (e.g., big game) jurisdiction.

If Alternative D were selected and the TNC inholding in the southern portion of Baca NWR was part of the exchange for the 300-foot-wide transportation corridor, a large parcel of mostly shrublands and grasslands with some wetter areas would provide wildlife habitat for a number of avian species, including songbirds such as horned larks. The wetter areas within the general area provide habitat for numerous

other birds including various waterfowl, American avocets, and sandhill cranes. Globally vulnerable small mammals that live in these environments and that would be protected under Alternative D include the silky pocket mouse and the thirteen-lined ground squirrel (USFWS 2005b).

4.3 Effects on Cultural Resources

This section describes the estimated effects of each alternative on cultural resources.

Alternative A (No Action)

There could be the disturbance or loss of some of the linear ditches, which are non NRHP-eligible cultural resources within the 300 foot wide transportation corridor. These non-eligible sites are described in section 3.3; Previous Cultural Resource Investigations in Proposed Divestiture Lands. The SHPO concurred with the finding of no adverse effect for the proposed land disposal on November 5, 2010. Therefore, this alternative is not anticipated to result in an adverse effect.

Alternative B (Proposed Action)

The same effects as Alternative A are anticipated from the selection of Alternative B. Although, no cultural resources were located through previous studies in section 16, there is a potential that unidentified cultural resources may be protected by the addition of section 16 to the Refuge.

Alternative C

The same effects as Alternative A are anticipated from the selection of Alternative C. In addition, potentially unidentified cultural resources on private inholdings within Arapaho NWR or Baca NWR may be protected.

Alternative D

The same effects as Alternative C are anticipated from the selection of Alternative D. Although, no cultural resources were located through previous studies in section 16, there is the potential that unidentified cultural resources may be protected by the addition of section 16 and through future acquisitions of lands at other refuges.

4.4 Effects on the Socioeconomic Environment

This section describes the estimated effects of alternatives A, B, C, and D on the socioeconomic environment; specifically on land ownership, land use and development (including oil and gas, wind energy, and residential), and public use.

Effects on Land Ownership, Use and Development

The effects of the various alternatives on land ownership and land use are described below. The primary differentiator between the alternatives involves the potential for acquisition of State-controlled property within section 16, which has the potential to expand preserved open space holdings in the Rocky Flats NWR.

Alternative A (No Action)

As with all the alternatives, a 300-foot-wide strip of land would be disposed of by the Service, reducing the amount of Refuge land by approximately 100 acres. No other property outside of or within the Refuge would be affected. Under this alternative, the land removed from the Refuge would not be replaced or exchanged with an equal amount of new property, resulting in a net reduction in Federal open space.

Alternative B (Proposed Action)

The disposition of the land for a transportation improvement project would be used as a mechanism for a land exchange for new holdings at the Refuge, specifically within a 617-acre area at the far southwest edge of the existing acquisition boundary. Expansion of the acquisition boundary would allow for the Service to acquire land in this area, and the actual turning over of some portion of land to the Service would occur as a result of an exchange of land with approximately an equal value to the 300-foot-wide boundary area.

The proposed action would allow for the transfer of existing State-owned property to the Federal Government, and would potentially lead to contiguous connection with protected open space lands to the west. No private land owners would be affected by the expansion of the acquisition boundary, or the change from State lands to Federal ownership. Any ongoing lessees of these properties, such as for mining or livestock grazing, may be affected by this action. The acquisition of land within this area will reduce the likelihood that future development pressures, such as from the surrounding communities, will impinge on the preservation of wildlife and protected open space at the Rocky Flats NWR.

Alternative C

The disposition of the land for a transportation improvement would be used as a mechanism for a land exchange for new holdings at another refuge within Colorado, specifically capitalizing on opportunities to add to land holdings at Arapaho NWR or Baca NWR. This would occur as a result of an exchange of land with approximately an equal value to the 300-foot-wide boundary area, and possibly through the leveraging of opportunities to accept land donations from various charitable trusts.

Other than the disposition of the 300-foot-wide boundary area, this alternative would not have an effect on the land ownership or land use within the Rocky Flats NWR. The result would be a net reduction in land holdings within the Refuge, but may result in a statewide increase in Service-controlled property.

The State-owned land within section 16 would not become Federally-protected open space, and may be open to future activities such as mining, energy development, or residential or commercial development. This could lead to potential economic benefits to the State and local area, as these types of development could have fiscal impacts (sales tax, property tax) or economic growth impacts (jobs, energy development).

Alternative D

The disposition of the land for a transportation improvement project would be used as a mechanism for a land exchange for new holdings at another refuge within Colorado as defined in Alternative C. While the

acquisition boundary for the Refuge would be expanded to include section 16, no immediate exchange for land within this area would take place.

Expansion of the acquisition boundary would allow for the Service to acquire land in the State-owned section 16 area, although it would not require that the property is preserved in accordance with Refuge guidance. The land in this area would still be open to future activities such as mining, energy development, or residential or commercial development. This could lead to potential economic benefits to the State and local area, as these types of development could have fiscal impacts (sales tax, property tax) or economic growth impacts (jobs, energy development).

Overall, the size of the Rocky Flats NWR would be reduced in the short term, even though there may be a statewide increase in Service-controlled property due to acquisitions at Arapaho NWR or Baca NWR.

Effects on Public Use

Because the Rocky Flats NWR is currently not open for public use, there are not any existing public users that would be negatively affected by the various alternatives. However, the impacts to long-term plans for various public uses on the site are considered.

For all of the alternatives, the creation of a transportation improvement within the 300-foot-wide boundary area has the potential to serve as a barrier between the Rocky Flats NWR and the community and open space assets to the east. A stipulation of the disposition of the land for this improvement is that it must be undertaken so as to minimize potential negative impacts to the management and access to the Refuge.

Alternative A (No Action)

Because there would be no additional Refuge property added as part of this alternative, there would be no additional impact to public use options at the Rocky Flats NWR. At the same time, there would not be an opportunity to expand the options for public use through the exchange of land for additional Refuge property. The visitor experience in future public use scenarios would be adversely affected by proposed transportation improvements that may follow this action.

Alternative B (Proposed Action)

Under this alternative, the Rocky Flats NWR property would be expanded to incorporate additional land within the section 16 area. This would create additional opportunities for public recreation and use, and greater contiguity between existing open space assets controlled by the various Federal, State, county, and municipal governments in the immediate area. Additional effects would be similar to Alternative A.

Alternative C

Because there would be no additional Refuge property added as part of this alternative, there would be no additional impact to public use options at the Rocky Flats NWR. At the same time, there would not be an opportunity to expand the options for public use through the exchange of land for additional Refuge property. However, public use options at the existing Arapaho NWR and Baca NWR may be expanded under this alternative. Additional effects would be similar to Alternative A, though the potential

construction of a bike path, or a bike path with improvements to Indiana Street, is likely to have lesser adverse effects on the visitor experience at Rocky Flats NWR.

Alternative D

Because there would be no additional Refuge property added as part of this alternative, there would be no additional impact to public use options at the Rocky Flats NWR. Over the long-term, expansion of the acquisition boundary may lead to incorporation of land within the State-owned section 16 area. However, public use options at the existing Arapaho NWR and Baca NWR may be expanded under this alternative. Additional effects would be similar to Alternative A, though the potential construction of a bike path, or a bike path with improvements to Indiana Street, is likely to have lesser adverse effects on the visitor experience at Rocky Flats NWR.

Effects on Environmental Justice

Environmental Justice is defined as the fair treatment of people of all races, culture, incomes, and educational levels with respect to the development and enforcement of environmental laws, regulations, and policies. Fair treatment means that no population should be forced to shoulder a disproportionate share of environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, State, local, and tribal programs and policies. Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, mandates Federal agencies make achieving environmental justice part of their mission.

Because there are no people living at the Rocky Flats NWR, there are no residents who would be negatively nor disproportionately impacted by the various alternatives considered in this EA. The racial composition of the surrounding areas is predominantly white and not of Hispanic heritage. Median household income characteristics describe a population that has higher household income than State and national figures. These statistics are similar at Arapaho and Baca NWR. Based on the race and income characteristics of the surrounding communities and counties in these areas, as described in Section 3.4, there are not anticipated to be any disproportionate environmental justice impacts to sensitive or protected populations.

4.5 Unavoidable Adverse Impacts

Any adverse effects that may be unavoidable when carrying out these alternatives are described below.

Under all alternatives, land within 300 feet of Indiana Street will be transferred to an entity which has proposed transportation improvements in that corridor. All alternatives would result a loss of the habitat within the 300-foot-wide transportation corridor. This includes loss of critical habitat for the Preble's meadow jumping mouse. Details of the area and type of habitat lost are discussed in more detail in the 2004 Rocky Flats CCP/EIS (USFWS 2004a) and in this EA.

Increased noise associated with the proposed transportation improvements along Indiana Street could adversely impact the experience of Refuge visitors and displace wildlife or affect their behavior. Many species depend on sound to communicate, avoid danger, and locate food. Studies have found that noise can impact reproduction, productivity, behavior, and energy expenditure in wildlife (Bowles 1995). Increased traffic volume and/or speeds may impact wildlife species sensitive to noise. Lighting equipment

and increased light along the roadway could adversely affect some wildlife species. Artificial light can disrupt bird behavior, affect migration, increase bird collisions with structures, and increase risk of predation (IDA 2002). Impacts to the Refuge could be reduced by incorporating berms, sound walls, vegetation, or other noise-reducing techniques into the design of transportation improvements to reduce the impacts of traffic noise on wildlife and Refuge visitors. Roadway lighting could be designed to reduce light emission and be positioned to minimize effects to wildlife and Refuge aesthetics.

Use of standard emission minimization measures and dust abatement would mitigate potential impacts to air quality during construction for any of the proposed alternatives (FHWA 2008). Therefore, the Service does not anticipate significant impacts to air quality through violation of National Ambient Air Quality Standards[10] based on the proposed action. However, foreseeable transportation improvements which may lead to increased vehicle traffic are likely to result in higher vehicle emissions near the Refuge. This could result in negative effects to air quality, particularly in the form of higher ozone, volatile organic compound (VOC), and carbon monoxide (CO) levels. The Denver metropolitan area has a history of nonattainment of EPA standards for ozone and CO (FHWA 2008), though Denver is presently in a maintenance status. Because the implementation of proposed transportation alternatives is speculative, it is difficult to quantitatively analyze potential impacts of these proposals on air quality. However, a detailed analysis of Northwest Corridor Transportation Environmental Study construction alternatives determined that none of the alternatives would be likely to violate air quality standards or maintenance plans (FHWA 2008).

In addition, construction work to carry out the planned transportation improvements could disturb plutonium and other radioisotope contaminants potentially present in the surface soils of the 300-foot-wide parcel. The Service requested clarification on risks associated with construction activities on the transportation corridor. The CDPHE and EPA have provided specific analysis of this activity and determined the risk to a construction worker is at or below the low end of the CERCLA risk range (1 x 10-6) and any potential impacts to neighboring communities do not present health or environmental concerns (CDPHE 2011, Appendix G). An entity wishing to develop that parcel for transportation improvements would likely be required to take measures such as dust abatement to remain in compliance with Colorado Standards for Protection Against Radiation regulations[11]. Further, both the construction process and potential increased vehicle use on the Refuge boundary would result in an increased risk of the discharge of oil or the release of hazardous substances onto the Refuge or adjacent lands and waters.

4.6 Irreversible and Irretrievable Commitments of Resources

Any commitments of resources that may be irreversible or irretrievable because of carrying out alternatives A, B, C, or D are described below.

Alternative A (No Action)

There would be no commitment of resources by the Service if the No Action Alternative were selected. The Service's obligation under the Rocky Flats Act would be discharged.

[10] 40 CFR §50 – National Primary and Secondary Ambient Air quality Standards

[11] 6 CCR 1007-1 Part 4 – Standards for Protection Against Radiation; effective July 31, 2005

Alternative B (Proposed Action)

The Service would commit $2.8 million of property in the 300 foot transportation corridor toward a land exchange. The exchange and subsequent donation of land and surface mineral rights would result in the receipt of approximately $15 million in property and unexploited mineral estates by the United States.

Alternative C

The Service would commit $2.8 million of property in the 300 foot transportation corridor toward an exchange for an equivalent value of privately-held inholdings within Baca NWR or Arapaho NWR.

Alternative D

The same effects as Alternative C are anticipated under Alternative D. There would be no irreversible or irretrievable commitment of resources involved in the expansion of the administrative boundary of Rocky Flats NWR to include section 16. Potential acquisition of property in that section could come through LWCF funding or other appropriate means.

4.7 Cumulative Impacts

As defined by the Council on Environmental Quality's regulations for implementing NEPA (40 CFR §1508.7), a cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

This section describes the past, present, and reasonably foreseeable future actions related to the proposed action and alternatives. To define projects included for the cumulative analysis, only those actions were considered that have a reasonable expectation that they may occur, and would result in an identifiable incremental impact when combined with the effects of the proposed action or alternatives.

Past Actions

The most important past action that has the potential for cumulative impacts was the operation of the Rocky Flats Plant, which had a primary mission of manufacturing triggers for nuclear weapons. Construction of the plant, which was operated by DOE, began in 1951 and the plant was permanently decommissioned in 1992. Due to the nature of the work at the plant, radioactive materials, including plutonium and uranium, were onsite, and through a variety of means, resulted in contamination of soils and groundwater at the site. Additional contamination resulted from airborne plutonium. Several studies were conducted by the EPA and other organizations that mapped detectable levels of radioactive elements on the Rocky Flats property and at offsite areas, primarily east/southeast of the former plant in the direction of the prevailing winds.

The Rocky Flats Plant was placed on the EPA National Priority List (NPL) and became an EPA superfund site, with cleanup starting in 1992. In 2007, the EPA announced that a large portion of the Rocky Flats site was deleted from the NPL which reflected the completion of the response actions needed

to clean up the site. This allowed the DOE to transfer part of the Rocky Flats site to the U.S. Department of Interior (DOI) for the Service to manage as a National Wildlife Refuge. Section 1.1 in chapter 1 gives a brief description of the transfer of the Rocky Flats site to the Service.

Present Actions

The 2005 Rocky Flats NWR CCP sets the management direction for the Refuge. The CCP emphasizes conservation of habitat and wildlife, along with a moderate level of wildlife dependent public uses, primarily trails and interpretive displays. Due to a lack of funding, implementation of parts of the CCP is on hold, and most of the public access, as well as proactive habitat and wildlife conservation plans have been delayed. Present management at the Refuge focuses on maintenance, compliance with weed control regulations, and compliance with endangered species requirements.

As described in section 1.2 in chapter 1, the Service's Proposed Action is to expand the acquisition boundary of the Refuge to accommodate a potential land exchange related to a 300-foot-wide easement along Indiana Street, which was mandated in the Rocky Flats Act. The Act stated that land up to 300 feet in width shall be made available by easement or sale for the sole purpose of transportation improvements, provided that the improvements minimize adverse effects on the management of the Refuge, and are part of an approved Denver regional transportation plan.

Reasonably Foreseeable Future Actions

Reasonably foreseeable future actions are actions and activities that are independent of the proposed action, but may result in cumulative impacts when combined with the Proposed Action or alternatives. The future actions should have a reasonable expectation of occurring, and usually are anticipated to occur regardless of which alternative is selected. Transportation improvements, land development, mining, and recreation development in the form of trails are considered cumulative projects for this EA.

Transportation

As previously discussed, the Rocky Flats Act included a provision that the Service must make a 300-foot-wide strip along Indiana Street available by easement or sale for transportation improvements. Although the exact configuration of a future transportation improvement is not known at this time, it is likely that there will be improvements to facilitate traffic flow and to provide for bike transportation through the 300-foot-wide strip. .

The Jefferson Parkway Public Highway Authority (JPPHA) provided a proposal (referred to as the Jefferson Greenway Proposal) to the Service regarding the direct sale of the 300-foot-wide transportation corridor along Indiana Street as well as an exchange of land (section 16) to expand the Refuge boundary. Through its scoping comments on this project (letter dated July 29, 2011; see Appendix H), JPPHA refined its proposed plan for the divestiture of the transportation corridor. In a direct sale of the transportation corridor from the Service, JPPHA proposes to develop the "Jefferson Parkway" for regional traffic movement. Although not designed to date, the Parkway may consist of multi-modal improvements and is proposed to retain space for a pedestrian and bicycle pathway in the transportation corridor and along the entire Parkway from SH 128 to SH 93.

The City of Golden has also proposed to acquire the land for transportation improvements, either through sale or land exchange. Golden's proposal and supplements (See Appendix E) detail the use of the 300-foot-wide transportation corridor to provide an important north-south connection for bicycle commuters. They would also potentially reserve a portion of that corridor for improvements to Indiana Street.

Impacts associated with possible transportation improvements can be found in the Rocky Flats CCP/EIS (USFWS 2004) and the Northwest Corridor Transportation Study (CDOT 2008).

Land Development

The Denver metropolitan area has experienced considerable growth in the recent past, and although current economic conditions have slowed the rate of development, urbanization has spread towards Rocky Flats NWR. Existing open space surrounding the Refuge helps protect the ecological values associated with the Refuge, however there is developable land to the south and southeast of the Refuge. Over the years, much of the surrounding area has experienced the conversion of land from traditionally rural uses such as farming and ranching to more suburban and urban uses. In general, residential and commercial development has continued to replace vacant agricultural land in much of the surrounding area. The Denver Regional Council of Governments estimates that in 20 years, an additional two million residents will occupy the Denver metropolitan region. With the increase in population, areas of development have spread and continue to consume agricultural and open space lands. (FHWA 2008).

The Northwest Parkway Transportation Environmental Study (FHWA 2008) identified two areas of potential future development: the Vauxmont development northeast of SH 93 and SH 72, and the Cimarron Park development northwest of SH 72 and Indiana Street. Some development has already occurred at the Cimarron Park project and the Vauxmont project. Much of the undeveloped land in the same general area, although not currently proposed or platted, has been preliminarily identified for future development. While development of the built environment is occurring, jurisdictions are also active in acquiring and preserving open space, parks, and recreation areas (FHWA 2008). There is potential for further development which may be facilitated by transportation improvements (including bike and roadway developments) that have been proposed for the 300-foot corridor, which would be additive with those discussed above.

Mining

Existing mining operations are located on the western edge of Rocky Flats NWR. These are primarily aggregate and clay mines. Continued operations at these facilities have the potential for continued cumulative impacts to resources at the Refuge. The proposals to donate and/or retire mineral rights beneath existing DOE and State lands represent a minimal reduction of potential aggregate development in the Denver metropolitan area.

Recreation

There is a substantial amount of designated open space surrounding the Rocky Flats NWR. These areas are managed by numerous local agencies, including Boulder County, Jefferson County, and the cities of Boulder, Westminster, and Broomfield. Future foreseeable development includes trail construction that could connect many of these existing open space areas by connecting trails through the Refuge. Trail

development is part of the 2005 Rocky Flats NWR CCP, but is delayed until such time as funding is available.

As described above, Golden proposes development of the transportation corridor on the east side of the Refuge for an approximately ten-foot-wide bicycle and pedestrian facility, including appurtenant trailhead parking facilities. The proposed bikeway facility is intended for connection to trails, bike lanes, and open space. As discussed above, the JPPHA proposal has also been revised to include a bicycle/pedestrian route along their proposed roadway.

Cumulative Impacts by Alternative

This section describes any adverse cumulative effects that may result from the combination of past, present, and reasonably foreseeable future actions and implementation of the proposed action or alternatives.

Alternative A (No Action)

Under the No Action Alternative, the Service would not change the administrative boundary of the Refuge, and would engage in a direct sale of the 300-foot-wide transportation corridor as directed by the Rocky Flats Act. Revenue from the direct sale would be deposited into the U.S. Treasury.

Cumulative impacts to the Refuge would include use of the 300-foot-wide strip along Indiana Street as a transportation corridor. For this analysis, it is assumed that the transportation improvement would involve construction of a roadway for use by motorized vehicles.

Construction activities associated with transportation improvements would require clearing and grading of a transportation corridor which would result in soil disturbance. The EPA has certified that no hazardous contamination (including plutonium) occurs above levels that allow for unlimited use of the area. As described in Section 1.5 in Chapter 1, should the Service dispose of the property to an entity for transportation purposes, the project would be subject to the State of Colorado Radiation Control Regulations. The CDPHE has stated that construction activities would require appropriate construction controls such as dust abatement, erosion control, and sediment control (CDPHE 2011; Appendix G). It would be the responsibility of the owner and developer of improvements in the 300-foot-wide corridor to comply the State of Colorado requirements regarding issues of public health and for appropriate implementation of control techniques that may be necessary during construction. The cumulative impacts would include the potential for the release of airborne contamination during construction, although the existing level of contamination is considered low as the EPA certified in 2007 that the planned corrective actions had been completed for all of what is now Rocky Flats NWR.

In addition to soil disturbance and the resulting potential for contamination, several other resources may be impacted by the development of transportation improvements. These potential impacts were discussed in the 2004 Rocky Flats NWR CCP/EIS (USFWS 2004a) and included effects to water resources, noxious weeds, wildlife, vegetation, noise and aesthetics, and public use.

Land development in the area surrounding the Refuge could be facilitated by sale of the transportation corridor and could affect Refuge resources through several means. Clearing land for future development could result in weed infestations that could affect Refuge lands; land development could be a movement

barrier to wildlife between the Refuge and surrounding open space lands; development along the southern boundary of the Refuge could impact Preble's meadow jumping mouse habitat potentially connected to the Refuge and urbanization can bring an increase in domestic pets, especially cats that can have a negative impact on native rodents and birds; development can bring an increase in traffic to roads surrounding the Refuge; construction activities can affect the natural scenery and visual character of the landscape as viewed from the Refuge; and housing or commercial development in proximity to the Refuge can increase the ambient noise levels. Land development and urban growth have put a significant strain on the area's natural resources, most notably water supplies. They are also driving up land values, making it increasingly expensive for local and county governments to preserve additional open space, and for agricultural landowners to stay in business. Many communities have begun to recognize the importance of open space and are taking steps to preserve open space corridors for residents and wildlife alike in their respective community comprehensive plans (FHWA 2008).

Future mining activity, primarily along the western edge of the Refuge, could result in impacts to the Refuge through impacts to soils (erosion and windblown soil deposition), water resources (changes in surface and groundwater flows), vegetation (disturbance to vegetation communities; weed infestation), wildlife (disruption to animal movement; fragmented habitat; noise and human activity), threatened and endangered species (direct or indirect impacts to Preble's meadow jumping mouse habitat), visual resources (ground disturbance impacts to scenic quality), noise (increased noise from mine operations), and air quality (dust and windblown soil).

Recreation development related to the cumulative projects identified for the assessment is primarily related to trails. As mentioned above, Golden has proposed a bike and pedestrian trail within the 300-foot-wide transportation corridor, with associated trailhead parking. The trail could connect to other existing or planned trails and open space. Other local jurisdictions have future plans for trail development that could impact public use at the Refuge. Impacts of constructing a bike/pedestrian trail would include soil disturbance, which could result in the soil contamination issue discussed above, although construction of a trail would have substantially less potential for soil disturbance than construction of a roadway. Other potential cumulative impacts related to Refuge resources would include an increase in public use, recreation, and interpretation activities, which would be in compliance with the 2005 Rocky Flats NWR CCP and considered a beneficial impact. However, generally as human activity increases in the area, negative impacts to wildlife habitat and movement would likely increase.

The above analysis discusses the potential cumulative impacts to resources at Rocky Flats NWR. These impacts could occur regardless of which alternative is implemented. Disclosure of these impacts provides context for the cumulative impacts of the alternatives themselves. Alternative A, other than the direct sale of the 300-foot-wide transportation corridor, would result in no change to existing management or the administrative boundary. As such, this alternative would have little effect as far as adding to cumulative impacts to Refuge resources. The spread of noxious weeds at the Refuge is an ongoing problem; the situation existed at the site in 2007 when the land was transferred to the Service and continues to be an issue. Continued weed infestations would be a cumulative impact to vegetation and wildlife habitat.

Alternative B (Proposed Action)

Alternative B includes the expansion of the administrative boundary to include section 16 located at the southwest corner of the existing Refuge boundary. The Service would sell the 300-foot-wide transportation corridor in exchange for equal interest in lands within section 16. Additionally, the Service

would continue efforts to acquire subsurface mineral rights within both the existing and expanded administrative boundary. Implementation of this alternative would generally have a positive effect as far as reducing cumulative impacts to Refuge resources. Acquiring section 16, and subsurface mineral rights would benefit wildlife and create a connection between the Refuge and open space areas to the west, protect Preble's meadow jumping mouse habitat, protect a vestige of xeric tallgrass prairie, and would reduce the amount of active mining in the area which would reduce impacts caused by that activity. The effects from the sale of the 300-foot-wide transportation corridor would cause cumulative impacts as previously discussed.

Alternative C

Alternative C would include the sale of the 300-foot-wide corridor in exchange for land holdings at another NWR in Colorado, and would not include a change in the existing Refuge administration boundary. Cumulative impacts to the Refuge associated with this alternative would be similar to Alternative A except that impacts related to a bike path, or a bike path with transportation improvements along Indiana Street, are likely to be lower. Other than the sale of the transportation corridor, management of the Refuge and the amount of land included within the administrative boundary would not change. A land exchange at either Arapaho NWR or Baca NWR would be a benefit to those refuges, but is not considered a cumulative impact at Rocky Flats NWR.

Alternative D

Alternative D would expand the administrative boundary of the Refuge but would complete a land exchange for land holdings at another Colorado refuge. section 16 would not immediately be acquired as part of this alternative. Cumulative impacts would be similar to Alternative A. Although the administrative boundary would be expanded, without the actual acquisition of land within the expanded boundary, the Service would have no control over activities in non-Service owned lands within the expanded boundary. Although it may be more likely at some point in the future that the Service could acquire lands within the administrative boundary, there would be no change to cumulative impacts for the foreseeable future.

5.0 Coordination and Environmental Review

This chapter describes how the Service coordinated with others and conducted environmental reviews of various aspects of the project proposal and analysis. Additional coordination and review would be needed to carry out the proposed action, if selected.

5.1 Agency Coordination

The Service has discussed the potential expansion and land exchange with local and regional conservation organizations and non-governmental organizations, and has worked closely with other Federal (DOE, EPA), State (Colorado State Land Board, Department of Fish, Wildlife, and Parks, and CDPHE), and local (City of Arvada, City and County of Boulder, City and County of Broomfield, City of Golden, City of Westminster, Jefferson County, and Town of Superior) governments. Tribal governments with aboriginal interest in the Rocky Flats area (Cheyenne and Arapaho of Oklahoma, Northern Arapaho, Northern Cheyenne, Shoshone-Bannock, and Eastern Shoshone) were invited to comment and/or formally consult with the Service. The Services' Regional Archaeologist consulted with the State Historic Preservation Officer, and was intimately involved with the development of this EA.

The Service coordinated internally in developing this EA. Field and regional Service staff conducted the analysis and prepared this document, and an Endangered Species Act Section 7 consultation is underway and will be completed before the release of the final EA (see section 5.4, List of Preparers and Reviewers).

5.2 Contaminants and Hazardous Materials

The Service is required to invest in healthy lands. A Level 1 pre-acquisition site assessment was conducted on section 16 by the USFWS Ecological Services field office in Colorado (Appendix C). If an alternative other than the proposed action which involved a land acquisition were selected, the appropriate level of contaminants assessment would be conducted for that site prior to acquisition.

5.3 National Environmental Policy Act

The Service conducted this environmental analysis under the authority of and in compliance with NEPA, which requires an evaluation of reasonable alternatives that will meet stated objectives and an assessment of the possible effects on the natural and human environment.

Environmental Assessment

This EA will be the basis for determining whether the implementation of the proposed action would constitute a major Federal action significantly affecting the quality of the human environment. NEPA planning for this EA involved other government agencies and the public in the identification of issues and alternatives for the proposed project (See chapter 1; Issues Identified and Selected for Analysis).

Distribution and Availability

The Service is distributing the EA (with the associated draft Land Protection Plan (LPP) in the same volume) to the project mailing list, which includes Federal and State legislative delegations; tribes; Federal, State, and local agencies; non-governmental organizations; and interested individuals. Copies can be requested from the USFWS Region 6 office. After the EA is released for public review, the Service will hold a public meeting to discuss the EA and draft LPP.

Copies of the draft EA/LPP and information about the public meeting are available by visiting the Rocky Flats NWR website or by contacting the service by email, mail, phone, or in person.

- Project website: www.fws.gov/rockyflats
- Project email: rockyflatsea@fws.gov
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5.4 List of Preparers and Reviewers

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APPENDIX A

Rocky Flats Act

defense plutonium or defense plutonium materials to the Savannah River Site during the period beginning on February 1, 2002, and ending on the date on which such plans are submitted to Congress.

(g) RULE OF CONSTRUCTION.—Nothing in this section may be construed to prohibit or limit the Secretary from shipping defense plutonium or defense plutonium materials to sites other than the Savannah River Site during the period referred to in subsection (f) or any other period.

(h) ANNUAL REPORT ON FUNDING FOR FISSILE MATERIALS DISPOSITION ACTIVITIES.—The Secretary shall include with the budget justification materials submitted to Congress in support of the Department of Energy budget for each fiscal year (as submitted with the budget of the President under section 1105(a) of title 31, United States Code) a report setting forth the extent to which amounts requested for the Department for such fiscal year for fissile materials disposition activities will enable the Department to meet commitments for the disposition of surplus defense plutonium and defense plutonium materials located at the Savannah River Site, and for any other fissile materials disposition activities, in such fiscal year.

SEC. 3156. MODIFICATION OF DATE OF REPORT OF PANEL TO ASSESS THE RELIABILITY, SAFETY, AND SECURITY OF THE UNITED STATES NUCLEAR STOCKPILE.

Section 3159(d) of the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (Public Law 105–261; 42 U.S.C. 2121 note) is amended by striking "of each year, beginning with 1999," and inserting "of 1999 and 2000, and not later than February 1, 2002,".

Subtitle F—Rocky Flats National Wildlife Refuge

Rocky Flats National Wildlife Refuge Act of 2001.
16 USC 668dd note.

SEC. 3171. SHORT TITLE.

This subtitle may be cited as the "Rocky Flats National Wildlife Refuge Act of 2001".

SEC. 3172. FINDINGS AND PURPOSES.

(a) FINDINGS.—Congress finds the following:

(1) The Federal Government, through the Atomic Energy Commission, acquired the Rocky Flats site in 1951 and began operations there in 1952. The site remains a Department of Energy facility. Since 1992, the mission of the Rocky Flats site has changed from the production of nuclear weapons components to cleanup and closure in a manner that is safe, environmentally and socially responsible, physically secure, and cost-effective.

(2) The majority of the Rocky Flats site has generally remained undisturbed since its acquisition by the Federal Government.

(3) The State of Colorado is experiencing increasing growth and development, especially in the metropolitan Denver Front Range area in the vicinity of the Rocky Flats site. That growth and development reduces the amount of open space and thereby diminishes for many metropolitan Denver communities the vistas of the striking Front Range mountain backdrop.

(4) Some areas of the Rocky Flats site contain contamination and will require further response action. The national interest requires that the ongoing cleanup and closure of the entire site be completed safely, effectively, and without unnecessary delay and that the site thereafter be retained by the United States and managed so as to preserve the value of the site for open space and wildlife habitat.

(5) The Rocky Flats site provides habitat for many wildlife species, including a number of threatened and endangered species, and is marked by the presence of rare xeric tallgrass prairie plant communities. Establishing the site as a unit of the National Wildlife Refuge System will promote the preservation and enhancement of those resources for present and future generations.

(b) PURPOSES.—The purposes of this subtitle are—

(1) to provide for the establishment of the Rocky Flats site as a national wildlife refuge following cleanup and closure of the site;

(2) to create a process for public input on the management of the refuge referred to in paragraph (1) before transfer of administrative jurisdiction to the Secretary of the Interior; and

(3) to ensure that the Rocky Flats site is thoroughly and completely cleaned up.

SEC. 3173. DEFINITIONS.

In this subtitle:

(1) CERCLA.—The term "CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq.).

(2) CLEANUP AND CLOSURE.—The term "cleanup and closure" means the response actions for covered substances carried out at Rocky Flats, as required by any of the following:

(A) The RFCA.

(B) CERCLA.

(C) RCRA.

(D) The Colorado Hazardous Waste Act, 25–15–101 to 25–15–327, Colorado Revised Statutes.

(3) COVERED SUBSTANCE.—The term "covered substance" means any of the following:

(A) Any hazardous substance, as such term is defined in paragraph (14) of section 101 of CERCLA (42 U.S.C. 9601).

(B) Any pollutant or contaminant, as such term is defined in paragraph (33) of such section 101.

(C) Any petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of paragraph (14) of such section 101.

(4) RCRA.—The term "RCRA" means the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.), popularly known as the Resource Conservation and Recovery Act.

(5) REFUGE.—The term "refuge" means the Rocky Flats National Wildlife Refuge established under section 3177.

(6) RESPONSE ACTION.—The term "response action" means any of the following:

(A) A response, as such term is defined in paragraph (25) of section 101 of CERCLA (42 U.S.C. 9601).

(B) A corrective action under RCRA or under the Colorado Hazardous Waste Act, 25–15–101 to 25–15–327, Colorado Revised Statutes.

(C) Any requirement for institutional controls imposed by any of the laws referred to in subparagraph (A) or (B).

(7) RFCA.—The term "RFCA" means the Rocky Flats Cleanup Agreement, an intergovernmental agreement, dated July 19, 1996, among—

(A) the Department of Energy;

(B) the Environmental Protection Agency; and

(C) the Department of Public Health and Environment of the State of Colorado.

(8) ROCKY FLATS.—

(A) IN GENERAL.—Except as provided in subparagraph (B), the term "Rocky Flats" means the Rocky Flats Environmental Technology Site, Colorado, a defense nuclear facility, as depicted on the map titled "Rocky Flats Environmental Technology Site", dated October 22, 2001, and available for inspection in the appropriate offices of the United States Fish and Wildlife Service.

(B) EXCLUSIONS.—The term "Rocky Flats" does not include—

(i) the land and facilities of the Department of Energy's National Renewable Energy Laboratory, including the acres retained by the Secretary under section 3174(f); and

(ii) any land and facilities not within the boundaries depicted on the map referred to in subparagraph (A).

(9) SECRETARY.—The term "Secretary" means the Secretary of Energy.

SEC. 3174. FUTURE OWNERSHIP AND MANAGEMENT.

(a) FEDERAL OWNERSHIP.—Except as expressly provided in this subtitle, all right, title, and interest of the United States, held on or acquired after the date of the enactment of this Act, to land or interest therein, including minerals, within the boundaries of Rocky Flats shall be retained by the United States.

(b) LINDSAY RANCH.—The structures that comprise the former Lindsay Ranch homestead site in the Rock Creek Reserve area of the buffer zone, as depicted on the map referred to in section 3173(8)(A), shall be permanently preserved and maintained in accordance with the National Historic Preservation Act (16 U.S.C. 470 et seq.).

(c) PROHIBITION ON ANNEXATION.—Neither the Secretary nor the Secretary of the Interior shall allow the annexation of land within the refuge by any unit of local government.

(d) PROHIBITION ON THROUGH ROADS.—Except as provided in subsection (e), no public road shall be constructed through Rocky Flats.

(e) TRANSPORTATION RIGHT-OF-WAY.—

(1) IN GENERAL.—

(A) AVAILABILITY OF LAND.—On submission of an application meeting each of the conditions specified in paragraph (2), the Secretary, in consultation with the Secretary of the Interior, shall make available land along the eastern boundary of Rocky Flats for the sole purpose of transportation improvements along Indiana Street.

(B) BOUNDARIES.—Land made available under this paragraph may not extend more than 300 feet from the west edge of the Indiana Street right-of-way, as that right-of-way exists as of the date of the enactment of this Act.

(C) EASEMENT OR SALE.—Land may be made available under this paragraph by easement or sale to one or more appropriate entities.

(D) COMPLIANCE WITH APPLICABLE LAW.—Any action under this paragraph shall be taken in compliance with applicable law.

(2) CONDITIONS.—An application referred to in paragraph (1) meets the conditions specified in this paragraph if the application—

(A) is submitted by any county, city, or other political subdivision of the State of Colorado; and

(B) includes documentation demonstrating that the transportation improvements for which the land is to be made available—

(i) are carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge; and

(ii) are included in the regional transportation plan of the metropolitan planning organization designated for the Denver metropolitan area under section 5303 of title 49, United States Code.

(f) WIND TECHNOLOGY EXPANSION AREA.—The Secretary shall retain, for the use of the National Renewable Energy Laboratory, the approximately 25 acres identified on the map referred to in section 3173(8)(A) as the "Wind Technology Expansion Area".

SEC. 3175. TRANSFER OF MANAGEMENT RESPONSIBILITIES AND JURISDICTION OVER ROCKY FLATS.

(a) TRANSFER REQUIRED.—

(1) IN GENERAL.—Subject to the other provisions of this section, the Secretary shall transfer administrative jurisdiction over the property that is to comprise the refuge to the Secretary of the Interior.

(2) DATE OF TRANSFER.—The transfer shall be carried out not earlier than the completion certification date, and not later than 30 business days after that date.

(3) COMPLETION CERTIFICATION DATE.—For purposes of paragraph (2), the completion certification date is the date on which the Administrator of the Environmental Protection Agency certifies to the Secretary and to the Secretary of the Interior that cleanup and closure at Rocky Flats has been completed, except for the operation and maintenance associated with response actions, and that all response actions are operating properly and successfully.

(b) MEMORANDUM OF UNDERSTANDING.—

(1) REQUIRED ELEMENTS.—The transfer required by subsection (a) shall be carried out pursuant to a memorandum

of understanding between the Secretary and the Secretary of the Interior. The memorandum of understanding shall—

(A) provide for the division of responsibilities between the Secretary and the Secretary of the Interior necessary to carry out such transfer;

(B) address the impacts that any property rights referred to in section 3179(a) may have on the management of the refuge, and provide strategies for resolving or mitigating these impacts;

(C) identify the land the administrative jurisdiction of which is to be transferred to the Secretary of the Interior; and

(D) specify the allocation of the Federal costs incurred at the refuge after the date of such transfer for any site investigations, response actions, and related activities for covered substances.

(2) PUBLICATION OF DRAFT.—Not later than one year after the date of the enactment of this Act, the Secretary and the Secretary of the Interior shall publish in the Federal Register a draft of the memorandum of understanding.

(3) FINALIZATION AND IMPLEMENTATION.—

(A) Not later than 18 months after the date of the enactment of this Act, the Secretary and Secretary of the Interior shall finalize and implement the memorandum of understanding.

(B) In finalizing the memorandum of understanding, the Secretary and Secretary of the Interior shall specifically identify the land the administrative jurisdiction of which is to be transferred to the Secretary of the Interior and provide for a determination of the exact acreage and legal description of such land by a survey mutually satisfactory to the Secretary and the Secretary of the Interior.

(c) TRANSFER OF IMPROVEMENTS.—The transfer required by subsection (a) may include such buildings or other improvements as the Secretary of the Interior has requested in writing for purposes of managing the refuge.

(d) PROPERTY RETAINED FOR RESPONSE ACTIONS.—

(1) IN GENERAL.—The transfer required by subsection (a) shall not include, and the Secretary shall retain jurisdiction, authority, and control over, the following real property and facilities at Rocky Flats:

(A) Any engineered structure, including caps, barrier walls, and monitoring or treatment wells, to be used in carrying out a response action for covered substances.

(B) Any real property or facility to be used for any other purpose relating to a response action or any other action that is required to be carried out by the Secretary at Rocky Flats.

(2) CONSULTATION.—The Secretary shall consult with the Secretary of the Interior, the Administrator of the Environmental Protection Agency, and the Governor of the State of Colorado on the identification of all real property and facilities to be retained under this subsection.

(e) COST.—The transfer required by subsection (a) shall be completed without cost to the Secretary of the Interior.

(f) NO REDUCTION IN FUNDS.—The transfer required by subsection (a), and the memorandum of understanding required by

subsection (b), shall not result in any reduction in funds available to the Secretary for cleanup and closure of Rocky Flats.

SEC. 3176. ADMINISTRATION OF RETAINED PROPERTY; CONTINUATION OF CLEANUP AND CLOSURE.

(a) ADMINISTRATION OF RETAINED PROPERTY.—

(1) IN GENERAL.—In administering the property retained under section 3175(d), the Secretary shall consult with the Secretary of the Interior to minimize any conflict between—

(A) the administration by the Secretary of such property for a purpose relating to a response action; and

(B) the administration by the Secretary of the Interior of land the administrative jurisdiction of which is transferred under section 3175(a).

(2) PRIORITY IN CASE OF CONFLICT.—In the case of any such conflict, the Secretary and the Secretary of the Interior shall ensure that the administration for a purpose relating to a response action, as described in paragraph (1)(A), shall take priority.

(3) ACCESS.—The Secretary of the Interior shall provide to the Secretary such access and cooperation with respect to the refuge as the Secretary requires to carry out operation and maintenance, future response actions, natural resources restoration, or any other obligations.

(b) ONGOING CLEANUP AND CLOSURE.—

(1) IN GENERAL.—The Secretary shall carry out to completion cleanup and closure at Rocky Flats.

(2) CLEANUP LEVELS.—The Secretary shall carry out such cleanup and closure to the levels established for soil, water, and other media, following a thorough review by the parties to the RFCA and the public (including the United States Fish and Wildlife Service and other interested government agencies) of the appropriateness of the interim levels in the RFCA.

(3) NO RESTRICTION ON USE OF NEW TECHNOLOGIES.—Nothing in this subtitle, and no action taken under this subtitle, restricts the Secretary from using at Rocky Flats any new technology that may become available for remediation of contamination.

(c) OPPORTUNITY TO COMMENT.—The Secretary of the Interior shall have the opportunity to comment with respect to any proposed response action as to the impacts, if any, of such proposed response action on the refuge.

(d) RULES OF CONSTRUCTION.—

(1) NO RELIEF FROM OBLIGATIONS UNDER OTHER LAW.—Nothing in this subtitle, and no action taken under this subtitle—

(A) relieves the Secretary, the Administrator of the Environmental Protection Agency, the Secretary of the Interior, or any other person from any obligation or other liability with respect to Rocky Flats under the RFCA or any Federal or State law;

(B) impairs or alters any provision of the RFCA; or

(C) alters any authority of the Administrator of the Environmental Protection Agency under section 120(e) of CERCLA (42 U.S.C. 9620(e)), or any authority of the State of Colorado.

(2) CLEANUP LEVELS.—Nothing in this subtitle shall reduce the level of cleanup and closure at Rocky Flats required under the RFCA or any Federal or State law.

(3) PAYMENT OF RESPONSE ACTION COSTS.—Nothing in this subtitle affects the obligation of a Federal department or agency that had or has operations at Rocky Flats resulting in the release or threatened release of a covered substance to pay the costs of response actions carried out to abate the release of, or clean up, the covered substance.

SEC. 3177. ROCKY FLATS NATIONAL WILDLIFE REFUGE.

(a) IN GENERAL.—On completion of the transfer required by section 3175(a), and subject to section 3176(a), the Secretary of the Interior shall commence administration of the real property comprising the refuge in accordance with this subtitle.

(b) ESTABLISHMENT OF REFUGE.—Not later than 30 days after the transfer required by section 3175(a), the Secretary of the Interior shall establish at Rocky Flats a national wildlife refuge to be known as the Rocky Flats National Wildlife Refuge.

(c) COMPOSITION.—The refuge shall be comprised of the property the administrative jurisdiction of which was transferred as required by section 3175(a).

(d) NOTICE.—The Secretary of the Interior shall publish in the Federal Register a notice of the establishment of 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.

SEC. 3178. COMPREHENSIVE PLANNING PROCESS.

(a) IN GENERAL.—Not later than 180 days after the date of the enactment of this Act, in developing a comprehensive conservation plan for the refuge in accordance with section 4(e) of the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd(e)), the Secretary of the Interior shall establish a comprehensive planning process that involves the public and local communities. The Secretary of the Interior shall establish such process in consultation with the Secretary, the members of the Coalition, the Governor of the State of Colorado, and the Federal

Deadline.

and State of Colorado officials who have been designated as trustees for Rocky Flats under section 107(f)(2) of CERCLA (42 U.S.C. 9607(f)(2)).

(b) OTHER PARTICIPANTS.—In addition to the entities specified in subsection (a), the comprehensive planning process required by subsection (a) shall include the opportunity for direct involvement of entities that are not members of the Coalition as of the date of the enactment of this Act, including the Rocky Flats Citizens' Advisory Board and the cities of Thornton, Northglenn, Golden, Louisville, and Lafayette, Colorado.

(c) DISSOLUTION OF COALITION.—If the Coalition dissolves, or if any Coalition member elects to leave the Coalition during the comprehensive planning process required by subsection (a)—

(1) such comprehensive planning process shall continue; and

(2) an opportunity shall be provided to each entity that is a member of the Coalition as of September 1, 2000, for direct involvement in such comprehensive planning process.

(d) CONTENTS.—In addition to the requirements of section 4(e) of the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd(e)), the comprehensive conservation plan referred to in subsection (a) shall address and make recommendations on the following:

(1) The identification of any land referred to in subsection (e) of section 3174 that could be made available under that subsection.

(2) The characteristics and configuration of any perimeter fencing that may be appropriate or compatible for cleanup and closure purposes, refuge purposes, or other purposes.

(3) The feasibility of locating, and the potential location for, a visitor and education center at the refuge.

(4) Any other issues relating to Rocky Flats.

(e) COALITION DEFINED.—In this section, the term "Coalition" means the Rocky Flats Coalition of Local Governments established by the Intergovernmental Agreement, dated February 16, 1999, among—

(1) the city of Arvada, Colorado;
(2) the city of Boulder, Colorado;
(3) the city of Broomfield, Colorado;
(4) the city of Westminster, Colorado;
(5) the town of Superior, Colorado;
(6) Boulder County, Colorado; and
(7) Jefferson County, Colorado.

Deadline.

(f) REPORT.—Not later than three years after the date of the enactment of this Act, the Secretary of the Interior shall submit to Congress—

(1) the comprehensive conservation plan referred to in subsection (a); and

(2) a report that contains—

(A) an outline of the involvement of the public and local communities in the comprehensive planning process, as required by subsection (a);

(B) to the extent that any input or recommendation from the comprehensive planning process is not accepted, a clear statement of the reasons why such input or recommendation is not accepted; and

(C) a discussion of the impacts of any property rights referred to in section 3179(a) on management of the refuge, and an identification of strategies for resolving and mitigating these impacts.

SEC. 3179. PROPERTY RIGHTS.

(a) IN GENERAL.—Except as provided in subsections (c) and (d), nothing in this subtitle limits any valid, existing property right at Rocky Flats that is owned by any person or entity, including, but not limited to—

(1) any mineral right;

(2) any water right or related easement; and

(3) any facility or right-of-way for a utility.

(b) ACCESS.—Except as provided in subsection (c), nothing in this subtitle affects any right of an owner of a property right referred to in subsection (a) to access the owner's property.

(c) REASONABLE CONDITIONS.—

(1) IN GENERAL.—The Secretary or the Secretary of the Interior may impose such reasonable conditions on access to property rights referred to in subsection (a) as are appropriate for the cleanup and closure of Rocky Flats and for the management of the refuge.

(2) NO EFFECT ON OTHER LAW.—Nothing in this subtitle affects any Federal, State, or local law (including any regulation) relating to the use, development, and management of property rights referred to in subsection (a).

(3) NO EFFECT ON ACCESS RIGHTS.—Nothing in this subsection precludes the exercise of any access right, in existence on the date of the enactment of this Act, that is necessary to perfect or maintain a water right in existence on that date.

(d) UTILITY EXTENSION.—

(1) IN GENERAL.—The Secretary or the Secretary of the Interior may allow not more than one extension from an existing utility right-of-way on Rocky Flats, if necessary.

(2) CONDITIONS.—An extension under paragraph (1) shall be subject to the conditions specified in subsection (c).

(e) EASEMENT SURVEYS.—Subject to subsection (c), until the date that is 180 days after the date of the enactment of this Act, an entity that possesses a decreed water right or prescriptive easement relating to land at Rocky Flats may carry out such surveys at Rocky Flats as the entity determines are necessary to perfect the right or easement.

SEC. 3180. LIABILITIES AND OTHER OBLIGATIONS.

(a) IN GENERAL.—Nothing in this subtitle shall relieve, and no action may be taken under this subtitle to relieve, the Secretary, the Secretary of the Interior, or any other person from any liability or other obligation at Rocky Flats under CERCLA, RCRA, or any other Federal or State law.

(b) COST RECOVERY, CONTRIBUTION, AND OTHER ACTION.—Nothing in this subtitle is intended to prevent the United States from bringing a cost recovery, contribution, or other action that would otherwise be available under Federal or State law.

SEC. 3181. ROCKY FLATS MUSEUM.

(a) MUSEUM.—To commemorate the contribution that Rocky Flats and its worker force provided to winning the Cold War and

the impact that such contribution has had on the nearby communities and the State of Colorado, the Secretary may establish a Rocky Flats Museum.

(b) LOCATION.—The Rocky Flats Museum shall be located in the city of Arvada, Colorado, unless, after consultation under subsection (c), the Secretary determines otherwise.

(c) CONSULTATION.—The Secretary shall consult with the city of Arvada, other local communities, and the Colorado State Historical Society on—

(1) the development of the museum;

(2) the siting of the museum; and

(3) any other issues relating to the development and construction of the museum.

(d) REPORT.—Not later than three years after the date of the enactment of this Act, the Secretary, in coordination with the city of Arvada, shall submit to Congress a report on the costs associated with the construction of the museum and any other issues relating to the development and construction of the museum.

SEC. 3182. ANNUAL REPORT ON FUNDING.

For each of fiscal years 2003 through 2007, at the time of submission of the budget of the President under section 1105(a) of title 31, United States Code, for such fiscal year, the Secretary and the Secretary of the Interior shall jointly submit to Congress a report on the costs of implementation of this subtitle. The report shall include—

(1) the costs incurred by each Secretary in implementing this subtitle during the preceding fiscal year; and

(2) the funds required by each Secretary to implement this subtitle during the current and subsequent fiscal years.

TITLE XXXII—DEFENSE NUCLEAR FACILITIES SAFETY BOARD

Sec. 3201. Authorization.

SEC. 3201. AUTHORIZATION.

There are authorized to be appropriated for fiscal year 2002, $18,500,000 for the operation of the Defense Nuclear Facilities Safety Board under chapter 21 of the Atomic Energy Act of 1954 (42 U.S.C. 2286 et seq.).

TITLE XXXIII—NATIONAL DEFENSE STOCKPILE

Sec. 3301. Definitions.
Sec. 3302. Authorized uses of stockpile funds.
Sec. 3303. Authority to dispose of certain materials in National Defense Stockpile.
Sec. 3304. Revision of limitations on required disposals of certain materials in National Defense Stockpile.
Sec. 3305. Acceleration of required disposal of cobalt in National Defense Stockpile.
Sec. 3306. Restriction on disposal of manganese ferro.

50 USC 98d note.

SEC. 3301. DEFINITIONS.

In this title:

APPENDIX B

Rocky Flats National Wildlife Refuge Species List

Appendix B
Rocky Flats National Wildlife Refuge Species List

Plant Species

Grasses, Reeds, Rushes, and Grass-Like Plants

Common Name	*Scientific Name*	Common Name	*Scientific Name*
Jointed Goatgrass	*Aegilops cylindrical X Agrohordeum macounii*	Slimleaf Dichanthelium	*Dichanthelium linearifolium*
Slender Wheatgrass	*Agropyron caninum*	Scribner Dichanthelium	*Dichanthelium oligosanthes*
Crested Wheatgrass	*Agropyron cristatum*		
Thickspike Wheatgrass	*Agropyron dasystachyum*	Hairy Crabgrass	*Digitaria sanguinalis*
		Inland Salt Grass	*Distichlis spicata*
Crested Wheatgrass	*Agropyron desertorum*	Barnyard Grass	*Echinochloa crusgallii.*
Tall Wheatgrass	*Agropyron elongatum*	Canada Wild Rye	*Elymus canadensis*
Griffin's Wheatgrass	*Agropyron griffithsii*	Russian Wild Rye	*Elymus juncea*
Intermediate Wheatgrass	*Agropyron intermedium*	Stinkgrass	*Eragrostis cilianensis*
Quackgrass *	*Agropyron repens*	Weeping Lovegrass	*Eragrostis curvula*
Western Wheatgrass	*Agropyron smithii*	Little Lovegrass	*Eragrostis minor*
Bluebunch Wheatgrass	*Agropyron spicatum*	India Lovegrass	*Eragrostis pilosa*
Ticklegrass	*Agrostis scabra*	Sand Lovegrass	*Eragrostis trichodes*
Redtop	*Agrostis stolonifera*	Six-weeks Fescue	*Festuca octoflora*
Marsh Foxtail	*Alopecurus geniculatus*	Sheep's Fescue	*Festuca ovina*
Big Bluestem	*Andropogon gerardii*	Meadow Fescue	*Festuca pratensis*
Silver Bluestem	*Andropogon saccharoides*	Tall Mannagrass	*Glyceria grandis*
		Fowl Mannagrass	*Glyceria striata*
Little Bluestem	*Andropogon scoparius.*	Meadow Barley	*Hordeum brachyantherum*
Italian Windgrass	*Apera interrupta*		
Forktip Threeawn	*Aristida basiramea*	Foxtail Barley	*Hordeum jubatum*
Fendler Threeawn	*Aristida purpurea*	Little Barley	*Hordeum pusillum*
Red Threeawn	*Aristida purpurea*	Junegrass	*Koeleria pyramidata*
Cultivated Oats	*Avena fatua var. sativa*	Rice Cutgrass	*Leersia oryzoides*
Side-oats Grama	*Bouteloua curtipendula*	Bearded Sprangletop	*Leptochloa fasicularis*
Blue Grama	*Bouteloua gracilis*	Italian Ryegrass	*Lolium perenne*
Hairy Grama	*Bouteloua hirsuta*	Perennial Ryegrass	*Lolium perenne*
Rattlesnake Grass	*Bromus briziformis*	Wolftail	*Lycurus phleoides*
Smooth Brome	*Bromus inermis*	Scratchgrass	*Muhlenbergia asperifolia*
Japanese Brome	*Bromus japonicus*		
Downy Brome	*Bromus tectorum*	Muhly	*Muhlenbergia filiformis*
Buffalo-grass	*Buchloe dactyloides*	Mountain Muhly	*Muhlenbergia montana*
Northern Reedgrass	*Calamagrostis stricta*	Marsh Muhly	*Muhlenbergia racemosa*
Field Sandbur	*Cenchrus longispinus*	Spike Muhly	*Muhlenbergia wrightii*
Rescuegrass	*Ceratochloa marginata*	Indian Ricegrass	*Oryzopsis hymenoides*
Feather fingergrass	*Chloris virgata*	Witchgrass	*Panicum capillare*
Bermuda Grass	*Cynodon dactylon*		
Orchardgrass	*Dactylis glomerata*		
Poverty Oatgrass	*Danthonia spicata*		

Common Name	***Scientific Name***	**Common Name**	***Scientific Name***
Fall Panicum	*Panicum dichotomiflorum*	Inland Rush	*Juncus interior*
		Longstyle rush	*Juncus longistylis*
Switchgrass	*Panicum virgatum*	Knotted Rush	*Juncus nodosus*
Reed Canarygrass	*Phalaris arundinacea*	Torrey's Rush	*Juncus torreyi*
Timothy	*Phleum pratense*	Tracy Rush	*Juncus tracyi*
Common Reed	*Phragmites australis*	Spikerush	*Eleocharis acicularis*
Bulbous Bluegrass	*Poa bulbosa*	Spikerush	*Eleocharis compressa*
Canby's Bluegrass	*Poa canbyi*	Spikerush	*Eleocharis macrostachya*
Canada Bluegrass	*Poa compress*		
Muttongrass	*Poa fendleriana*	Blunt Spikerush	*Eleocharis obtusa*
Alkali Bluegrass	*Poa juncifolia*	Spikerush	*Eleocharis parvula*
Fowl Bluegrass	*Poa palustris*	Bulrush	*Scirpus acutus*
Kentucky Bluegrass	*Poa pratensis*	Bulrush	*Scirpus maritimus*
Rabbitfoot Grass	*Polypogon monspeliensis*	Bulrush	*Scirpus pallidus*
		Pungent Bulrush	*Scirpus pungens*
Tumblegrass	*Schedonnardus paniculatus*	Bulrush	*Scirpus validus*
		Slenderbeak Sedge	*Carex athrostachya*
Rye	*Secale cereale*	Golden Sedge	*Carex aurea*
Green Foxtail	*Setaria viridis*	Bebs Sedge	*Carex bebbii*
Squirreltail	*Sitanion hystrix*	Short-beaked Sedge	*Carex brevior*
Indian-grass	*Sorghastrum nutans*	Douglas Sedge	*Carex douglasii*
Prairie Cordgrass	*Spartina pectinata*	Narrowleaf Sedge	*Carex eleocharis*
Prairie Wedgegrass	*Sphenopholis obtusata.*	Emory's Sedge	*Carex emoryi*
Rough Dropseed	*Sporobolus asper*	Threadleaf Sedge	*Carex filifolia*
Sand Dropseed	*Sporobolus cryptandrus*	Bottlebrush Sedge	*Carex hystericina*
Prairie Dropseed	*Sporobolus heterolepis*	Inland Sedge	*Carex interior*
Poverty Grass	*Sporobolus neglectus*	Sun Sedge	*Carex inops* ssp. *heliophila*
Needle-and-thread	*Stipa comata*		
New Mexico Feather Grass	*Stipa neomexicana*	Woolly Sedge	*Carex lanuginosa*
		Nebraska Sedge	*Carex nebrascensis*
Sleepy Grass	*Stipa robusta*	Grassyslope Sedge	*Carex oreocharis*
Porcupine-grass	*Stipa spartea*	Clustered field Sedge	*Carex praegracilis*
Green Needlegrass	*Stipa viridula*	Beaked Sedge	*Carex rostrata*
Wheat	*Triticum aestivum*	Broom Sedge	*Carex scoparia*
Narrow-leaved Cattail	*Typha angustifolia*	Analogue Sedge	*Carex simulata*
Common Cattail	*Typha latifolia*	Prickly Sedge	*Carex stipata*
Blue-eyed Grass	*Sisyrinchium montanum*	Fox Sedge	*Carex vulpinoidea*
Articulate Rush	*Juncus articulatus*	Sea arrowgrass	*Triglochin maritima*
Baltic Rush	*Juncus balticus*	Field Horsetail	*Equisetum arvense*
Toad Rush	*Juncus bufonius*	Smooth Horsetail	*Equisetum laevigatum*
Dudley Rush	*Juncus dudleyi*	Variegated Scouring Rush	*Equisetum variegatum*
Swordleaf rush	*Juncus ensifolius*		

Forbs

Common Name	*Scientific Name*	Common Name	*Scientific Name*
Yarrow	*Achillea millefolium*	Two-grooved Vetch	*Astragalus bisulcatus*
False Dandelion	*Agoseris glauca*	Canada Milk-vetch	*Astragalus canadensis*
Striate Agrimony	*Agrimonia striata*	Ground-plum	*Astragalus crassicarpus*
American Water Plantain	*Alisma trivale*	Drummond Milkvetch	*Astragalus drummondii*
Wild Onion	*Allium cernuum*	Pliant Milkvetch	*Astragalus flexuosus*
Geyer's Onion	*Allium geyeri*	Lotus Milk-Vetch	*Astragalus lotiflorus*
Wild White Onion	*Allium textile*	Parry's Milkvetch	*Astragalus parryi*
Alder	*Alnus incana*	Short's Milkvetch	*Astragalus shortianus*
Pale Alyssum	*Alyssum alyssoides*	Draba Milk-Vetch	*Astragalus spathulatus*
Alyssum	*Alyssum minus*	Foothill Milkvetch	*Astragalus tridactylicus*
Tumbleweed	*Amaranthus albus*	Yellowrocket Wintercress	*Barbarea vulgaris*
Prostrate Pigweed	*Amaranthus graecizans*	Water Parsnip	*Berula erecta*
Rough Pigweed	*Amaranthus retroflexus*	Nodding Beggarticks	*Bidens cernua*
Common Ragweed	*Ambrosia artemisiifolia*	Beggar-ticks	*Bidens frondosa*
Western Ragweed	*Ambrosia psilostachya*	Water Starwort	*Callitriche verna*
Giant Ragweed	*Ambrosia trifida*	Sego Lily	*Calochortus gunnisonii*
Robust Toothcup	*Ammania robusta*	Plains Yellow Primrose	*Calylophus serrulatus*
False Indigo	*Amorpha fruticosa*	Small-seeded False Flax	*Camelina microcarpa*
Western Rock Jasmine	*Androsace occidentalis*	Harebell	*Campanularotundifolia*
Candle Anemone	*Anemone cylindrica*	Shepherd's Purse	*Capsella bursa-pastoris*
Pasque-flower	*Anemone patens*	Lens-padded Hoary Cress	*Cardaria chalepensis*
Pink Pussytoes	*Antennaria microphylla*	Hoary Cress *	*Cardaria draba*
Pussytoes	*Antennaria parvifolia*	Musk Thistle *	*Carduus nutans*
Dog Fennel	*Anthemis cotula*	Orange Paintbrush	*Castilleja integra*
Spreading Dogbane	*Apocynum androsaemifolium*	Downy Paintbrush	*Castilleja sessiliflora.*
		Diffuse Knapweed *	*Centaurea diffusa*
Hemp Dogbane	*Apocynum cannabinum*	Russian Knapweed *	*Centaurea repens*
Rock Cress	*Arabis fendleri*	Yellow Star Thistle	*Centaurea solstitialis*
Tower Mustard	*Arabis glabra*	Prairie Chickweed	*Cerastium arvense*
Rock Cress	*Arabis hirsuta*	Short-stalked Chickweed	*Cerastiumbrachypodum*
Burdock *	*Arctium minus*	Common Mouse-Ear	*Cerastium vulgatum*
Fendler's Sandwort	*Arenaria fendleri*	Coontail	*Ceratophyllum demersum*
Prickly Poppy	*Argemone polyanthemos*	Cornflower	*Centaurea cyanus*
Arnica	*Arnica fulgens*	Lamb's Quarters	*Chenopodium album*
Swamp Milkweed	*Asclepias incarnata*	Dark Goosefoot	*Chenopodium atrovirens*
Plains Milkweed	*Asclepias pumila*		
Showy Milkweed	*Asclepias speciosa*	Pitseed Goosefoot	*Chenopodium berlandieri*
Narrow-leaved Milkweed	*Asclepias stenophylla*		
Green Milkweed	*Asclepias viridiflora*	Jerusalem Oak	*Chenopodium botrys*
Asparagus	*Asparagus officinalis*	Desert Goosefoot	*Chenopodium dessicatum*
Madwort	*Asperugo procumbens*		
Meadow Aster	*Aster campestris*	Fremont Goosefoot	*Chenopodium fremontii*
Aster	*Aster falcatus*	Oakleaf goosefoot	*Chenopodium glaucum*
Fendler's Aster	*Aster fendleri*	Goosefoot	*Chenopodium leptophyllum*
Panicled Aster	*Aster hesperius*		
Smooth Blue Aster	*Aster laevis*	Overi's Goosefoot	*Chenopodium overi*
Aster	*Aster porteri*	Blue Mustard	*Chorispora tenella*
Standing Milkvetch	*Astragalus adsurgens*	Ox-eye Daisy	*Chrysanthemum Leucanthemum*
Field Milkvetch	*Astragalus agrestis*		

Common Name	***Scientific Name***	**Common Name**	***Scientific Name***
Golden Aster	*Chrysopsis fulcrata*	Willow Herb	*Epilobium paniculatum*
Golden Aster	*Chrysopsis villosa*	Fleabane	*Erigeron canus*
Common Chicory *	*Cichorium intybus*	Fleabane	*Erigeron compositus*
Water Hemlock	*Cicuta maculata*	Fleabane	*Erigeron divergens*
Canada Thistle *	*Cirsium arvense*	Fleabane	*Erigeron flagellaris*
Flodman's Thistle	*Cirsium flodmanni*	Fleabane	*Erigeron pumilus*
Yellow Spine Thistle	*Cirsium ochrocentrum*	Oregon Fleabane	*Erigeron speciosa*
Wavyleaf Thistle	*Cirsium undulatum*	Daisy Fleabane	*Erigeron strigosus*
Bull Thistle *	*Cirsium vulgare*	LaVeta Fleabane	*Erigeron vetensis*
Spring Beauty	*Claytonia rosea*	Winged Eriogonum	*Eriogonum alatum*
Western White Clematis	*Clematis ligusticifolia*	Spreading Wild Buckwheat	*Eriogonum effusum*
Rocky Mountain Beeplant	*Cleome serrulata*	James' Wild Buckwheat	*Eriogonum jamesii*
Blue Lips	*Collinsia parviflora*	Sulphur Flower	*Eriogonum umbellatum*
Collomia	*Collomia linearis*	Filaria	*Erodium cicutarium*
Bastard Toadflax	*Comandra umbellata*	Western Wallflower	*Erysimum capitatum*
Poison Hemlock *	*Conium maculatum*	Bushy Wallflower	*Erysimum repandum*
Community Campion	*Conosilene conica*	California Poppy	*Eschscholzia californica*
Hare's-ear Mustard	*Conringia orientalis*	Toothed Spurge	*Euphorbia dentata*
Horseweed	*Conyza canadensis*	Fendler's Euphorbia	*Euphorbia fendleri*
Plains Coreopsis	*Coreposis tinctoria*	Snow-on-the-Mountain	*Euphorbia marginata*
Crown Vetch	*Coronilla varia*	Spurge	*Euphorbia robusta*
Nipple Cactus	*Coryphantha missouriensis*	Thyme-leaved Spurge	*Euphorbia serpyllifolia*
		Spurge	*Euphorbia spathulata*
Mexican Aster	*Cosmos bipinnatus*	Russian leavy spurge	*Euphorbia uralensis*
Hawksbeard	*Crepis occidentalis*	Fumitory	*Fumaria vaillentii*
Hawksbeard	*Crepis runcinata*	Blanket Flower	*Gaillardia aristata*
Miners Candle	*Cryptantha virgata*	Catchweed Bedstraw	*Galium aparine*
Dodder	*Cuscuta approximata*	Northern Bedstraw	*Galium septentrionale*
Hound's Tongue	*Cynoglossum officinale*	Scarlet Gaura	*Gaura coccinea*
Taperleaf Flatsedge	*Cyperus acuminatus*	Velvety Gaura	*Gaura parviflora*
Fragile Fern	*Cystopteris fragilis*	Yellow Avens	*Geum aleppicum*
White Prairie Clover	*Dalea candida*	Large-leaved Avens	*Geum macrophyllum*
Purple Prairie Clover	*Dalea purpurea*	Northern Gentian	*Gentiana affinis*
Wild Carrot	*Daucus carota*	Common Wild Geranium	*Geranium caespitosum*
Blue Larkspur	*Delphinium nuttalianum*	Gilia	*Gilia opthalmoides*
Prairie Larkspur	*Delphinium virescens*	Wild Licorice	*Glycyrrhiza lepidota*
Tansy Mustard	*Descurainia pinnata*	Cotton-batting	*Gnapthalium chilense*
Tansy Mustard	*Descurainia richardsonii*	Hedge Hyssop	*Gratiola neglecta*
		Curly-top Gumweed	*Grindelia squarrosa*
Flixweed	*Descurainia sophia*	Annual Baby's Breath	*Gysophila elegans*
African Daisy	*Dimporphotheca aurantiaca*	Northern Green Orchid	*Habenaria hyperborea*
		Large-flowered Stickseed	*Hackelia floribunda*
Shooting Star	*Dodecatheon pulchellum*	Cutleaf Ironplant	*Happlopappus spinulosus*
Yellow Whitlowort	*Draba nemorosa*	Whiskbroom Parsley	*Harbouria trachypleura*
White Whitlowort	*Draba reptans*	Rough False Pennyroyal	*Hedeoma hispidum*
Dragonhead	*Dracocephalum parviflorum*	Common Sunflower	*Helianthus annuus*
		Texas Blue Weed	*Helianthus ciliaris*
Fetid Marigold	*Dyssodia papposa*	Maximilian Sunflower	*Helianthus maximilianii*
Hedgehog Cactus	*Echinocereus viridiflorus*	Nuttall's Sunflower	*Helianthus nuttallii*
		Plains Sunflower	*Helianthus petiolaris*
Willow Herb	*Epilobium ciliatum*	Sunflower	*Helianthus pumilus*

Common Name	***Scientific Name***	**Common Name**	***Scientific Name***
Stiff Sunflower	*Helianthus rigidus*	Tarweed	*Madia glomerata*
Showy Goldeneye	*Heliomeris multiflora*	Common Mallow	*Malva neglecta*
Cow Parsnip	*Heracleum sphondylium*	Common Horehound	*Marrubium vulgare*
Dame's Rocket *	*Hesperis matronalis*	Black Medick	*Medicago lupulina*
Alumroot	*Heuchera parvifolia*	Alfalfa	*Medicago sativa*
Nodding Green Violet	*Hybanthus verticillatus*	White Sweetclover	*Melilotus alba*
Waterleaf	*Hydrophyllum fendleri*	Yellow Sweetclover	*Melilotus officinalis*
Hymenopappus	*Hymenopappus filifolius*	Field Mint	*Mentha arvensis*
Greater St. John's-wort	*Hypericum majus*	Bluebells	*Mertensia lanceolata*
Common St. John'swort *	*Hypericum perforatum*	False Dandelion	*Microseris cuspidate*
Spike Gilia	*Ipomopsis spicata*	Slender Phlox	*Microsteris gracilis*
Western Blue Flag	*Iris missouriensis*	Monkey Flower	*Mimulus floribundus*
Poverty Weed	*Iva axillaris*	Roundleaf Monkeyflower	*Mimulus glabratus*
Marsh Elder	*Iva xanthifolia*	Hairy Four-O'Clock	*Mirabilis hirsuta*
Kochia	*Kochia scoparia*	Narrowleaf Four O'Clock	*Mirabilis linearis*
False Boneset	*Kuhnia chlorolepis*	Wild Four-O'Clock	*Mirabilis nyctaginea*
False Boneset	*Kuhnia eupatorioides*	Wild Bergamot	*Monarda fistulosa*
Blue Lettuce	*Lactuca oblongifolia.*	Spotted Bee-Balm	*Monarda pectinata*
Prickly Lettuce	*Lactuca serriola*	Musineon	*Musineon divaricatum*
Stickseed	*Lappula redowskii*	Mousetail	*Myosurus minimus*
Purple Peavine	*Lathyrus eucosmus*	American Milfoil	*Myriophyllum exalbescens*
Duckweed	*Lemna minor*		
Field Peppergrass	*Lepidium campestre*	Watercress	*Nasturtium officinale*
Peppergrass	*Lepidium densiflorum*	Navarretia	*Navarretia minima*
Bladderpod	*Lesquerella montana*	Catnip	*Nepeta cataria*
White Aster	*Leucelene ericoides*	Whitest Evening Primrose	*Oenothera albicaulis*
Mountain Lily	*Leucocrinum montanum*	Evening Primrose	*Oenothera flava*
Blazing Star	*Liatris punctata*	Yellow Stemless Evening Primrose	*Oenothera howardii*
Porter's Lovage	*Ligusticum porteri*		
Mudwort	*Limosella aquatica*		
Texas Toadflax	*Linaria canadensis.*	Common Evening Primrose	*Oenothera villosa*
Dalmatian Toadflax *	*Linaria dalmatica*	Scotch Thistle *	*Onopordum acanthium*
Butter-and-eggs*	*Linaria vulgaris*	False Gromwell	*Onosmodium molle*
Blue Flax	*Linum perenne*	Pale Evening Primrose	*Onothera albicaulis*
Norton's Flax	*Linum pratense*	Little Prickly Pear	*Opuntia fragilis*
Plains Flax	*Linum puberulum*	Twistspine Prickly Pear	*Opuntia macrorhiza*
Fog-fruit	*Lippia cuneifolia*	Plains Prickly Pear	*Opuntia polyacantha*
Puccoon	*Lithospermum incisum*	Broomrape	*Orobanche fasciculata*
Puccoon	*Lithospermum multiflorum*	Sweet Cicely	*Osmorhiza chiliensis*
		Anise Root	*Osmorhiza longistylis*
Great Lobelia	*Lobelia siphilitica*	Gray-Green Wood Sorrel	*Oxalis dillenii.*
Wild Parsley	*Lomatium orientale*	Purple Locoweed	*Oxytropis lambertii*
Birdfoot Trefoil	*Lotus corniculatus*	Corn Poppy	*Papaver rhoeas*
Silvery Lupine	*Lupinus argenteus*	Pennsylvania Pellitory	*Parietaria pensylvanica*
American Bugleweed	*Lycopus americanus*	James' Nailwort	*Paronychia jamesii*
Rough Bugleweed	*Lycopus asper*	Nipple Cactus	*Pediocactus simpsonii*
Skeleton-weed	*Lygodesmia juncea*	White Beardtongue	*Penstemon albidus*
Fringed Loostrife	*Lysimachia ciliata*	Firecracker Penstemon	*Penstemon eatonii*
Winged Loosestrife	*Lythrum alatum*	Palmer's Penstemon	*Penstemon palmeri*
Bigelovi's Tansy Aster	*Machaeranthera bigelovii*	Sidebells Penstemon	*Penstemon secundiflorus*
Hoary Aster	*Machaeranthera canescens*	Rocky Mountain Penstemon	*Penstemon strictus*
		Slender Penstemon	*Penstemon virens*

Common Name	***Scientific Name***	**Common Name**	***Scientific Name***
Penstemon	*Penstemon virgatus*	Willow Dock	*Rumex salicifolius.*
Scorpionweed	*Phacelia heterophylla*	Common Arrowhead	*Sagittaria latifolia*
Clammy Ground cherry	*Physalis heterophylla*	Russian-Thistle	*Salsola iberica*
Prairie Ground Cherry	*Physalis pumila*	Lance-leaved Sage	*Salvia reflexa*
Virginia Ground Cherry	*Physalis virginiana*	Bouncing Bet	*Saponaria officinalis*
Double Bladder-pod	*Physaria vitulifera*	Diamondleaf Saxifrage	*Saxifraga rhomoidea*
Picradeniopsis	*Picradeniopsis oppositifolia*	False Salsify	*Scorzonera laciniata*
		Figwort	*Scrophularia lanceolata*
Popcorn Flower	*Plagiobothrys scouleri*	Britton's Skullcap	*Scutellaria brittonii*
English Plantain	*Plantago lanceolata*	Stonecrop	*Sedum lanceolatum*
Common Plantain	*Plantago major*	Spikemoss	*Selaginella densa*
Patagonian Plantain	*Plantago patagonica.*	Groundsel	*Senecio fendleri*
Clammy-weed	*Polansia dodecandra*	Groundsel	*Senecio integerrimus*
Knotweed	*Polygonum arenastrum.*	Prairie Ragwort	*Senecio plattensis*
Wild Buckwheat	*Polygonum convolvulus.*	Groundsel	*Senecio spartioides*
Knotweed	*Polygonum douglasii*	Groundsel	*Senecio tridenticulatus*
Water Pepper	*Polygonum hydropiper*	White Checkermallow	*Sidalcea candida*
Pale Smartweed	*Polygonum lapathifolium*	New Mexico Checkmallow	*Sidalcea neomexicana*
		Sleepy Catchfly	*Silene antirrhina*
Pennsylvania Smartweed	*Polygonum pensylvanicum*	Campion	*Silene drummondii*
		White Campion	*Silene pratensis*
Lady's Thumb	*Polygonum persicaria*	Tumbling Mustard	*Sisymbrium altissimum*
Knotweed	*Polygonum ramosissimum*	Strict Blue Eyed Grass	*Sisyrinchium montanum*
		Spikenard	*Smilacina stellata (L.)*
Knotweed	*Polygonum sawatchense*	Carrion Flower	*Smilax herbacea*
Common Purslane	*Portulaca oleracea*	Buffalo Bur	*Solanum rostratum*
Leafy Pondweed	*Potamogeton foliosus*	Cut-leaved Nightshade	*Solanum triflorum*
Floatingleaf	*Pondweed Potamogeton natans*	Canada Goldenrod	*Solidago canadensis*
		Late Goldenrod	*Solidago gigantea*
Tall Cinquefoil	*Potentilla arguta*	Prairie Goldenrod	*Solidago missouriensis*
Cinquefoil	*Potentilla fissa*	Soft Goldenrod	*Solidago mollis*
Cinquefoil	*Potentilla gracilis*	Low Goldenrod	*Solidago nana*
Wooly Cinquefoil	*Potentilla hippiana*	Rigid Goldenrod	*Solidago rigida*
Norwegian Cinquefoil	*Potentilla norvegica*	Field Sow Thistle	*Sonchus arvensis*
Bushy Cinquefoil	*Potentilla paradoxa*	Prickly Sow Thistle	*Sonchus asper*
Cinquefoil	*Potentilla pensylvanica*	Greater sea-spurry	*Spergularia media*
Hybrid Cinquefoil	*Potentilla pulcherrima xhippiana*	Sand Spurry	*Spergularia rubra*
		Red False Mallow	*Sphaeralcea coccinea*
Cinquefoil	*Potentilla rivalis*	Globe Mallow	*Sphaeralcea parvifolia*
Selfheal	*Prunella vulgaris*	Hedge Nettle	*Stachys palustris*
Wild Alfala	*Psoralea tenuiflora*	Long-leaved Stitchwort	*Stellaria longifolia*
Purple Ground Cherry	*Quincula lobata*	Wire Lettuce	*Stephanomeria pauciflora*
Macoun's Buttercup	*Ranunculus macounii*		
Cursed Crowfoot	*Ranunculus scleratus*	Green Gentian	*Swertia radiata*
Hairy Leaf Buttercup	*Ranunculus trichophyllus*	Prairie Fameflower	*Talinum parviflorum*
		Red Seeded Dandelion	*Taraxacum laevigatum*
Prairie Coneflower	*Ratibida columnifera*	Dandelion	*Taraxacum officinale*
Bog Yellow Cress	*Rorippa palustris*	Purple Meadow Rue	*Thalictrum dasycarpum*
Goldenglow	*Rudbeckia ampla*	Greenthread	*Thelesperma megapotanicum*
Sheep Sorrel	*Rumex acetosella*		
Curly Dock	*Rumex crispus*	Golden Banner	*Thermopsis rhombifolia var.divaricarp*a
Golden Dock	*Rumex maritimus*		
Bitter Dock	*Rumex obtusifolius*	Field Penny Cress	*Thlaspi arvense*

Common Name	*Scientific Name*	Common Name	*Scientific Name*
Easter Daisy	*Townsendia grandiflora*	Great Plains Verbena	*Verbena bipinnatifida*
Easter Daisy	*Townsendia hookeri*	Prostrate Vervain	*Verbena bracteata*
Spiderwort	*Tradescantia occidentalis*	Blue Vervain	*Verbena hastata*
		Golden Crownbeard	*Verbesina encelioides*
Noseburn	*Tragia ramosa*	Brooklime Speedwell	*Veronica americana*
Goat's Beard	*Tragopogon dubius*	Water Speedwell	*Veronica anagallis-aquatica*
Salsify	*Tragopogon porrifolius*		
Alsike Clover	*Trifolium hybridum*	Catenate Ironweed	*Veronica catentata*
Red Clover	*Trifolium pratense*	Purslane Speedwell	*Veronica peregrina*
White Clover	*Trifolium repens*	American Vetch	*Vicia americana*
Venus' Looking Glass	*Triodanis leptocarpa*	Yellow Prairie Violet	*Viola nuttallii*
Venus Looking Glass	*Triodanis perfoliata*	Rydberg's Violet	*Viola rydbergii*
Stinging Nettle	*Urtica dioica*	Colorado Violet	*Viola scopulorum*
Cow Cockle	*Vaccaria pyramidata*	Northern Bog Violet	*Viola sororia*
Moth Mullein *	*Verbascum blattaria*	Cocklebur	*Xanthium strumarium*
Common Mullein *	*Verbascum thapsus*	Death Camass	*Zigadenus venenosus*

Shrubs

Common Name	*Scientific Name*	Common Name	*Scientific Name*
Saskatoon Service-berry	*Amelanchier alnifolia*	Chokecherry	*Prunus virginiana*
Dwarf Wild Indigo	*Amorpha nana*	Apple	*Pyrus malus*
Western Sagewort	*Artemisia campestris*	Fragrant Sumac	*Rhus aromatica*
Silky Wormwood	*Artemisia dracunculus*	Golden Currant	*Ribes aureum*
Silver Sage	*Artemisia frigida*	Western Red Currant	*Ribes cereum*
White Sage	*Artemisia ludoviciana*	Common Gooseberry	*Ribes inerme*
Four-winged Saltbush	*Atriplex canescens*	Prickly Wild Rose	*Rosa acicularis*
Oregon Grape	*Berberis repens*	Prairie Wild Rose	*Rosa arkansana*
Buckbrush	*Ceanothus fendleri*	Western Wild Rose	*Rosa woodsii*
New Jersey Tea	*Ceanothus herbaceus*	Boulder Raspberry	*Rubus deliciosus*
GreenplumeRabbitbrush	*Chrysothamnus nauseosus*	Raspberry	*Rubus idaeus*
		Coyote Willow	*Salix exigua*
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	Bluestem Willow	*Salix irrorata*
		Yellow Willow	*Salix lutea*
Hawthorne	*Crataegus erythropoda*	Burnet	*Sanguisorba minor*
Hawthorn	*Crataegus succulenta*	Mountain Ash	*Sorbus scopulina*
Snakeweed	*Gutierrezia sarothrae*	Western Snowberry	*Symphoricarpos occidentalis*
Common Juniper	*Juniperus communis*		
Mountain Ninebark	*Physocarpus monogynus*	Snowberry	*Symphoricarpos oreophilus*
Ninebark	*Physocarpus opulifolius*	Salt Cedar	*Tamarix ramosissima*
Wild Plum	*Prunus americana*	Highbush Cranberry	*Viburnum opulus*
Sand Cherry	*Prunus pumila*	Yucca	*Yucca glauca*

Trees

Common Name	*Scientific Name*	Common Name	*Scientific Name*
Mountain Maple	*Acer glabrum*	Narrow-leaved Cottonwood	*Populus angustifolia*
Box-elder	*Acer negundo*	Plains Cottonwood	*Populus deltoides*
Norway Maple	*Acer platanoides*	Lanceleaf Cottonwood	*Populus x acuminata*
Water Birch	*Betula occidentalis*	Douglas-Fir	*Pseudotsuga menziesii*
Russian Olive	*Elaeagnus angustifolia*	Black Locust	*Robinia pseudo-acacia*
Green Ash	*Fraxinus pennsylvania*	Peach-leaf Willow	*Salix amygdaloides*
Rocky Mountain Juniper	*Juniperus scopulorum*		
Blue Spruce	*Picea pungens*	Crack Willow	*Salix fragilis*
Ponderosa Pine	*Pinus ponderosa*	Siberian Elm	*Ulmus pumila*
Silver Poplar	*Populus alba*		

Vines

Common Name	*Scientific Name*	Common Name	*Scientific Name*
Hedge Bindweed	*Calystegia macouni*	Common Hops	*Humulus lupulus*
Hedge Bindweed	*Calystegia sepium*	Poison Ivy	*Toxicodendron rydbergii*
Hairy Clematis	*Clematis hirsutissima*		
Western Clematis	*Clematis ligusticifolia*	Puncture Vine	*Tribulus terrestris*
Field Bindweed	*Convolvulus arvensis*	River-bank Grape	*Vitis riparia*
Evolvulus	*Evolvulus nuttallianus*		

Others

The following types of plants have also been identified at Rocky Flats:

- 15 mosses
- 24 lichens

Wildlife Species List

Birds

Raptors

Common Name	*Scientific Name*	Common Name	*Scientific Name*
American kestrel	*Falco sparverius*	Merlin	*Falco columbarius*
Bald eagle	*Haliaeetus leucocephalus*	Northern goshawk	*Accipiter gentilis*
		Northern harrier	*Circus cyaneus*
Barn owl	*Tyto alba*	Osprey	*Pandion haliaetus*
Black vulture	*Coragyps atratus*	Peregrine falcon	*Falco peregrinus*
Broad-winged hawk	*Buteo platypterus*	Prairie falcon	*Falco mexicanus*
Burrowing owl	*Athene cunicularia*	Red-tailed hawk	*Buteo jamaicensis*
Cooper's hawk	*Accipiter cooperii*	Rough-legged hawk	*Buteo lagopus*
Ferruginous hawk	*Buteo regalis*	Sharp-shinned hawk	*Accipiter striatus*
Golden eagle	*Aquila chrysaetos*	Short-eared owl	*Asio flammeus*
Great horned owl	*Bubo virginianus*	Swainson's hawk	*Buteo swainsoni*
Long-eared owl	*Asio otus*	Turkey vulture	*Cathartes aura*

Songbirds

Common Name	*Scientific Name*	Common Name	*Scientific Name*
American crow	*Corvus brachyrhynchos*	Brewer's sparrow	*Spizella breweri*
American goldfinch	*Carduelis tristis*	Broad-tailed hummingbird	*Selasphorus platycercus*
American pipit	*Anthus rubescens*	Brown thrasher	*Toxostoma rufum*
American redstart	*Setophaga ruticilla*	Brown-headed cowbird	*Molothrus ater*
American robin	*Turdus migratorius*	Bullock's oriole	*Icterus bullockii*
American tree sparrow	*Spizella arborea*	Cassin's finch	*Carpodacus cassinii*
Ash-throated flycatcher	*Myiarchus cinerascens*	Cassin's sparrow	*Aimophila cassinii*
Barn swallow	*Hirundo rustica*	Chestnut-collaredlongspur	*Calcarius ornatus*
Belted kingfisher	*Ceryle alcyon*	Chestnut-sided warbler	*Dendroica pensylvanica*
Black swift	*Cypseloides niger*	Chipping sparrow	*Spizella passerina*
Black-billed cuckoo	*Coccyzus erythropthalmus*	Clay-colored sparrow	*Spizella pallida*
		Cliff swallow	*Petrochelidon pyrrhonota*
Black-billed magpie	*Pica hudsonia*		
Black-capped chickadee	*Poecile atricapilla*	Common grackle	*Quiscalus quiscula*
Black-headed grosbeak	*Pheucticus elanocephalus*	Common nighthawk	*Chordeiles minor*
		Common poorwill	*Phalaenoptilus nuttallii*
Black-throatedgray warbler	*Dendroica nigrescens*	Common raven	*Corvus corax*
Blue grosbeak	*Guiraca caerulea*	Common yellowthroat	*Geothlypis trichas*
Blue jay	*Cyanocitta cristata*	Cordilleran flycatcher	*Empidonax occidentalis*
Blue-gray gnatcatcher	*Polioptila caerulea*	Dark-eyed junco	*Junco hyemalis canice*
Blue-headed vireo	*Vireo solitarius*	Downy woodpecker	*Picoides pubescens*
Bohemian waxwing	*Bombycilla garrulus*	Eastern kingbird	*Tyrannus tyrannus*
Brewer's blackbird	*Euphagus cyanocephalus*	Eastern phoebe	*Sayornis phoebe*

Common Name	*Scientific Name*	Common Name	*Scientific Name*
European starling	*Sturnus vulgaris*	Red-winged blackbird	*Agelaius phoeniceus*
Field sparrow	*Spizella pusilla*	Rock dove	*Columba livia*
Fox sparrow	*Passerella illiaca*	Rock wren	*Salpinctes obsoletus*
Golden-crowned kinglet	*Regulus satrapa*	Ruby-crowned kinglet	*Regulus calendula*
Grasshopper sparrow	*Ammodramus savannarum*	Rufous hummingbird	*Selasphorus rufus*
		Sage thrasher	*Oreoscoptes montanus*
Gray catbird	*Dumetella carolinensis*	Savannah sparrow	*Passerculus sandwichensis*
Green-tailed towhee	*Pipilo chlorurus*		
Hairy woodpecker	*Picoides villosus*	Say's phoebe	*Sayornis saya*
Hermit thrush	*Catharus guttatus*	Snow bunting	*Plectrophenax nivalis*
Horned lark	*Eremophila alpestris*	Song sparrow	*Melospiza melodia*
House finch	*Carpodacus mexicanus*	Spotted towhee	*Pipilo maculatus*
House sparrow	*Passer domesticus*	Swainson's thrush	*Catharus ustulatus*
House wren	*Troglodytes aedon*	Townsend's solitaire	*Myadestes townsendi*
Lapland longspur	*Calcarius lapponicus*	Tree swallow	*Tachycineta bicolor*
Lark bunting	*Calamospiza melanocorys*	Vesper sparrow	*Pooecetes gramineus*
		Violet-green swallow	*Tachycineta thalassina*
Lark sparrow	*Chondestes grammacus*	Virginia's warbler	*Vermivora virginiae*
Lazuli bunting	*Passerina amoena*	Warbling vireo	*Vireo gilvus*
Lesser goldfinch	*Carduelis psaltria*	Western bluebird	*Sialia mexicana*
Lincoln's sparrow	*Melospiza lincolnii*	Western kingbird	*Tyrannus verticalis*
Loggerhead shrike	*Lanius ludovicianus*	Western meadowlark	*Sturnella neglecta*
MacGillivray's warbler	*Opornis tolmiei*	Western tanager	*Piranga ludoviciana*
Marsh wren	*Cistothorus palustris*	Western wood-pewee	*Contopus sordidulus*
Mountain bluebird	*Sialia currucoides*	White-breasted nuthatch	*Sitta carolinensis*
Mountain chickadee	*Parus gambeii*	White-crowned sparrow	*Zonotrichia leucophrys*
Mourning dove	*Zenaida macroura*	Willow flycatcher	*Empidonax traillii*
Northern flicker	*Colaptes auratus*	Wilson's warbler	*Wilsonia pusilla*
Northern mockingbird	*Mimus polyglottus*	Yellow warbler	*Dendroica petechia*
Northern shrike	*Lanius excubitor*	Yellow-breasted chat	*Icteria virens*
Orange-crowned warbler	*Vermivora celata*	Yellow-headed blackbird	*Xanthocephalus xanthocephalus*
Ovenbird	*Seiurus aurocapillus*		
Palm warbler	*Dendroica palmarum*	Yellow-rumped warbler	*Dendroica coronata*
Pine siskin	*Carduelis pinus*		
Red-breasted nuthatch	*Sitta canadensis*		
Red-naped sapsucker	*Sphyrapicus nuchalis*		

Upland Game

Common Name	*Scientific Name*	Common Name	*Scientific Name*
Ring-necked pheasant	*Phasianus colchicus*	Sharp-tailed grouse	*Tympanuchus phasianellus*

Waterfowl and Shorebirds

Common Name	***Scientific Name***	**Common Name**	***Scientific Name***
American bittern	*Botaurus lentiginosus*	Long-billed curlew	*Numenius americanus*
American coot	*Fulica americana*	Mallard	*Anas platyrhynchos*
American white pelican	*Pelecanus erythrorhynchos*	Northern pintail	*Anas acuta*
		Northern shoveler	*Anas clypeata*
American wigeon	*Anas americana*	Pectoral sandpiper	*Calidris melanotos*
Black-crowned nightheron	*Nycticorax nycticorax*	Pied-billed grebe	*Podilymbus podiceps*
Blue-winged teal	*Anas discors*	Redhead	*Aythya americana*
Bufflehead	*Bucephala albeola*	Ring-billed gull	*Larus delawarensis*
Canada goose	*Branta canadensis*	Ring-necked duck	*Aythya collaris*
Canvasback	*Aythya valisineria*	Ruddy duck	*Oxyura jamaicensis*
Cinnamon teal	*Anas cyanoptera*	Semipalmated plover	*Charadrius semipalmatus*
Common goldeneye	*Bucephala clangula*		
Common merganser	*Mergus merganser*	Semipalmated sandpiper	*Calidris pusilla*
Common snipe	*Gallinago gallinago*	Snow goose	*Chen caerulescens*
Double-crested cormorant	*Phalacrocorax auritus*	Snowy egret	*Egretta thula*
Eared grebe	*Podiceps nigricollis*	Solitary sandpiper	*Tringa solitaria*
Franklin's gull	*Larus pipixcan*	Sora	*Porzana carolina*
Gadwall	*Anas strepera*	Spotted sandpiper	*Actitis macularia*
Great blue heron	*Ardea herodias*	Virginia rail	*Rallus limicola*
Great egret	*Ardea alba*	Western grebe	*Aechmophorus occidentalis*
Greater scaup	*Aythya marila*		
Greater yellowlegs	*Tringa melanoleuca*	White-faced Ibis	*Plegadis chihi*
Green-winged teal	*Anas crecca*	Willet	*Catoptrophorus semipalmatus*
Hooded merganser	*Lophodytes cucullatus*		
Killdeer	*Charadrius vociferus*	Wilson's phalarope	*Phalaropus tricolor*
Lesser scaup	*Aythya affinis*	Wood duck	*Aix sponsa*
Lesser yellowlegs	*Tringa flavipes*		

MAMMALS

Common Name	*Scientific Name*	Common Name	*Scientific Name*
American black bear	*Ursus americanus*	Mule deer	*Odocoileus hemionus*
Big brown bat	*Eptesicus fuscus*	Muskrat	*Ondatra zibethicus*
Black-tailed prairie dog	*Cynomys ludovicianus*	Northern pocket gopher	*Thomomys talpoides*
Bobcat	*Lynx rufus*	Olive-backed pocket mouse	*Perognathus fasciatus*
Common gray fox	*Urocyon cinereoargenteus*	Plains harvest mouse	*Reithrodontomys montanus*
Common porcupine	*Erethizon dorsatum*	Plains pocket mouse	*Perognathus flavescens*
Coyote	*Canis latrans*	Prairie vole	*Microtus ochrogaster*
Deer mouse	*Peromyscus maniculatus*	Preble's meadow jumping mouse	*Zapus hudsonius preblei*
Desert cottontail	*Sylvilagus audubonii*	Raccoon	*Procyon lotor*
Eastern fox squirrel	*Sciurus niger*	Silky pocket mouse	*Perognathus flavus*
Elk (Wapiti)	*Cervus elaphus*	Striped skunk	*Mephitis mephitis*
Hispid pocket mouse	*Chaetodipus hispidus*	Thirteen-lined ground squirrel	*Spermophilus tridecemlineatus*
House mouse	*Mus musculus*		
Long-tailed vole	*Microtus longicaudus*		
Masked shrew	*Sorex cinereus*	Chipmunk	*Eutamias* spp.
Meadow vole	*Microtus pennsylvanicus*	Western harvest mouse	*Reithrodontomys megalotis*
Merriam's shrew	*Sorex merriami*	Western jumping mouse	*Zapus princeps*
Mexican woodrat	*Neotoma mexicana*	White-tailed deer	*Odocoileus xvirginianus*
Mountain lion	*Felis concolor*	White-tailed jackrabbit	*Lepus townsendii*

REPTILES AND AMPHIBIANS

Common Name	*Scientific Name*	Common Name	*Scientific Name*
Boreal chorus frog	*Pseudacris triseriatus maculata*	Prairie rattlesnake	*Crotalus viridis*
		Red-sided garter snake	*Thamnophis sirtalis*
Bullfrog	*Rana catesbeiana*	Short-horned lizard	*Phynosoma douglassi*
Bullsnake	*Pituophis melanoleucus*	Snapping turtle	*Chelydra serpentian*
Eastern yellowbelly racer	*Coluber constrictor*	Tiger salamander	*Ambystoma tigrinum*
Great Plains toad	*Bufo cognatus*	Western painted turtle	*Chrysemys picta*
Northern leopard frog	*Rana pipiens*	Western plains gartersnake	*Thamnophis radix*

FISH

Common Name	*Scientific Name*	Common Name	*Scientific Name*
Bluegill	*Lepomis macrochirus*	Northern redbelly dace	*Phoxinus eos*
Creek chub	*Semotilus atromaculatus*	Largemouth bass	*Micropterus salmoides*
		Longnose dace	*Rhinichthys cataractae*
Common shiner	*Luxilus cornutus*	Smallmouth bass	*Micropterus dolomieui*
Fathead minnow	*Pimephales promelas*	Stoneroller	*Campostoma anomalum*
Green sunfish	*Lepomis cyanellus*	White sucker	*Catostomus commersoni*

OTHERS

The following types of invertebrate species have also been identified at Rocky Flats:

- 63 species of phytoplankton
- 63 species of zooplankton
- 197 macrobiotic invertebrates
- 72 emergent insects
- 688 terrestrial invertebrates

APPENDIX C

Phase 1 Environmental Assessment of Section 16

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Colorado Field Office
46525 Highway 114
Saguache, Colorado 81149

IN REPLY REFER TO:
ES/CO: EC/PFW/Section 16
Mailstop 65412 Lakewood

MEMORANDUM 11 August 2011

To: Ms. Sue Oliveira, Chief Division of Realty

From: Ms. Laura Archuleta, Environmental Contaminants Specialist

Subject: Section 16/Rocky Flats NWR Phase I Survey

We completed a Phase I Environmental Site Assessment for the Section 16 Tract which was based on site visits, water quality sampling of the State Clay Mine 'pond', interviews, and a review of several environmental databases. Our research, sampling, and site visits found no known or observable environmental contaminants issues related to the parcel.

We do recommend that the car chassis and barrel be removed from the State Clay Mine pond and that the small debris piles throughout the parcel be removed too. Please dispose of all waste appropriately. In addition, we recommend that the above ground storage tank be labeled and that the secondary containment be checked for potential leaks since it is rusted. Or if the above ground storage tank will not be used in the future, it and the secondary containment should be removed and disposed of properly.

If you have any questions, please call me at (719) 655-6121 or Brian Sanchez at 303-236-4752.

Enclosures
cc: Mr. Steve Berendzen, RMA/RF NWR
Mr. Kevin Johnson, EC Coordinator

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UNITED STATES FISH AND WILDLIFE SERVICE
MOUNTAIN - PRAIRIE REGION # 6

ENVIRONMENTAL SITE ASSESSMENT
LEVEL 1 SURVEY CHECKLIST

Instructions: Complete each section. When the answer is "Yes" or when no response is given in parts B., C., and D., provide documentation under Part E. Describe the distance if "Nearby" is checked and whether there is a known potential pathway for hazardous substances and/or other environmental problems on site. Attach a legal description and plat, topographic map, or other identification of the real property covered by this Survey.

Note: Any deletions or omissions from this form will render this Survey invalid.

A. BACKGROUND INFORMATION:

Bureau Name FWS – Refuge Planning **Tract Name/Number** Section 16, Rocky Flats

Project Name Rocky Flats National Wildlife Refuge **County** Jefferson **State** CO

B. **Interviews:** Interview owners, neighbors, county agents, etc. and any appropriate Federal authorities on past and present use, addressing the topics in Parts C. and D. below. (Attach documentation)

- See Environmental Site Assessment Level 1 Survey Checklist (attached).

C. **Site Inspection Screen:** Note observance or knowledge of the following on site or nearby with checkmark:

		On Site Yes	Nearby Yes	None
1.	Dumps, especially with drums or other containers. (Read labels if possible; DO NOT OPEN OR HANDLE! If no labels, note identifying characteristics.)	___	___	X
2.	Other debris: note type (e.g., household, farm, industrial waste, etc.)	X	___	___
	- Old tires and other debris including scrap metal and discarded cement are located in dispersed dump sites east and west of the State Clay Mine (Figures 9, 10, 11). An abandoned automobile chassis and old storage barrel are located on the edge of the State Clay Mine pond (Figures 12, 13). The barrel is rusted through and appears to be empty. Tires and other household waste (e.g., television, sink) are also located in the southern, dry portion of the State Clay Mine (Figure 14).			
3.	Fills: (note if possible cover for dumps)	___	___	X
4.	Unusual chemical odors	___	___	X
5.	Aboveground storage tanks: note type (e.g., petroleum products, pesticides, etc.) Estimated tank size 500-gallon, The tank is not labeled. It is positioned in a stock tank and has a 'Danger' sign on it indicating that its contents are flammable (Figure 15).	X	___	___
6.	Chemicals/solvents storage: note where (e.g., barn, residence, etc.)	___	___	X

7.	Evidence of asbestos: note where, (e.g., fire proofing, acoustical plaster, siding, or floor tiles)	___	___	X
8.	Vegetation different from surrounding area for no apparent reason (e.g., bare ground)	___	___	X
9.	"Sterile" or modified water bodies	___	___	X
10.	Oiled or formerly oiled roads (note if no apparent damage)	___	___	X
11.	Oil seeps or other stained ground, or discolored stream banks	___	___	X
12.	Oil slicks on, or unusual colors in, water	___	___	X
13.	Spray operation base: note type (e.g., air strip, equipment parking area)	___	___	X
14.	Machinery/equipment repair areas	___	___	X
15.	Pipelines; major electrical equipment	X	___	___

- An underground natural gas transmission pipeline runs parallel to the northern property boundary. It is just north of access road and north of Woman Creek. It passes under the extreme northeast corner of the property for approximately 150 feet. The pipeline is owned and operated by the Public Service Company of Colorado (Denver, Colorado). The company maintains a surface easement over the pipeline.

16.	Electric transmission lines: pole-mounted transformers, pad-mounted transformers (note evidence of leakage)	X	___	___

- An electrical transformer owned and operated by the Public Service Company of Colorado is located within the exclusion envelope. Electric transmission lines exist along Highway 93, along the property's southern boundary, and diagonally in a north-south direction through the center of the property (Figures 4, 5). Additionally, electrical transmission lines run from the transformer along the rail line, southward to the southern boundary.

17.	Underground storage tanks, standpipes, constructed sites for petroleum product storage	___	___	X
18.	Evidence of oil or gas drilling pads or holding ponds	X	___	___

- There are 20 oil and gas wells within 2 miles of the property that are registered with the Colorado Oil and Gas Conservation Commission (COGCC). Of the 20 wells, 1 is classified as 'active', 1 is classified as 'producing', and 1 is classified as 'waiting on completion'. The remaining 17 wells are classified as 'dry and abandoned', 'abandoned', or 'plugged and abandoned'. The 'producing' well is located within the exclusion envelope in the northwestern corner of the property.

19.	Evidence of strip mining, hard rock mining, or other mineral activity	X	X	___

- Thirteen permitted mines exist within 2 miles of the property. The Church Pit and Rocky Flats Pit are located immediately north of the property. Both are currently active and produce clay (Church Pit) and sand and gravel (Rocky Flats Pit). Another inactive mine (State Clay Mine) is located in the center of the property. It was mined for clay from 1980 to 1994. The same site was also mined for coal from 1934 – 1946 and was referred to as the Caprock Mine. The Caprock Mine was a steeply sloping mine that extended 4,000 feet in length and 600 – 700 feet deep.

20. Other environmental problems: (see 341 FW 3. 5 C.) Attach documentation ____ ____ X

D. Record Searches: Coordinate with Division of Realty. Attach documentation to show that 'appropriate inquiry' was made from 'reasonably ascertainable' information (see 341 FW 3, Exhibit 4) for the following:

-Based on information provided by the Colorado State Land Board and the U.S. Fish and Wildlife Service's Refuge Planning Office, the following types of documents do not exist for the property: Environmental Site Assessment, Environmental Audit reports, Environmental permits, Registration for USTs or aboveground storage tanks, or Geotechnical studies.

- The Environmental Contaminants Program conducted searches of the US EPA's online Envirofacts Database, the Colorado Oil and Gas Conservation Commission's online database, the Colorado Division of Reclamation, Mining, and Safety's permitted mining database, and the Colorado Storage Tank Information System's online database to determine the presence of registered NPDES dischargers, hazardous waste sites, permitted oil and gas well sites, and registered underground storage tanks in the vicinity of Section 16. The searches were conducted between June 20 and July 29, 2011.

-Other appropriate inquiry from reasonably ascertainable information for due diligence (e.g. "remoteness" of potential mineral development report, etc.) is the responsibility of U.S. Fish and Wildlife Service's Refuge Planning Office.

1. Past uses that might indicate potential hazardous substance or other environmental problems on site. (CIRCLE any that are applicable and document in Section E):

NONE X

Manufacturing; service station; dry cleaning; air strip; pipeline; rail line; facility with large electrical transformers or pumping equipment; petroleum production; landfill; scrap metal, auto or battery recycling; military; lab; wood preserving.
Other (describe)

- A rail line passes through the property's eastern side and a spur extends westward into the Refuge and through the Rocky Flats Industrial Area.

2. Nearby land uses, especially upstream or up gradient, or that might have had waste to dump at site (see above list).

NONE X

Identify _____

4. Agricultural drainage history: surface and/or subsurface drains. Yes____ No_X__

5. In acquiring land from another Federal agency, that agency has notified the Department of past or current presence of a hazardous substance under Section 120(h) of CERCLA (Superfund).

Not Applicable_X__ Yes____ No____

E. Documentation and Analysis: (Attached): Include all documentation for Parts A, B, and C above (e.g., detailed summary of site conditions; description of topography and other site features; list the records searched and findings; list of persons interviewed and comments; analysis; photos; etc.). Include conclusions by Environmental Contaminants Specialist, if any.

F. Certification (Preparer sign one and only one of the following)

1. I certify that to the best of my knowledge, no hazardous substances or other environmental problems are present on this real property, and there are no obvious signs of any effects of such substances or problems.

Signed Laura Archuleta Printed Name Laura Archuleta

Date: 10 August 2011 Title: Environmental Contaminants Specialist

2. The surveyed real property, or a portion thereof, contains hazardous substances or other environmental problems as determined by the environmental site assessment. The owner of the real estate has cleaned up or will clean up the hazardous substance or other environmental problems to bureau specifications. (documentation of the owner's commitment, ability, and plan to clean up the property, is attached). A level II or a Level III Survey is not required.

Signed_____ Printed Name_____

Date:_____ Title:_____

3. On the basis of the information collected to complete this form it is possible to reasonably conclude that there is a potential for hazardous substances or other environmental problems, or the effects of hazardous substances or other environmental problems, to be present on this real property.

A Level II Survey is recommended____

A Level III Survey was completed ____ (see attached information)

Signed_____ Printed Name_____

Date:_____ Title:_____

4. On the basis of the information collected to complete this Survey it is possible to reasonably conclude that there is a potential for hazardous substances or other environmental problems, or the effects of hazardous substances or other environmental problems, to be present on this real property, but there is sufficient information documented to conclude that a Level II or III Survey is not necessary. The actual or potential remediation or other environmental cleanup costs or other monetary damages on this real property can reasonably expect to be $ _____.

Signed_____ Printed Name_____

Date:_____ Title:_____

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Sec. 312.10 of this part.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Signed_____ Print Name Laura Archuleta

Date 10 August 2011 Title Environmental Contaminants Specialist

G. Reprogramming

Reprogramming will____ will not X be required.

H. Approving Official

Signed_____ Printed Name Susan C. Linner

Date: 8/11/11 Title: Colorado Field Supervisor

ENVIRONMENTAL SITE ASSESSMENT
LEVEL 1 SURVEY CHECKLIST

Tract Name: Section 16, Rocky Flats, Jefferson County, Colorado

E. **Documentation and Analysis** of sections A, B, and C

A. See Attachment A for legal description of property boundaries, Attachment B for property map and photos, and Attachment C for a water quality summary table of the State Clay Mine pond.

B. Interviews - Interviews were held with the following individuals:

Mr. Christopher Smith – Colorado State Board of Land Commissioners

Mr. Smith met with me (Brian Sanchez, U.S. Fish and Wildlife Service [USFWS]), Steven Shuck (USFWS), Michael Dixon (USFWS), Eric Paul Griffin (USFWS), Donald Shannon (Shannon and Associates), and Bill Lundquist (Shannon and Associates) on June 22, 2011. Mr. Smith gave us a tour of the property and provided some information about its history and current use. He mentioned that an abandoned coal mine was present in the center of the property. He later provided information that indicated that the site was originally mined for coal and more recently mined for clay. He indicated that accumulated water in the open-pit mine had not been examined for trace metals. He was not aware of any contaminant issues that exist on the property.

Mr. Mark Sattelberg – U.S. Fish and Wildlife Service

Mr. Sattelberg met with me on August 2, 2011 to discuss Section 16. He served as the Rocky Flats National Wildlife Refuge Contaminants Specialist for 5 years in the early 2000's. He was unaware of any environmental concerns on Section 16. His experience led him to believe that the site was not likely impacted by actinide contamination sources within the Rocky Flats Industrial Area.

Ms. Amy Thornburg – U.S. Fish and Wildlife Service
Mrs. Thornburg met with me on June 14 and provided general background information, maps, manuscript reprints, and other documents associated with Section 16. Mrs. Thornburg is familiar with Section 16 and highlighted a few areas of potential environmental concern.

Other – Rocky Flats National Wildlife Refuge Comprehensive Conservation Plan and Environmental Impact Statement and other publications.

Site information compiled in the Rocky Flats National Wildlife Refuge Comprehensive Conservation Plan and Environmental Impact Statement (USFWS 2004), and publications by Poet and Martell (1972), Smith and Black (1975), Arthur (1977), Little and Whicker (1978), Ibrahim et al. (1996, 1997), Webb et al. (1997), Hulse et al. (1999), Todd and Sattelberg (2005), and Sattelberg (2007) were reviewed and used to prepare this environmental site assessment. The documents provided a comprehensive and detailed description of the surrounding area and investigated environmental issues.

C. Site Inspection Screen

Site Description

Section 16 is comprised of approximately 640 acres in Jefferson County, Colorado (Figure 1). The property is approximately 20 miles northwest of downtown Denver. It is adjacent to the southwest boundary of Rocky Flats National Wildlife Refuge (Refuge). The property contains remnants of native xeric tallgrass prairie, is used as a migration corridor for deer and elk, and contains critical habitat for the federally endangered Preble's meadow jumping mouse (*Zapus hudsonius preblei*). Woman Creek flows seasonally from west to east through the property's northern portion before the majority of its flow is diverted into the Mower Ditch and Mower Reservoir. Smart Ditch originates on the property below Rocky Flats Lake and flows from east to west, eventually entering the South Woman Creek drainage and Standley Lake. The South Boulder Diversion Canal (Figure 2) runs from north to south along the property's eastern portion. The canal is operated by Denver Water Department and delivers water from Gross Reservoir to Ralston Reservoir. None of this water is delivered to the property. The majority of Rocky Flats Lake, also known as Smart Reservoir, is located within the property boundaries. It is primarily fed by pumped groundwater and/or spring seepage from the upper Smart drainage. Charles McKay holds the rights to this water. Surface rights to the property are currently leased to Charles McKay for agricultural and recreational uses. Current leases have been in place since 2004 (agricultural) and 2009 (recreational). The property is primarily used for livestock grazing (Figure 3). Mineral rights to the property have been leased to the LaFarge Corporation since 1992. Existing structures within the property boundaries are located within a 23 acre exclusion envelope in the northwest corner. This envelope will be retained by the Colorado State Land Board.

Highway 93 runs along the eastern side of the property, while Highway 72 is located south of the property (Figure 1). An access road is located along the northern property boundary and another enters the property from Highway 93. A series of dirt roads exist throughout the property. A rail line passes through the property's eastern side and a spur extends westward into the Refuge and through the Rocky Flats Industrial Area (IA). An electrical transformer owned and operated by the Public Service Company of Colorado is

located within the exclusion envelope. Electric transmission lines exist along Highway 93, along the property's southern boundary, and diagonally in a north-south direction thought the center of the property (Figures 4, 5). Additionally, electrical transmission lines run from the transformer along the rail line, southward to the southern boundary.

The city of Arvada (population: 106,000) is located approximately 10 miles southeast of the property, while the city of Golden (population: 18,000) is located approximately 10 miles south of the property. Two smaller communities of Superior (population: 11,000) and Eldorado Springs (population: 600) are each located approximately 5 miles northeast and northwest of the property, respectively. There are 8 underground storage tanks in Golden within 2 miles of the property. Four of these tanks hold gasoline, 3 hold diesel fuel, and 1 holds used oil. There are 6 above ground storage tanks in Golden within 2 miles of the property. All of these tanks hold diesel fuel. There are 5 underground storage tanks in Arvada within 2 miles of the property. Two of these tanks hold gasoline, 2 hold diesel fuel, and 1 holds used oil. There are 6 above ground storage tanks in Arvada within 2 miles of the property. Two of these tanks hold lube oil, 1 holds diesel fuel, 1 holds dyed diesel fuel, 1 holds used oil, and 1 holds methanol. There are 26 facilities within 2 miles of any property boundary that are registered with the U.S. Environmental Protection Agency's (EPA) Facility Registry System. While there are 12 National Pollutant Discharge Elimination System permitted dischargers within 20 miles of the property, none are directly upslope of the property and none discharge into waterways that flow onto the property. There are 2 sites within 10 miles of the property recognized as Comprehensive Environmental Response, Compensation, and Liability Superfund sites. The Marshall Landfill, located approximately 6 miles northeast of the site, was placed on the National Priorities List (NPL) in 1983. The Rocky Flats Environmental Technology Site, located within the Refuge was placed on the NPL in 1989. This site is located within the Rocky Flats IA and remains under the control of the Department of Energy (Figure 1).

There are 20 oil and gas wells within 2 miles of the property that are registered with the Colorado Oil and Gas Conservation Commission (COGCC). Of the 20 wells, 1 is classified as 'active', 1 is classified as 'producing', and 1 is classified as 'waiting on completion'. The remaining 17 wells are classified as 'dry and abandoned', 'abandoned', or 'plugged and abandoned'. The 'producing' well is located within the exclusion envelope in the northwestern corner of the property. The most recent production records for this well (State 16-4, #1) available through the COGCC online database are from December 2009. An underground natural gas transmission pipeline runs parallel to northern property boundary. It is located north of the access road and north of Woman Creek. It passes under the extreme northeast corner of the property for approximately 150 feet. The pipeline is owned and operated by the Public Service Company of Colorado (Denver, Colorado). The company maintains a surface easement over the pipeline.

Thirteen permitted mines exist within 2 miles of the property. One is located in the center of the property (State Clay Mine) and 2 are located immediately north of the

property (Church Pit, Rocky Flats Pit). The permit for the State Clay Mine was issued in 1980 and revoked in 1994. Permits for the Church Pit and Rocky Flats mines were issued in 1980 and 2004, respectively. Both are currently active and produce clay (Church Pit) and sand and gravel (Rocky Flats Pit). The State Clay Mine is approximately 920 yards long (north-south) and 80 yards at its widest (east-west). It is an open pit mine that appears to have filled with groundwater. From ground level, the pit extends approximately 30 feet downward to the water's surface. This location was also mined for coal from 1934 – 1946 and was referred to as the Caprock Mine (Christopher Smith, Pete Milonas, Colorado State Land Board, personal communication). The Caprock Mine was a steeply sloping mine that extended 4,000 feet in length and 600 – 700 feet deep. Historic mining record searches have not yielded further information on this mine's production or reclamation.

Based on this site's mining history and the peculiar blue-green color of the infiltrated water present in the State Clay Mine (Figures 1, 6), the USFWS opted to quantify the presence of trace metals in this water as part of the Phase I Environmental Assessment process. Three water samples and 1 duplicate were collected from the State Clay Mine on June 30, 2011. Samples were analyzed by Accutest Laboratories (Wheat Ridge, Colorado) for total and dissolved concentrations of arsenic, cadmium, copper, manganese, iron, lead, and zinc. Calcium and magnesium were also quantified for the purpose of estimating water hardness. Results are summarized in Table 1. Few analytes were present at concentration above their respective method detection limits (DL). Analytes above their DLs were below chronic toxicity screening levels presented by Buchman (1999) or the Colorado Department of Public Health and Environment (CDPHE 2011).

Nuclear weapons components were manufactured within the IA between 1952 and 1989 when it was placed on the U.S. EPA's NPL (USFWS 2004). From 1958 to 1968, plutonium-contaminated cutting oil was stored in steel drums at a site known as the 903 Pad. The drums leaked and contaminated the soil near the Pad. Contaminated soil was subsequently transported east and southeast from this location by prevailing winds (USFWS 2004). Soil concentrations of actinides (i.e., americium, plutonium, uranium) from this source are inversely related to their distance from the 903 Pad (Little and Whicker 1978, Ibrahim et al. 1996). A survey of Refuge lands conducted by the Department of Energy and the USFWS in 2006 indicates that 3 of 41 soil samples collected throughout the Refuge contained plutonium concentrations above 1 pCi/g. Each of these sites is located south and southeast of the 903 Pad (Sattelberg 2007). Soil concentrations below 1 pCi/g are expected to impart minimal risk to Refuge workers or visitors (USFWS 2004). While this sampling effort did not address Section 16, soil samples were collected adjacent to the northern and eastern property boundaries. Each of these samples yielded actinide concentrations well below 1 pCi/g.

Investigations into the presence of actinides in deer tissue collected in the Rocky Flats area were conducted by Hiatt (1977), Symonds (1992), and Todd and Sattelberg (2005).

Each investigation revealed very low actinide levels and few concentrations above method DLs. Todd and Sattelberg (2005) suggest that this is likely due to the low levels of actinides across most of the Rocky Flats site, the very low rate of soil to plant actinide transfer, and the low rate of gastrointestinal adsorption (ATSDR 1990). They further suggest that the consumption of deer meat harvested from the Rocky Flats area poses little risk to human health. A similar investigation conducted by the U.S. EPA (Smith and Black 1975) examined tissues from cattle which grazed on a pasture east of the Rocky Flats IA. The authors carried out a human health risk assessment and determined that the daily consumption of liver or muscle tissue from these animals over the course of 50 years would result in a minimal (0.002%) increase above background radiation exposure levels.

Site Visit Notes

1. State Clay Mine:

Trace metal concentrations in water collected from the State Clay Mine are summarized in Table 1. All concentrations were below method DLs or chronic screening exposure levels. Turtles were observed swimming in the pond during a visit on June 30, 2011.

2. Bunker:

A storage bunker (Figures 1, 7, 8) built into the side of a hill is located southeast of the State Clay Mine. Its origins and use are unknown. It is small (approximately 3.5 feet high and 8 feet on each side). It has a heavy metal outer door, a metal inner door, and two protected locations on the outer door for the attachment of locks. There is animal scat in it and vegetation was apparently carried in by the occupant. The door does not fully close, so it is easily accessible by small animals. Strange smells, stained soils in the bunker, or 'dead' ground near the entrance were not apparent. It does not appear to be an environmental hazard.

3. Waste Piles:

There are several dispersed waste piles west and east of the State Clay Mine (Figures 9, 10, 11). They contain old tires, discarded cement, and some scrap metal. There did not appear to be any hazardous materials in the waste piles.

4. Debris in State Clay Mine:

There is some debris present in the pond within the State Clay Mine (Figure 12). Debris consists of an abandoned automobile chassis and a rusted storage barrel at the water's edge. The barrel appears to be empty. Tires and other household waste (e.g., television, sink, water heater) are located in southern, dry portion of the mined area (Figures 13. 14).

5. Above ground storage tank:

An above ground storage tank is present on the property west of the State Clay Mine (Figure 15). The storage tank does not appear to be leaking and is held within a stock tank. The storage tank is not labeled, but has a 'Danger' sign on it indicating that its contents are flammable. The delivery hose from the storage tank was not completely held within the stock tank.

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comprehensive conservation plan and environmental impact statement. U.S. Fish and Wildlife Service, Commerce City, Colorado.
Webb, S.B., Ibrahim, S.A., Whicker, F.W. 1997. A three-dimensional spatial model of plutonium in soil near Rocky Flats, Colorado. Health Physics 73:340-349.

ATTACHMENT A – Section 16 Legal Description

T. 2 S., R. 70 W., 6th P.M., Section 16, all, excepting a 23 acre parcel in the northwest corner of the section.

ATTACHMENT B – Figures

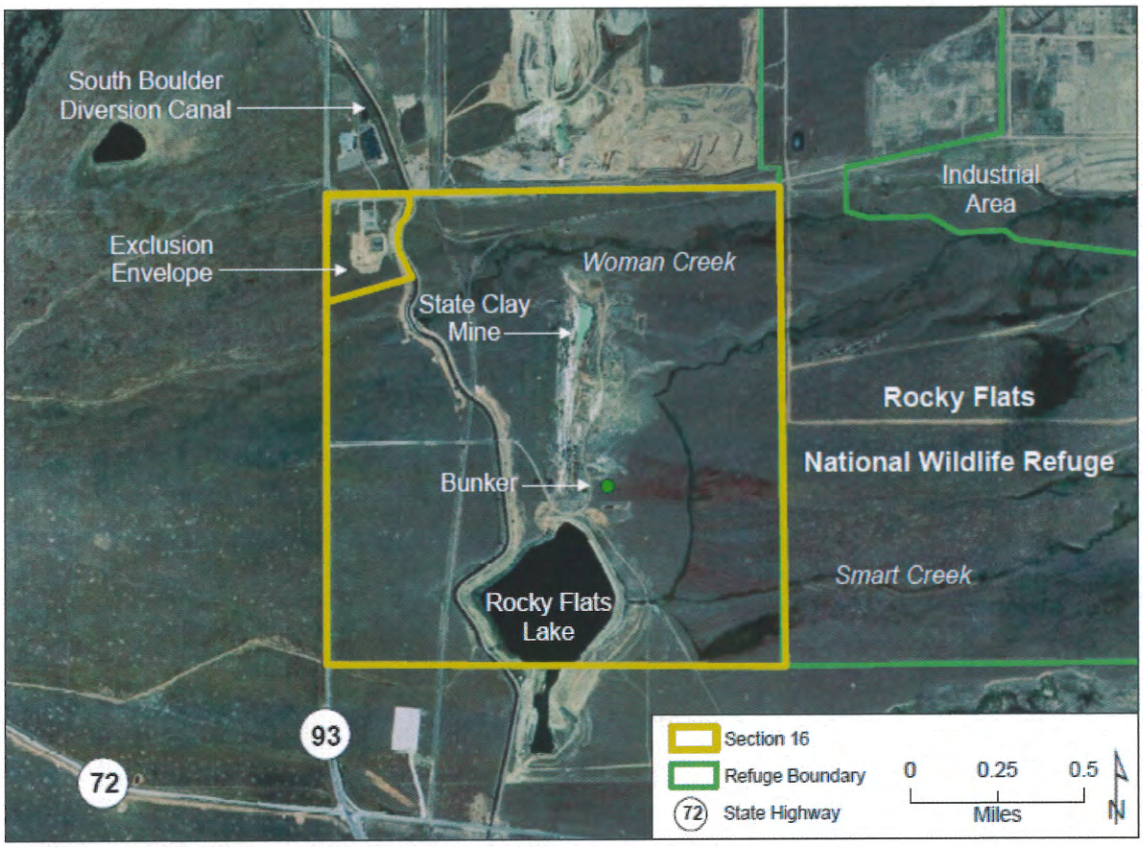

Figure 1: Section 16 and surrounding area, Jefferson County, Colorado.

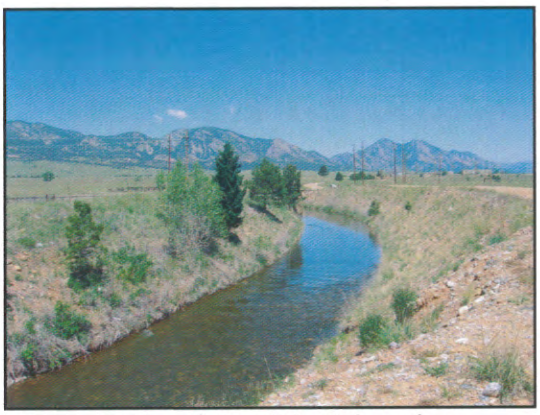

Figure 2: South Boulder Diversion Canal.

Figure 3: Cattle grazing on the property.

Figure 4: Electric transmission lines along the southern property boundary.

Figure 5: Electric transmission lines crossing over Rocky Flats Lake.

Figure 6: State Clay Mine.

Figure 7: Bunker southeast of State Clay Mine.

Figure 8: Interior of bunker.

Figure 9: Old tires in dispersed debris piles.

Figure 10: Old tires in dispersed debris piles.

Figure 11: Discarded cement in dispersed debris piles.

Figure 12: Abandoned automobile chassis in the State Clay Mine.

Figure 13: Barrel in the State Clay Mine.

Figure 14: Debris in southern, dry portion of the State Clay Mine.

Figure 15: Above ground storage tank.

Table 1: Trace metal concentrations in filtered[1] (Dissolved) and unfiltered (Total) water samples collected from the State Clay Mine on Section 16, Jefferson County, Colorado. Samples were collected on June 30, 2011.

Site ID	Water	[2]As (ug/L)	Cd (ug/L)	Cu (ug/L)	Fe (ug/L)	Pb (ug/L)	Mn (ug/L)	Zn (ug/L)	Ca (ug/L)	Mg (ug/L)	Hardness (mg/L as $CaCO_3$)
S16-1	Total	< 1.6	< 0.20	5.1	182	< 1.0	6.9	< 20	-	-	-
S16-1	Dissolved	< 1.6	< 0.20	< 4.0	114	< 1.0	< 2.0	< 20	35000	4280	105.05
S16-1D	Total	< 1.6	< 0.20	< 4.0	160	5.2	6.6	< 20	-	-	-
S16-1D	Dissolved	< 1.6	< 0.20	< 4.0	324	< 1.0	< 2.0	< 20	34400	4210	103.26
S16-2	Total	< 1.6	< 0.20	< 4.0	162	< 1.0	5.7	< 20	-	-	-
S16-2	Dissolved	< 1.6	< 0.20	< 4.0	182	< 1.0	2.6	< 20	35000	4270	105.01
S16-3	Total	< 1.6	< 0.20	< 4.0	221	< 1.0	8.9	< 20	-	-	-
S16-3	Dissolved	< 1.6	< 0.20	< 4.0	<200	1.6	< 2.0	< 20	34800	4190	104.18
Chronic screening levels for detected analytes[3]		-	-	9.7 dissolved	1000 total	3.3 dissolved	1671.3 dissolved	-	-	-	

[1]0.45 micron membrane filter. [2]As- arsenic; Cd- cadmium; Cu- copper; Fe- iron; Pb- lead; Mn- manganese; Zn- zinc; Ca- calcium, Mg- magnesium. [3]Based on hardess of 104 mg/L (as $CaCO_3$). Values are based on dissolved concentrations of Cu, Pb, and Mn and total concentrations of Fe. Cu, Fe, and Pb values derived from Buchmann (1999); Mn value derived from CDPHE (2005).

APPENDIX D

Process for Evaluation of Competing Applications

Appendix D
Process for Evaluation of Competing Applications

Background

Section 3174 of the Rocky Flats Act states that "The Secretary…shall make available land along the eastern boundary of Rocky Flats for the sole purpose of transportation improvements along Indiana Street."

Upon receipt of an application for use of lands for transportation improvements along Indiana Street, the Service will evaluate the application to determine if it meets all of the conditions outlined in the Rocky Flats Act (Appendix A). The legislative intent of the Rocky Flats Act was to establish a wildlife refuge out of the closed Rocky Flats Environmental Technology Site and to make a small portion of those lands available for transportation improvements along Indiana Street (Rep. Udall 2001). Section 3172 of the Rocky Flats Act includes discussion on the existing site conditions and overall nature of the site; the need for open space in the Denver Front Range area; the fact that the area provides habitat for many wildlife species, including a number of threatened and endangered species; and the presence of rare xeric tallgrass prairie plant communities on the site. Section 3174 specifically states that up to 300 feet of land along the eastern boundary of the Refuge shall be made available for the sole purpose of transportation improvements along Indiana Street. This section also provides that any application must demonstrate that those improvements will be carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge.[12] Lastly, section 3177 defines the purposes for which the Refuge shall be managed.

The Service has received two applications for the transportation corridor. After completing an environmental analysis on proposed actions involving expansion of the Refuge and a land exchange for the transportation corridor, the Service must make a decision on which application will be accepted. Consistent with Service policy, the Refuge Manager will make the decision between any competing applications.

The Service will provide a statement explaining the basis for its final decision on this matter. The FWS will evaluate the applications under the Rocky Flats Act and this decision will be made available to the public on the Refuge webpage (www.fws.gov/rockyflats).

Regulatory Framework

When the Service evaluates the applications, it will examine the following regulations and policies:

[12] The Service has thoroughly analyzed impacts associated with the loss of a 300 foot corridor in the Rocky Flats NWR CCP/EIS (USFWS 2004) and determined that loss of the corridor would not significantly impact the management of Rocky Flats as a wildlife refuge.

Code of Federal Regulations

Title 50, Chapter 1, Part 25 of the Code of Federal Regulations (50 CFR 25.11-25.45) outlines the Service's administrative procedures and governs the general administration of units of the National Wildlife Refuge System, public notice of changes in Service policy regarding Refuge System units, issuance of permits required on Refuge System units, and other administrative aspects involving the management of various units of the Refuge System. The regulations in this part apply to areas of land and water held by the United States in fee title and to property interests in such land and water in less than fee, including but not limited to easements.

Service Regulations

The National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, 16 U.S.C. 668dd-668ee, provides the authority for establishing policies and regulations governing refuges uses, including the authority to prohibit certain harmful activities.

Appropriate Use Policy

The Service's Appropriate Refuge Uses Policy (USFWS 2006b) sets the general rules and provides guidelines for determining appropriate uses of National Wildlife Refuge System (NWRS) lands. This policy applies to all existing and proposed uses in the NWRS when the Service has jurisdiction over the use. The policy does not apply to a use that is mandated by statute.

Compatibility Policy

The Service's Compatible Uses Policy (USFWS 2000b), and the National Wildlife Refuge System Improvement Act set forth general rules and provide guidelines for determining compatibility of existing and proposed uses of the Refuge. This policy does not apply to circumstances where other legal mandates supersede those requiring compatibility.

Other Laws Pertaining to Activities on Refuge Lands

Endangered Species Act

The Endangered Species Act, 16 U.S.C. 1531-1544, provides for the protection of endangered and threatened species and the habitats upon which they depend. Section 7 of the Act requires Federal agencies to consult with the Service when the agencies' action may affect a listed species. Consultation ensures that agency actions authorized, funded, or carried out are not likely to jeopardize the continued existence of threatened or endangered species or result in destruction or adverse modification of critical habitat for these species.

Preble's meadow jumping mouse occurs in every major drainage on the Refuge. Listed as a threatened species in 1998, the mouse occurs in habitat adjacent to streams and waterways along the Front Range of Colorado and southeastern Wyoming. At Rocky Flats, Preble's meadow jumping mouse has been found in wetlands and shrubland communities adjacent to the Rock Creek and Woman Creek drainages. A total of 1108 acres on 12 miles of Rock, Walnut, and Woman Creek are designated as critical habitat (USFWS 2010).

The Service will complete an intra-Service Section 7 consultation on its proposed activities as they relate to the Preble's meadow jumping mouse and the potential for modification of designated critical habitat. This decision is completed as a part of the final environmental assessment.

National Historic Preservation Act

Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, requires Federal agencies to assess the effects of an action on historical and cultural resource sites. This is accomplished by inventorying proposed disturbance areas or the area of potential impact (APE), evaluating site importance and eligibility to the NRHP, assessing the effect of the undertaking on NRHP-eligible sites, and consulting with appropriate historic preservation agencies. Compliance with section 106 of the NHPA was followed for the proposed activities described under this EA.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979, 16 U.S.C. 470aa-470mm, as amended, provides for the protection of archaeological resources on public and Native American lands and for exchange of information between governmental entities and academic or private archaeological researchers. An archaeological resource under this act is defined as material remains of past human life or activities that are of archaeological interest and includes but is not limited to pottery, basketry, bottles, weapons, tools, structures, rock paintings or carvings, intaglios, graves, and human skeletal remains.

State Regulations and Rules

The majority of regulatory agencies and programs under which the proposed transportation improvements are regulated are covered by:

Colorado Department of Public Health and Environment

Major regulatory programs of the Colorado Department of Public Health and Environment (CDPHE) that apply to construction of transportation projects include the regulation of stormwater discharges during construction activities, storage and disposal of solid waste, radiation health, and air emission sources.

APPENDIX E

City of Golden Proposal

Appendix E
City of Golden Proposal

On May 19, 2011, the City of Golden submitted an application for the 300' transportation corridor. (See Attachment 1.) This proposal involved a direct sale of the corridor to Golden for $3 million, or $200,000 more than the appraised value of $2.8 million. Golden's application stated: "Specifically, the City would use the westernmost 250 feet of the 300 foot transportation corridor for development of bicycle and pedestrian transportation facilities along a generally north-south alignment." The application further states, "In addition, the city proposes to reserve the easternmost 50 feet of the transportation corridor for arterial improvements to Indiana Street." The application detailed Golden's reasoning as to why their application would minimize adverse impacts to the refuge.

On May 23, 2011, Golden submitted a supplement to its application of May 19. (See attachment 2.) The supplement reiterated the earlier proposal to use the westernmost 250 feet of the corridor for bicycle and pedestrian access, and to reserve the easternmost 50 feet for arterial improvements to Indiana Street. It then stated: "While the City still requests transfer of the Rocky Flats transportation corridor for this purpose, it believes that the Department (consistent with its obligations under the National Environmental Policy Act and the Rocky Flats Act) should consider, as an alternative, making the entire 300 feet of the Rocky Flats transportation corridor available for the development of bicycle and pedestrian transportation facilities." The proposal was still structured as a direct sale to Golden.

In a letter dated June 9, 2011, the Service informed Golden of its conclusion that the appropriate way to evaluate the proposals from JPPHA and Golden was through the NEPA process.

On July 1, 2011, Golden submitted a second supplement to the application of May 19 in which it offered the concept of a land exchange, rather than a direct sale. (See attachment 3.) In this supplement Golden stated that: "The City would also be willing to engage in a land exchange whereby it would purchase approximately $3 million worth of property to exchange with the Service upon the transfer of the Rocky Flats transportation corridor to the City. A land exchange would keep the value of the land within the Service for use in the region and help maximize the value of any exchange to the City. The land to be exchanged could include property within the adjoining section 16 or land within the Arapaho National Wildlife Refuge ("Arapaho NWR")." This supplement also discussed how a bicycle/pedestrian corridor would contribute to the realization of Secretary of Interior Ken Salazar's vision of a Rocky Mountain Greenway connecting the Denver Greenway System to the three national wildlife refuges in the Denver region and eventually to Rocky Mountain National Park.

On July 29, 2011, Golden submitted scoping comments addressing the environmental assessment for Rocky Flats. In that document, Golden suggested alternatives that the Service should analyze. Golden also stated: "To simplify the analysis for the Service, the City limits its proposed use of the transportation corridor to development of bicycle and pedestrian transportation facilities and does not seek to reserve the easternmost 50 feet for arterial improvements to Indiana Street."

Since the initial Golden submittal of May 19, 2011, the Service has been working with the Office of the Regional Solicitor to determine whether Golden's proposal conforms to the requirements of the Act.

Golden will be advised of any deficiencies identified so that they may pursue corrective action to make the proposal compliant if they chose to do so.

On August 18, 2011, Golden included the Service on additional correspondence regarding this issue.

City of Golden

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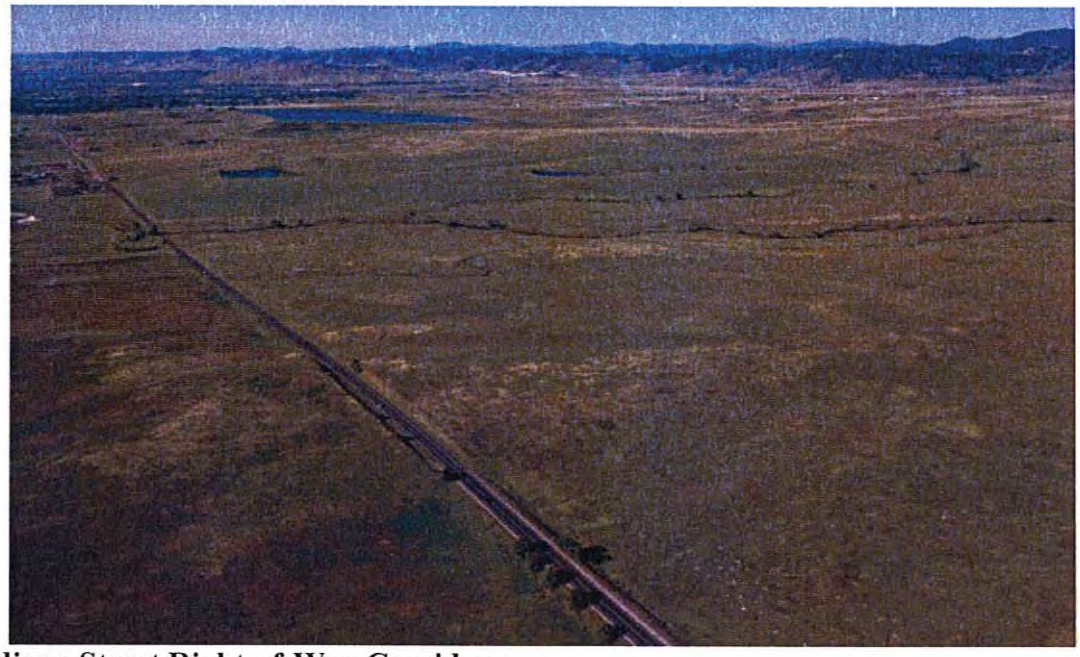
May 19, 2011

The Honorable Steve Guertin **BY E-MAIL AND HAND DELIVERY**
Regional Director, Mountain-Prairie Region
U.S. Department of the Interior
134 Union Blvd.
Lakewood, Colorado 80228

Re: Application for Right-of-Way along the Eastern Edge of Rocky Flats National Wildlife Refuge

Dear Regional Director Guertin:

Through this application letter, the City of Golden requests that the Department of the Interior make 300 feet of right-of-way along Indiana Street available to it solely for transportation purposes (referred to as the "Rocky Flats right-of-way"). The City offers to pay $3,000,000 for the Rocky Flats right-of-way, which is $200,000 greater than the only other application for this right-of-way. The City is confident that this application meets the requirements of the law, unlike the proposal submitted by the Jefferson Parkway Public Highway Authority ("JPPHA") members, as it will minimize impacts on the management of the Rocky Flats National Wildlife Refuge ("Refuge") and provide a greater financial compensation for the provision of the property. In furtherance of this application, we are prepared to submit a check for $200,000 to serve as earnest money.



Indiana Street Right-of-Way Corridor

I. Background

Through the Rocky Flats National Wildlife Refuge Act of 2001, Pub. L. No. 107-107, 115 Stat. 1379 (2001) ("Act"), Congress authorized the Secretaries of Energy and the Interior to make available land along the eastern boundary of Rocky Flats for the sole purpose of transportation improvements along Indiana Street. Congress also directed that such land shall be made available only after "submission of an application meeting each of the conditions specified" in the law. Pub. L. No. 107-107, § 3174(e)(1)(A) (codified at 16 U.S.C. § 668dd note). These requirements include:

1. An application must be submitted by "any county, city, or other political subdivision of the State of Colorado." Pub. L. No. 107-107, § 3174(e)(2)(A).

2. The land must be requested "for the sole purpose of transportation improvements along Indiana Street." Pub. L. No. 107-107, § 3174(e)(1)(A).

3. Proposed improvements must be included in the Denver metropolitan area's regional transportation plan. Pub. L. No. 107-107, § 3174(e)(2)(B)(ii).

4. The applicant must submit documentation demonstrating that the proposed transportation improvements "are carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge." Pub. L. No. 107-107, § 3174(e)(2)(B)(i).

5. An action to transfer land to an applicant must "be taken in compliance with applicable law." Pub. L. No. 107-107, § 3174(e)(1)(D).

This letter demonstrates that these requirements are met by the City and that it is only the City's Application that can be approved legally under the Act.

Where the FWS has received more than one application, it must follow the provisions of the Act and provide the right-of-way to the entity to the applicant that best meets the requirements of the law, particularly the minimization of the effects on the management of the Refuge.

II. Submission by a County, City, or other Political Subdivision

An application for use of the Rocky Flats right-of-way must be submitted by "any county, city, or other political subdivision of the State of Colorado." Pub. L. No. 107-107, § 3174(e)(2)(A). The City of Golden is a home rule municipality and a political subdivision of the State of Colorado that is hereby requesting transfer of the land.

III. Transportation Purpose for Property

The Rocky Flats right-of-way must be requested "for the sole purpose of transportation improvements along Indiana Street." Pub. L. No. 107-107, § 3174(e)(1)(A). The

purpose of this application is to obtain use of the Rocky Flats right-of-way solely for transportation improvements along Indiana Street.

Specifically, the City would use the westernmost 250 feet of the 300 foot right-of-way for development of bicycle and pedestrian transportation facilities along a generally north-south alignment. These facilities would connect to bicycle routes and widened shoulders on SH 128 and McCaslin Boulevard that connect north and east to Superior, Broomfield, Boulder and Louisville, as well as existing or proposed bicycle paths or routes south and east in Westminster and Arvada. It would also allow regional connections to the west (along SH 128, SH 72 or the two proposed east-west multi-use trails planned for the Refuge itself).

The use of the property as a bicycle and pedestrian corridor would minimize impacts to the Refuge, because it would involve a narrower strip of impact (10-15 feet) at or very close to existing grade, with minimal earthwork or structure required.

As indicated in Figure 18 of the Denver Regional Council of Government's (DRCOG's) Pedestrian and Bicycle Element of the 2035 Metro Vision Regional Transportation Plan, DRCOG has planned for a bicycle corridor along this alignment. DRCOG, 2035 METRO VISION REGIONAL TRANSPORTATION PLAN 71 (2011) [Attachment 1]. However, Indiana Street currently lacks sidewalks and bicycle facilities from SH 128 to SH 72, with minimal shoulders. The lack of a good north-south route creates a significant barrier to north-south nonmotorized transportation in the region.

As depicted in the attached map [Attachment 2], submitted in compliance with 50 C.F.R. § 29.21-2(b), at least 250 feet of right-of-way is required for the proposed bicycle/pedestrian facilities. In order to maximize cyclist and pedestrian safety and enhance the use of the non-motorized transportation corridor, there is a need to provide a setback from existing and future traffic along Indiana Street. In addition, the Rocky Flats right-of-way would be used to insert curves and switchbacks if appropriate to reduce climbing grades, especially on the steeper northern side of the right-of-way. The use of the corridor for non-motorized transportation would also minimize resource impacts within the right-of-way relative to any other transportation alternative.

As documented in the CCP/EIS, the total potential right-of-way allowed under the Act contains:

- Significant water resources, 5,133 feet in length;
- Important wetland acreage, 3.5 acres;
- Rare xeric tallgrass grassland, 4.4 acres;
- Rare xeric needle and thread grassland, 9.2 acres;
- Activity colony for the Prairie Dog, 1.9 acres;
- Critical habitat for the Preble's Meadow Jumping Mouse ("Mouse"), 8.5 acres; and
- One cultural resource.

U.S. Fish and Wildlife Service, ROCKY FLATS NATIONAL WILDLIFE REFUGE FINAL COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT (CCP/FEIS) 192 (Sept. 2004) [Attachment 3].

Construction of a bicycle and pedestrian facility can minimize impacts to these resources through (1) a narrower footprint (between 10-30 times narrower); (2) less earth movement and structure to maintain grades and other highway requirements; (3) a much greater ability (and benefit) to provide a curving route that could avoid the most sensitive biotic and historic resources; and (4) a greater ability to provide bridges or boardwalk-type facilities in riparian and other sensitive areas.

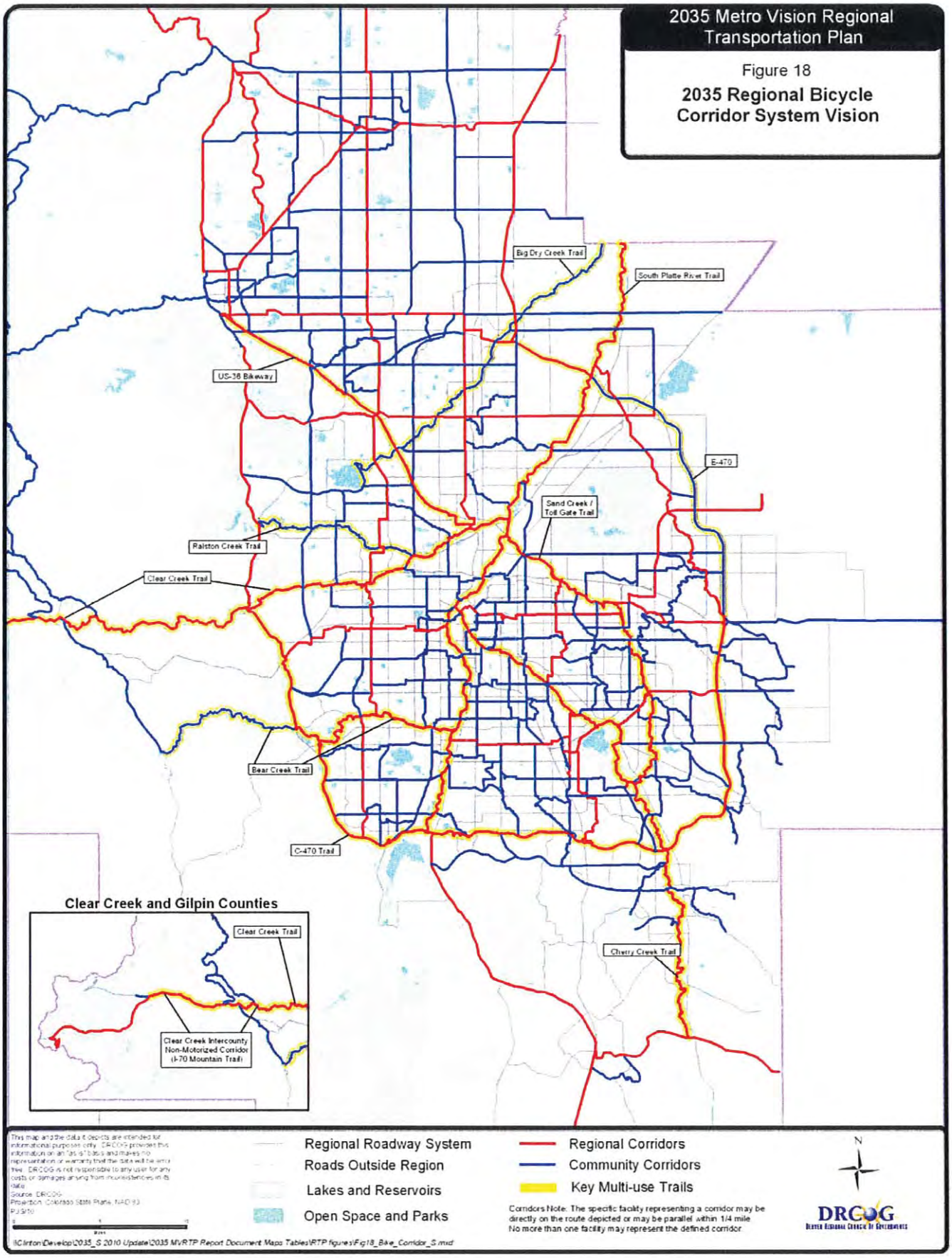
In addition, the City proposes to reserve the easternmost 50 feet of the right-of-way for arterial improvements to Indiana Street. The Jefferson County Countywide Transportation Plan and other studies have identified a long-term need for the widening of Indiana Street to four lanes to accommodate local and regional traffic. While the widening of Indiana Street is not currently included in the Regional Transportation Plan, the City believes it is important to reserve right-of-way for this transportation purpose due to the limited right-of-way available (75-100 feet, based on Jefferson County property records) on Indiana Street and open space located to the east of Indiana Street.

IV. Inclusion of Proposed Transportation Improvements in the Regional Transportation Plan

The Act requires that proposed improvements must be included in Denver's regional transportation plan. Pub. L. No. 107-107, § 3174(e)(2)(B)(ii). This requirement is met for the proposed transportation use, because Denver Regional Council of Governments ("DRCOG") regional transportation plan ("RTP") identifies a "community bicycle corridor" along and within 1,000 feet of Indiana Street between SH 72 and SH 128. It specifically provides:

> Regional and community bicycle corridors have been identified as part of a system to ensure connections among various parts of the region. They will also receive more emphasis when projects are considered for funding in the TIP. Figure 18 shows those corridors. A comparable number of on- and off-street corridors are identified. The precise location of many corridor facilities is not known at this time. New facilities that are designated to represent corridors depicted in Figure 18 must be within 1,000 feet of the mapped route.

DRCOG, 2035 Metro Vision Regional Transportation Plan (RTP) 69 (Feb. 2011). As depicted in the Metro Vision Plan, an Indiana Street bicycle corridor is explicitly included in the RTP. Figure 18 of the RTP is reproduced below.


2035 Metro Vision Regional Transportation Plan
Figure 18
2035 Regional Bicycle Corridor System Vision
Big Dry Creek Trail
South Platte River Trail
US-36 Bikeway
E-470
Sand Creek / Toll Gate Trail
Ralston Creek Trail
Clear Creek Trail
Bear Creek Trail
C-470 Trail
Cherry Creek Trail
Clear Creek and Gilpin Counties
Clear Creek Trail
Clear Creek Intercounty Non-Motorized Corridor (I-70 Mountain Trail)
Regional Roadway System
Roads Outside Region
Lakes and Reservoirs
Open Space and Parks
Regional Corridors
Community Corridors
Key Multi-use Trails
Corridors Note: The specific facility representing a corridor may be directly on the route depicted or may be parallel within 1/4 mile. No more than one facility may represent the defined corridor.
N
DRCOG
\\Clinton\Develop\2035_S 2010 Update\2035 MVRTP Report Document Maps Tables\RTP figures\Fig18_Bike_Corridor_S.mxd

The RTP includes estimates of the total levels of funds available and expected to be spent for new bicycle/pedestrian facilities through 2035, but it does not contain a listing of funding on specific bicycle/pedestrian projects. *See* RTP at Ch. 5 *Fiscally Constrained 2035 Regional Transportation Plan.* The RTP indicates that the Metro Vision Plan provides detailed information on the plan's bicycle network. The RTP indicates that the total estimated cost of the bicycle network in the Metro Vision Plan is $900 million and that fiscally-constrained expenditures would be $590 million. RTP at 119.

The bicycle corridors (including along Indiana) detailed in the Metro Vision Plan are a mandatory and essential part of the RTP. Federal law requires that DRCOG include planned bicycle facilities in the RTP; thus, DRCOG's RTP would be incomplete without the bicycle improvements. *See* 23 U.S.C. § 217(g) ("Bicyclists and pedestrians shall be given due consideration in the comprehensive transportation plans developed by each metropolitan planning organization and State in accordance with sections 134 and 135, respectively. Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use are not permitted."); 23 C.F.R. § 450.322(f)(2), (8) (RTP must include "Pedestrian walkway and bicycle transportation facilities in accordance with 23 U.S.C. 217(g)"). *See also* Federal Highway Administration (FHWA), FHWA Guidance, *Bicycle and Pedestrian Provisions of Federal Transportation Legislation* (Oct. 22, 2008).[1]

V. Minimization of Adverse Effects on the Management of Rocky Flats as a Wildlife Refuge

Granting this application would, unlike other proposed uses of the Rocky Flats right-of-way, minimize impacts to the management of the Refuge. As noted above, the Act requires submission of documentation demonstrating that the proposed transportation improvements "are carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge." Pub. L. No. 107-107, § 3174(e)(2)(B)(i). The Service's finding that adverse effects have been *minimized* is a condition precedent for granting a right-of-way on the Refuge. As discussed below, this application is the only proposal that can minimize the effects of a transportation use on the management of the Refuge.

In analyzing whether adverse impacts on the management of the Refuge have been minimized for the purposes of allocating right-of-way within the Rocky Flats National Wildlife Refuge, the Service must consider the relative impacts of the competing transportation proposals on the Refuge and its management. Relative to the Jefferson Parkway proposal, a pedestrian and bicycle transportation corridor along Indiana Street, allowing for some improvements to Indiana Street within 50 feet of its western edge, would vastly minimize adverse impacts on Rocky Flats by:

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[1] It is worth noting that, unlike highway improvements, bicycle facilities are not subject to Clean Air Act conformity provisions. E.g., 40 C.F.R. § 93.126.

- Minimizing the footprint of improvements, including through avoidance of significant resources (specifically, a 3-mile, 10-foot wide path in the 2.76 mile-long corridor would have a footprint of 3.5 acres instead of the nearly 100-acre footprint of a 300-foot-wide freeway/tollway facility);
- Minimizing effects to critical habitat for and thus promoting conservation of the Preble's Meadow Jumping Mouse, a threatened species under the federal Endangered Species Act, and regionally important ground nesting bird species;
- Offering adequate and safe corridor crossing for a wide variety of wildlife in the way most consistent with migration patterns;
- Reducing disruption to soils and the potential for weed vectors;
- Minimizing impacts to imperiled vegetation communities and animal habitats, such as rare xeric tallgrass grassland and upland shrubland communities;
- Reducing pollutant loadings to the surrounding habitat from runoff over impervious surface cover; and
- Reducing motor vehicle emissions in the corridor.

The following paragraphs identify the potential impacts of the proposed transportation use, as compared to the proposed Jefferson Parkway use. As previously identified to FWS, the Jefferson Parkway applicants have not provided a concrete plan to mitigate, much less minimize, these harms to the Refuge. Similarly, at this time, FWS has conducted no adequate National Environmental Policy Act (NEPA) review to comply with that statute or the Act.

Section 4.16 of the CCP/FEIS contains generalized information regarding potential uses of the 300-foot right-of-way. [Attachment 3] While this information is not adequate to discharge FWS's obligations to assess the full impacts of the Parkway under NEPA, they are adequate to demonstrate that this Application's proposed transportation uses—*i.e.*, a 50-foot right-of-way for Indiana and a 10-15-foot bicycle/pedestrian facility in another 50 feet of the right-of-way—would minimize impacts on the Refuge. The following table from the CCP/FEIS summarizes some of the relative direct impacts. The proposed transportation uses would have slightly greater direct impacts than the 50-foot option in the table, while the Jefferson Parkway would have the impacts in the 300-foot option, plus the extensive indirect and cumulative impacts associated with induced growth, increased noise and other effects. The proposed bicycle and limited Indiana right-of-way would avoid these indirect impacts.

Table 18. Potential Resource Impacts Within Various Right-of-Way Widths

Resource	Possible Transferred Width		
	50 feet	125 feet	300 feet
Area *(acres)*	16.4	41.0	98.7
Soils	Loss of soil productivity of paved area		
Water Resources *(length of streams/ditches - feet)*	705	2,218	5,133
Vegetation *(acres)*			
Wetlands	0.6	1.5	3.5
Mesic mixed grassland	10.6	25.9	61.0
Reclaimed mixed grassland	2.7	7.0	17.5
Riparian shrubland/woodland	0.1	0.3	0.7
Xeric tallgrass grassland	0.6	1.9	4.0
Xeric needle and thread grassland	1.5	3.8	9.2
Other	0.3	0.6	2.8
Wildlife	No direct impacts to mule deer concentration areas or known raptor nest sites. General impacts to overall wildlife habitat, potential raptor nesting habitat, and movement corridors would occur.		
Prairie dog suitable habitat *(acres)*	12.7	31.9	76.6
Prairie dog active colony *(acres)*	< 0.1	0.4	1.9
Threatened, Endangered, and Candidate Species			
Preble's habitat *(acres)*	0.9	2.8	8.5
Cultural Resources *(number of sites)*	1	1	1
Public Use/Recreation *(Alternatives B/D)*			
Trails *(feet)*	1,300/6,000	1,500/6,200	2,000/6,600
Trail connections	2/2	2/2	2/2
Parking Areas	1/2	1/2	1/2
Trailhead/Restroom	0/1	0/1	0/1
Visual	Easterly views from portions of the Refuge may be affected, depending on road grade and viewer location		
Noise	Increased noise levels may affect wildlife use and visitor use in portions of the Refuge		
Air Quality	May affect air quality in the eastern portion of the Refuge from increased concentrations of gaseous pollutants		

Take of Critical Habitat for the Preble's Meadow Jumping Mouse at Woman and Walnut Creeks

The Final Comprehensive Conservation Plan for the Rocky Flats National Wildlife Refuge obligates the Service in its management of the Refuge to "protect and maintain Preble's habitat throughout the Refuge." U.S. Fish and Wildlife Service, Rocky Flats NATIONAL WILDLIFE REFUGE FINAL COMPREHENSIVE CONSERVATION PLAN (CCP) 67 (March 2005) (emphasis added). The CCP/FEIS shows that a 300-foot right-of-way would take 8.2 acres of Preble's Mouse habitat. CCP/FEIS at 192. The Refuge's Preble's Mouse habitat has now been designated as critical habitat by the Service. Fish and Wildlife Service, *Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for the Preble's Meadow Jumping Mouse in Colorado*, 75 Fed. Reg. 78430, 78437 (Dec. 15, 2010) ("We have determined that lands on the Rocky Flats Site are essential to the conservation of the species . . . [W]e conclude that the entire Rocky Flats site . . . contains the physical and biological features essential to the conservation of the PMJM and merits designation as critical habitat.").

Because the FWS can discharge the requirements of the Act with approximately one acre of habitat impact—as opposed to over eight acres for the Jefferson Parkway (see CCP/FEIS at 192)—FWS must choose this Application rather than the Jefferson Parkway application pursuant to both the Act and Section 7 of the Endangered Species Act.

The impact of large-scale development and critical habitat fragmentation that would be caused by the Jefferson Parkway must be considered by the Service in determining whether adverse impacts of the project are minimized. As the Service noted in its Preble's critical habitat designation, "[f]ederal agencies have an affirmative conservation mandate under section 7(a)(1) of the [Endangered Species] Act to contribute to the conservation of listed species." *Id.* at 78438. Further, the Act itself made clear that one of purposes of the Refuge was to protect threatened species like the Mouse:

> The Rocky Flats site provides habitat for many wildlife species, including a number of threatened and endangered species, and is marked by the presence of rare xeric tallgrass prairie plant communities. Establishing the site as a unit of the National Wildlife Refuge System will promote the preservation and enhancement of those resources for present and future generations.

Pub. L. No. 107-107, § 3172(a)(5). Management of Mouse habitat is inextricably tied to the management of the Refuge. There is no rational way for FWS to meet its statutory mandates and choose an alternative that *maximizes* impacts to the management of the Refuge.

Noise Impacts to Wildlife Resources

Although FWS acknowledged in its FEIS for the Rocky Flats National Wildlife Refuge that "increased noise along any of the adjacent corridors could displace or alter the behavior and productivity of some wildlife species on the Refuge," its analysis did not adequately consider the adverse impact that a major multi-lane road would have on wildlife, including ground-nesting birds. CCP/FEIS at 192. As noted in prior comments, FWS must address this issue prior to making any decision regarding the Rocky Flats right-of-way, both under the Act and NEPA.

Recent peer-reviewed research—that the Service has not considered—indicates that increasing the size of and traffic volume on roads (from two to four lanes, for example) greatly increases the zone in which ground nesting birds would be significantly affected. *See* R. Forman, et al., *Road Traffic and Nearby Grassland Bird Patterns in a Suburbanizing Landscape*, ENVIRONMENTAL MANAGEMENT at 782-800 (Vol. 29, No. 6, 2002). This and a number of other supporting articles are included as Attachment 4.

Another recent peer-reviewed study stressed that "[e]ffective management of protected areas must include noise assessment..." J. Barber, *et al.*, *The Costs of Chronic Noise Exposure for Terrestrial Organisms*, Trends in Ecology and Evolution at 180 (Sept. 15, 2009). FWS has cited this work with approval and has recommended analysis of the

effects on birds and other species as part of its draft guidance regarding wind energy. [Attachment 4] FWS identified a similar range of impacts to birds from noise, based on highway and other studies.

> Although traffic noise generally falls below the frequency of bird communication and hearing, several studies have documented that traffic noise can have significant negative impacts on bird behavior, communication, and ultimately on avian health and survival (e.g., Lohr et al. 2003, Lengagne 2008, Barber et al. 2010).
>
> ...
>
> Barber et al. (2010) assessed the threats of chronic noise exposure, focusing on grouse communication calls, urban bird calls, and other songbird communications. They determined that while some birds were able to shift their vocalizations to reduce the masking effects of noise, when shifts did not occur or were insignificant, masking could prove detrimental to the health and survival of wildlife (Barber et al. 2010). Although much is still unknown in the real world about the masking effects of noise on wildlife, the results of a physical model analyzing the impacts of transportation noise on the listening area2 of animals resulted in some significant findings. With a noise increase of just 3 dB – a noise level indentified as "just perceptible to humans" – this increase corresponded to a 50% loss of listening area for wildlife (Barber et al. 2010). Other data suggest noise increases of 3 dB to 10 dB correspond to 30% to 90% reductions in alerting distances for wildlife, respectively (Barber et al. 2010). Impacts of noise could thus be putting species at risk by impairing signaling and listening capabilities necessary for successful communication and survival.

FWS, The Effects of Noise on Wildlife (2011) (http://www.fws.gov/windenergy/docs/Noise.pdf) [Attachment 4].

However, FWS's past analysis and current decision contain no analysis of the effects of the Jefferson Parkway's noise on wildlife species protected at the Refuge. This is despite the fact that there is clear evidence that the volume and speed of traffic—both of which would be increased by the Jefferson Parkway—have effects on wildlife. For a two-lane road with 3,000 to 8,000 vehicles per day, the Forman study found no significant effect on grassland bird distribution. *See* R. Forman, et al., *Road Traffic and Nearby Grassland Bird Patterns in a Suburbanizing Landscape*, ENVIRONMENTAL MANAGEMENT at 782 (Vol. 29, No. 6, 2002). For moderate traffic on a two-lane road of 8,000 to 15,000 vehicles per day, "there was no effect on bird presence although regular breeding was reduced for 400 m from the road." *Id.* For heavier traffic on a two-lane road of 15,000-30,000 vehicles per day, "bird presence and breeding were decreased for 700 m." *Id.* For a heavy traffic volume of greater than 30,000 vehicles on a multilane, divided highway with higher speeds (and therefore noise), "bird presence and breeding were reduced for 1200 m from a road." *Id.* The Refuge contains ground-nesting and grassland bird species.

In the CCP/FEIS, FWS identified 2003 traffic counts on Indiana Street of 5,580 vehicles per day, well within the zone of no significant impacts. It predicted that traffic would increase to 8,100 vehicles per day by 2021, the very lower end of moderate impacts as far away as 400m.

Here, Jefferson Parkway applications have proposed a four-lane highway adjacent to the existing two-lane Indiana Street. The JPPHA projects traffic volumes of 36,800 vehicles per day on the Parkway and Indiana Street taken together under a build scenario. JEFFERSON PARKWAY SYSTEM LEVEL STUDY 3-19, 3-21 (July 2009) [Attachment 5]. These traffic volumes were submitted to DRCOG by JPPHA as part of the Regional Transportation Plan amendment process and must be considered by FWS.

This represents a more than eight-fold increase in traffic along the western edge of the Refuge and, therefore increased noise. Further, the Jefferson Parkway would increase the speeds on the Indiana corridor from 50 mph to 65 mph, a critical determinant of noise exposure levels. [Attachment 6] Based on the published results of Forman, *et al.*, these effects could lead to an area of impacts on bird presence and breeding for 1,200 meters from the road.

Increased traffic and vehicle speeds on the Parkway would significantly increase noise within the Refuge to the detriment of ground-nesting birds and potentially other species within the Refuge. While the FEIS mentions techniques that might reduce the impacts of traffic noise on wildlife and Refuge visitors, the Service has made no effort to substantively evaluate these impacts in the context of the JPPHA's proposal or to ensure that they are minimized.

The City's proposal to build bicycle and pedestrian improvements largely avoids this effect, because the bicycle transportation use would have a much lower level of noise than a high-speed, multi-lane highway. It would involve no increases of speed in the corridor and would not extend traffic noise sources 300 feet closer to the heart of the Refuge. While the bicycle lane would have a trail effect on some sensitive species, it would be much lower than the Parkway's impact and probably less than that of the existing two-lane Indiana Street.

Barriers to Wildlife Movement

The FEIS made clear that "Indiana Street can be a barrier to wildlife movement between the Refuge and the open space lands to the east during high traffic periods. A variety of terrestrial wildlife species, including mule deer, periodically cross between Rocky Flats and open space lands to the east. A larger and/or faster roadway along Indiana Street would increase the barrier effect for wildlife." *See* CCP/FEIS at 193 [Attachment 3]. The Jefferson Parkway applicants propose adding four or more high-speed toll lanes to the west of Indiana Street, more than tripling the size of the barrier to wildlife. Traffic volumes in 2035 along the combined Parkway and Indiana Street that are much higher than volumes along Indiana Street absent Parkway development will also increase the barrier to wildlife movement.

Additionally, the Parkway will also put significantly more traffic on SH 128 north of the Refuge by 2035 (29 percent more), increasing its effect as a barrier to movement. Jefferson Parkway Public Highway Authority, JEFFERSON PARKWAY SYSTEM LEVEL STUDY 3-19, 3-21 (July 2009) [Attachment 5]. The FEIS acknowledges that a "larger and/or faster roadway along Highways 128 or 92 could contribute to wildlife corridor impacts." CCP/FEIS at 193.

The Service indicated in the FEIS that these effects may be mitigated, but neither the Service nor Jefferson Parkway applicants have analyzed any specific mitigation measures in the context of a concrete proposal which is certain to have obstructive effects. *Id.* ("Crossings should be located at Woman Creek and Walnut Creek, as well as select upland locations.")

Further, the Service must consider the cumulative impacts of the Parkway on the Refuge and the movement of wildlife within, to, and from the Refuge. There is clear linkage between the proposed Jefferson Parkway and the existence and extent of development in the area and, at a minimum, real cumulative impacts that must be addressed. There is no question that the project proponents see development of nearby property as the primary purpose of the project, and that they see the highway as helping to facilitate such development, increasing its extent and speed. *See* Letter from Michael Bestor, City Manager, City of Golden, to The Hon. Ken Salazar, Secretary, Department of the Interior (June 8, 2009) [Attachment 7]. Proponents have argued that beltway construction would help facilitate 11,482,000 square feet of nonresidential construction and 4,645 new residential units within 20 years, mostly in areas that are west of SH 93 or lie on the southern edge of Rocky Flats. The development of these properties will have significant effects on the Refuge and the Mountain Backdrop.

The Candelas development proposed for the southern boundary of the Refuge will affect habitat, migration patterns, non-native predators, weed vectors, and other elements on the Refuge, especially when combined with a new high-speed roadway on the Refuge's eastern boundary and south of the Refuge. Absent an agreement to preserve undeveloped land to the south and west of the Refuge, it will be isolated once this project and the Parkway are completed. The Refuge will be walled off by the Parkway and Indiana Street on the east, commercial development on the south, and potential commercial development bounded by Highway 93 on the west. There would be no way for animals to get from the plains to the mountains, gutting the functioning of the Refuge.

By comparison, the bikeway use contained in this Application would pose little or no appreciable barrier to wildlife migration. If 50 feet of right-of-way were used to expand the 50 mph Indiana Street arterial, there would be some increase in its barrier effect, but far less than Indiana Street plus a 300-foot-wide tollway.

Grassland, Weed, and Soil Impacts

Wildlife and habitat management is a primary planning goal of the Service for management of the Rocky Flats National Wildlife Refuge, and the Refuge's Final Comprehensive Conservation Plan obligates the Service to manage rare xeric tallgrass, which the Service describes as "an important natural resource that needs special consideration and management." CCP/FEIS at 67. Yet, the proposed Parkway threatens these resources. As described in the CCP/FEIS, the Parkway would adversely impact 4.0 acres of rare xeric tallgrass grassland and another 9.2 acres of xeric needle and thread grassland. CCP/FEIS at 192. Additionally, the project would disturb 3.5 acres of vital wetlands within the refuge. *Id.* "Construction along any of the roadway corridors has the potential to exacerbate existing problems with noxious weeds at Rocky Flats, which could further impact native plant communities and wildlife habitat throughout the Refuge." CCP/FEIS at 191.

Again, the bikeway use in this Application would avoid and minimize this impact due to its much smaller footprint and lesser disturbance that could lead to noxious weed infestation. Even with the potential for modest widening of Indiana Street in a 50-foot right-of-way, there would be six-times less impact to these resources than the proposed Jefferson Parkway. *See* CCP/FEIS at 192.

As with the Preble's Meadow Jumping Mouse, protection of grassland habitat and species was a central purpose of the Act.

> The Rocky Flats site provides habitat for many wildlife species, including a number of threatened and endangered species, and is marked by the presence of rare xeric tallgrass prairie plant communities. Establishing the site as a unit of the National Wildlife Refuge System will promote the preservation and enhancement of those resources for present and future generations.

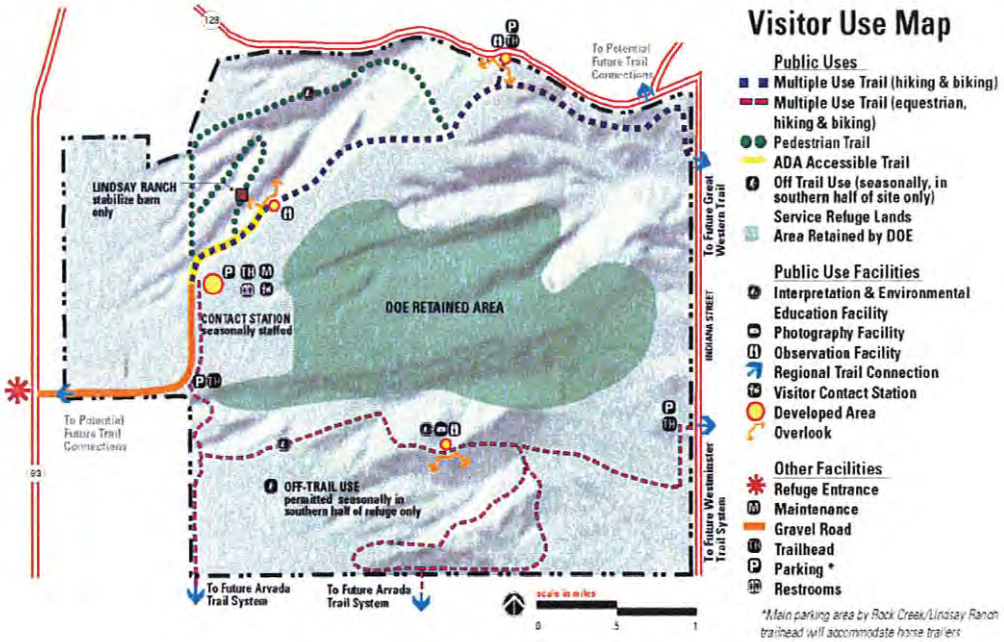
Pub. L. No. 107-107, § 3172(a)(5). FWS cannot rationally or legally choose an alternative that maximizes impacts to the very resources for which the Refuge was formed.

Similarly, the much lower footprint of disturbance (16.4 acres in a 50-foot right-of-way and approximately 3.6 acres for a bikeway) would minimize the effects on soils, including downstream water quality effects and the extent to which soils with residual plutonium and other radioactive materials would be disturbed. Portions of the Indiana Street corridor contain plutonium levels in the 1-7 picocuries per gram level. *See* U.S. Fish and Wildlife Service, ROCKY FLATS NATIONAL WILDLIFE REFUGE RECORD OF DECISION FINAL COMPREHENSIVE CONSERVATION PLAN (CCP ROD) 10 (Feb. 2005) [Attachment 8]. Reducing the extent of physical development would greatly reduce any risks associated with the disturbance of this material. While FWS, DOE and others characterize the risks associated with this level of contamination as low, minimizing

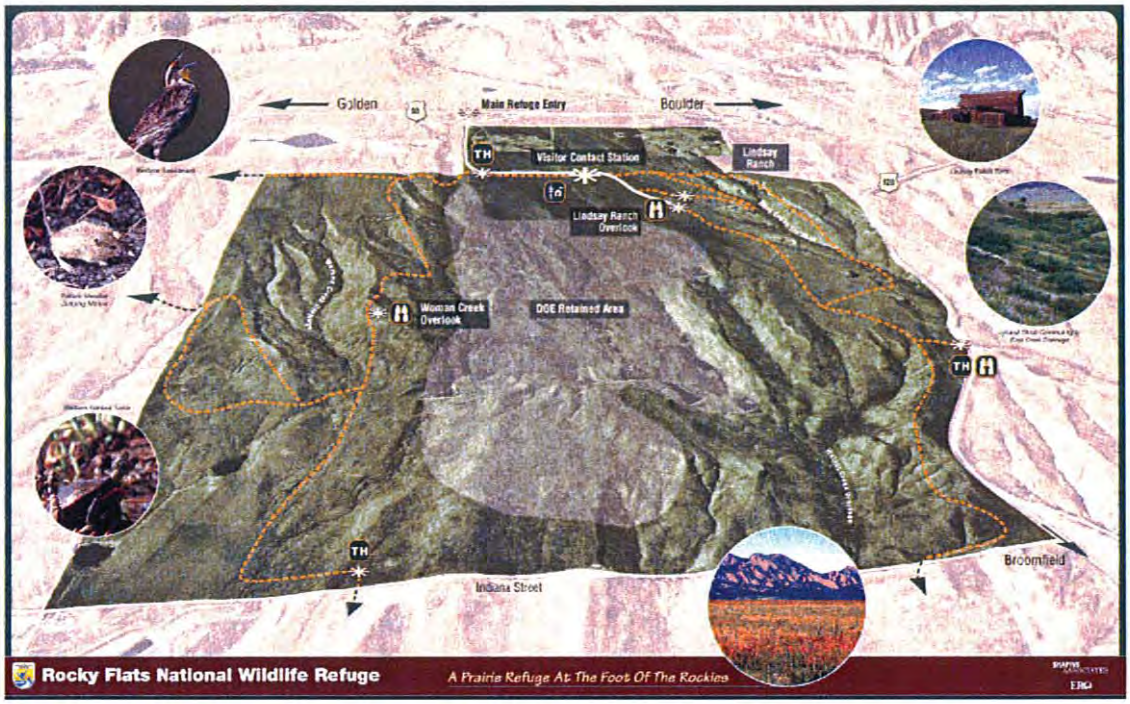
disturbance will reduce risks, including the potential for revised health risk understandings.

Effects on Wildlife-Related Recreation

In the CCP/FEIS, FWS recognized that "[i]mprovements along Indiana could impact parking areas, trails, and trail connections on the Refuge." CCP/FEIS at 194. This includes the trailhead and parking shown in the Record of Decision and CCP at Indiana Street. *E.g.*, CCP ROD at S10. The proposed Parkway would likely strand these access points on the other side of a high-speed, four-lane, limited access highway. We are unaware of any plans for the Jefferson Parkway to accommodate these access points.



By contrast, the transportation uses proposed in this Application would integrate with and enhance the access plan for the Refuge by providing better options for visitors to access the Refuge by bicycle, foot, or vehicle. It would also better integrate bicycle and foot access with neighboring open space owned by Boulder, Boulder County, Westminster, and others. As seen in the CCP Visitor Use Map copied above, these future trail connections north and east are explicitly contemplated in the CCP and facilitated by the transportation uses in this Application.



Other Impacts

The CCP/EIS identified potential harms based on a generalized taking and recommended possible general measures to minimize or mitigate the potential impacts of transportation improvements, not a concrete program of mitigation. The FEIS explicitly indicated that it was not a full, detailed analysis based on an actual road proposal and suggested that additional environmental work would be necessary when such a proposal is made. *See* Letter from Jacob Smith, Mayor of Golden, City of Golden, to Gregory Siekaniec, Assistant Director, National Wildlife Refuge System 2 (Oct. 20, 2009) [Attachment 9].

The FEIS also did not consider the indirect impacts of development that have been identified in previous comment letters and that are connected with the proposed Jefferson Parkway. Among other things, the development planned around the proposed tollway—approved for up to 180 feet high at the interchange just south of the Refuge—would significantly affect the Mountain Backdrop views the Act was intended to help preserve. Even ahead of findings relating to cleanup and protection of habitat on the Refuge, Congress found that:

> The State of Colorado is experiencing increasing growth and development, especially in the metropolitan Denver Front Range area in the vicinity of the Rocky Flats site. That growth and development reduces the amount of open space and thereby diminishes for many metropolitan Denver communities the vistas of the striking Front Range mountain backdrop.

Pub. L. No. 107-107, § 3172(a)(3). The proposed Jefferson Parkway, enabled by the competing right-of-way application, is intertwined with just such development on the Candelas site that would mar the Mountain Backdrop in a far worse way than any other

existing development between Golden and Boulder. These impacts must be fully considered and minimized. The City's proposal in this Application would involve no induced development and, thus, minimize impacts.

Because the Service has been presented with two actual project proposals, it must consider the relative impacts of the two projects to determine which minimizes adverse impacts on management of the Refuge. Based on its mandatory duty under the Act and related statutes like the Endangered Species Act, FWS must choose the option with the smallest effects on Refuge resources. The Act does not provide for the ability of the FWS to choose more than one application or to maximize impacts by choosing the option with the greatest impacts.

VI. Compliance with Applicable Law

The Act requires that actions taken by the Departments of the Interior and Energy regarding the Rocky Flats right-of-way be taken in compliance with applicable law. In particular, the Service's grant of a right-of-way within the Refuge must comply with its Rights-of-Way General Regulations for the National Wildlife Refuge System. 50 C.F.R. Part 29, subpart B.

The Service's Rights-of-Way regulations require that a right-of-way application include a "detailed environmental analysis" with "sufficient data so as to enable the Service to prepare an environmental assessment and/or impact statement in accordance with section 102(2)(c) of the National Environmental Policy Act of 1969 . . . ." 50 C.F.R. § 29.21-2(4). As this provision indicates, the Service must also comply with the National Environmental Policy Act as part of making any right-of-way available and evaluating any land exchange. Further, the Service must ensure that actions comport with the Endangered Species Act, 16 U.S.C. § 1531 et seq., and related regulations.

A detailed analysis of the environmental impacts of this proposal, as compared to the impacts of the transportation project proposed by the Jefferson Parkway applicants, is provided above. The City is happy to work with the Service to provide any additional information that might be needed in its preparation of a detailed environmental analysis of the proposed transfer.

The City believes that this written application complies with all regulatory requirements. In addition, as noted above, we are prepared to send a check for $200,000 to serve as earnest money.[2]

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[2] Pursuant to 50 C.F.R. § 29.21-2(a)(2)(i), the City is not required to submit an application fee because it is a local government.

VII. Conclusion

We very much appreciate your consideration of our request to transfer the transportation right-of-way under the authority of the Rocky Flats National Wildlife Refuge Act of 2001, Pub. L. No. 107-107, 115 Stat. 1379 (2001).

Please direct any questions relating to this application to me at (303)384-8010. We look forward to working with you on this project to improve transportation and minimize effects on the Refuge.

Sincerely yours,

Michael C. Bestor
City Manager, City of Golden

Cc: Bill Ray, JPPHA (without attachments)

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BY E-MAIL AND FIRST CLASS MAIL

May 23, 2011

The Honorable Steve Guertin
Regional Director, Mountain-Prairie Region
U.S. Department of the Interior
134 Union Blvd.
Lakewood, Colorado 80228

Re: Supplement to Application for Right-of-Way along the Eastern Edge of Rocky Flats National Wildlife Refuge

Dear Regional Director Guertin:

On May 20, 2011, the City of Golden requested that the Department of the Interior make 300 feet of right-of-way along Indiana Street available to it solely for transportation purposes (referred to as the "Rocky Flats right-of-way"). The City is confident that its application meets the requirements of the Rocky Flats National Wildlife Refuge Act of 2001 and will minimize impacts on the management of the Rocky Flats National Wildlife Refuge ("Refuge").

In its May 20th application, the City proposed to use the westernmost 250 feet of the 300 foot right-of-way for development of bicycle and pedestrian transportation facilities and to reserve the easternmost 50 feet for arterial improvements to Indiana Street. While the City still requests transfer of the Rocky Flats right-of-way for this purpose, it believes that the Department (consistent with its obligations under the National Environmental Policy Act and the Rocky Flats Act) should consider, as an alternative, making the entire 300 feet of the Rocky Flats right-of-way available for development of bicycle and pedestrian transportation facilities. This would ensure cyclist and pedestrian safety and enhance the use of the non-motorized transportation corridor, as it would provide a sufficient setback from existing and future traffic along Indiana Street. Dedicating the entire 300-foot Rocky Flats right-of-way to bicycle and pedestrian transportation facilities would also provide for insertion of appropriate curves to reduce climbing grades, especially on the steeper northern side of the right-of-way. It would also provide for inclusion of appurtenant parking facilities contemplated in the CCP for the Refuge. While the City would prefer the alternative identified in the May 20th application, its proposal would extend to the bicycle/pedestrian alternative as well.

The City appreciates your consideration of its application and this supplemental alternative and looks forward to working with you on this project.

We would like to meet with you and your staff to discuss the City's proposal and the Service's next steps. We will call your office next week to see if there are mutually convenient times when we could meet.

Please contact Mike Bestor or me if you have any questions.

Sincerely yours,

Steve Glueck
Planning Director and Acting City Manager for the Week of May 23, City of Golden

City of Golden

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BY E-MAIL AND FIRST CLASS MAIL

July 1, 2011

The Honorable Steve Guertin
Regional Director, Mountain-Prairie Region
U.S. Department of the Interior
134 Union Blvd.
Lakewood, Colorado 80228

Re: Supplement to Application for Right-of-Way along the Eastern Edge of Rocky Flats National Wildlife Refuge

Dear Regional Director Guertin:

The City is in receipt of your letter dated June 9, 2011, and appreciates that the U.S. Fish and Wildlife Service ("Service") plans to undertake review pursuant to the National Environmental Protection Act ("NEPA") of the proposals received from the Jefferson Parkway Public Highway Authority ("JPPHA") and the City of Golden for a right-of-way along Indiana Street on the eastern edge of the Rocky Flats National Wildlife Refuge ("Refuge").

This letter identifies a number of matters that the Service should consider as it begins its review of the applications for the right-of-way, including a proposal to use Golden's offer for the right-of-way in a land swap rather than a cash transaction to keep the value of the right-of-way acquisition in the Refuge system and maximize the benefit to the Service.

Potential Land Exchange Transaction

As you know, the City has requested that the right-of-way (referred to as the "Rocky Flats right-of-way") be made available to it for development of bicycle and pedestrian transportation facilities and arterial improvements to Indiana Street. In the City's May 20, 2011, letter requesting transfer of the Rocky Flats right-of-way, the City offered to purchase the land from the Service.

The City would also be willing to engage in a land exchange whereby it would purchase approximately $3 million worth of property to exchange with the Service upon the transfer of the Rocky Flats right-of-way to the City. A land exchange would keep the value of the land within the Service for use in the region and help maximize the value of any exchange to the City. The land to be exchanged could include property within the adjoining Section 16 or land within the Arapaho National Wildlife Refuge ("Arapaho NWR").

For example, within Section 16, the City's $3 million could be used to purchase the most critical parcels from a conservation standpoint—*i.e.*, the Woman Gulch Parcel and the Tall Grass Prairie Parcel—that could then be exchanged with the Service. According to the State Land Board, the 105-acre Woman Gulch Parcel is valued at $210,000, and the 115-acre Tall Grass Prairie Parcel (in the southwest corner of Section 16 west of the Denver Water feeder canal) is valued at $2,415,000.[1] *See* State Board of Land Commissioners' Memorandum re: Rocky Flats Section 16 Range of Value Estimate (Oct. 12, 2010) (Attachment A). The balance of the $3 million could be used to purchase one of the northwest corner parcels or to purchase some of the mineral rights within Section 16. The Woman Gulch Parcel is potential habitat for the Preble's meadow jumping mouse ("Preble's Mouse") and is extremely important for other wildlife due to the riparian corridor within this parcel. The Tall Grass Prairie Parcel within Section 16 contains a xeric tallgrass community, a rare plant community found on Rocky Flats and surrounding properties. These are, by far, the highest value ecological resources on Section 16.

The City understands that other entities, including the City of Boulder, Jefferson County and Boulder County, have expressed interest in protecting Section 16 and have money set aside to do so. It is reasonable to assume that all or much of this money would still be available for conservation of Section 16, regardless of how the Service resolves the right-of-way application question. Leveraging these funds could benefit the Service's wildlife preservation in the region and at the Refuge in particular.

Alternatively, the City could supply $3 million for a land exchange between the Arapaho NWR and the Rocky Flats right-of-way, which would benefit the Service's mission by helping secure a critical inholding at that refuge. The City understands that acquisition of inholding property within the Arapaho NWR is a top conservation priority for the Service in Colorado and the Mountain-Prairie Region. The Service has identified the need for acquisitions of private inholdings within the Arapaho NWR to enhance the protections for wildlife offered by the refuge. *See* U.S. Fish and Wildlife Service, *Arapaho National Wildlife Refuge Comprehensive Conservation Plan* at 24-25 (Sept. 2004) (Attachment B). The Service has recognized that the inholdings "represent valuable wildlife habitat and are of interest to the refuge." *Id.* at 24. The City understands that there is only one inholding remaining within the Arapaho NWR as shown on the attached map of the Arapaho NWR (Attachment C) and that efforts are underway to secure funding for its acquisition.

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[1] The acquisition of the Section 16 parcels would obviously require a willing seller in the State Land Board and possibly owners of mineral leases. If the Board is unwilling to sell the parcels at their identified fair market value for the conservation purposes it has identified, this particular land exchange would not be possible. However, given the Board's frequently expressed intention to protect the Woman Creek corridor and the opportunity to secure fair market value for these properties, it would be reasonable for the Board to convey them. As discussed below in this letter, this is particularly the case insofar as the particular properties at issue with the greatest ecological value are unlikely to be mined or developed in the reasonable future.

The City also understands that the Service's interest in acquiring this inholding is to add valuable wildlife habitat to the refuge. The Arapaho NWR "was created, in part, to offset losses of nesting habitats in the prairie wetland region of the Midwest" and "hosts more than 300 different animals, and annually produces 6,000-8,000 ducks." *Id.* at ix. The Arapaho NWR Comprehensive Conservation Plan states:

> Since 1967, the refuge has been managed primarily for waterfowl nesting and production. Using existing irrigation ditches for the water-delivery system, the refuge staff constructed or enhanced 72 wetland impoundments in the Illinois River. These impoundments, and associated wet-meadow habitats, provide the habitat necessary to produce waterfowl.
>
> The refuge provides quality habitat for many mammals and other birds common to high-mountain, sagebrush-steppe environments. The willow riparian area alone supports more than 40 species of songbirds (Neotropical migrants) during part of their migration or nesting cycle. Sage grouse are common on the refuge, and wet-meadow habitats provide critical feeding areas for sage grouse young.
>
> Moose, mule deer, elk, and pronghorn are common wildlife species on the refuge. These big-game species migrate on and off the refuge; however, an average of 1,200 elk, 200 pronghorn, and 20 moose may inhabit the refuge at any one time.

Id. at 13.

The City is amenable to a land exchange including Section 16, the inholding within the Arapaho NWR, or a combination of the two and would defer to the Service regarding what it regards as the best conservation option. For example, the City could acquire the Woman Gulch Parcel within Section 16 at $210,000 and spend the remainder of the $3 million acquiring acres within Arapaho NWR. Funds from another entity, such as the City of Boulder or Boulder County, could then be used to acquire the Tall Grass Prairie Parcel and some mineral rights within Section 16. The potential for a land swap and its variations must be considered as alternatives in the Service's review of the City's and JPPHA's applications under NEPA and the Rocky Flats National Wildlife Refuge Act of 2001 ("Rocky Flats Act").

We look forward to discussing this matter with you and shaping the alternatives based on the Service's priorities.

Connectivity to DOI New Management Direction

Since the City requested the Rocky Flats right-of-way, Secretary Salazar announced plans for a Rocky Mountain Greenway, connecting the Denver Greenway System to the three National Wildlife Refuges in the Denver region and eventually to Rocky Mountain

National Park. *See* U.S. Fish and Wildlife Service, Conceptual Graphic of Connecting Urban Trails: Rocky Flats National Wildlife Refuge, Two Ponds National Wildlife Refuge and Rocky Mountain Arsenal National Wildlife Refuge (Attachment D). In doing so, Secretary Salazar has helped to define a new management context for the Refuge, which must be taken into consideration in reviewing the competing applications for the Rocky Flats right-of-way under both NEPA and the Rocky Flats Act.

The Rocky Mountain Greenway is part of the America's Great Outdoors Initiative, a program which supports grassroots, consensus-based conservation initiatives. *See* Remarks of Secretary Salazar at the Rocky Mountain Arsenal Visitors Center Ribbon Cutting (May 26, 2011) (Attachment E). The objective of the America's Great Outdoors Initiative is to "launch a 21st century conservation and outdoor recreation agenda that builds on community-based approaches to protect our lands and waters, connects all Americans to our natural heritage, and empowers local communities to accomplish their conservation priorities." *See* America's Great Outdoors: A Promise to Future Generations (Attachment F). As part of that initiative, the Rocky Mountain Greenway "will create a great urban park and wildlife corridor that will link creeks and river corridors and connections to state and federal parks" as well as the three wildlife refuges. *See* Remarks of Secretary Salazar at the Rocky Mountain Arsenal Visitors Center Ribbon Cutting. Secretary Salazar stated that the Department's work on the Rocky Mountain Greenway "will enhance the connection of the people of the Denver metro region to the Rocky Mountain National Park. Eventually we hope to see a network of trails that connect up the National Park to the mountain backdrop of Larimer, Boulder, Jefferson and Douglas counties to this great Rocky Mountain Greenway." *Id.*

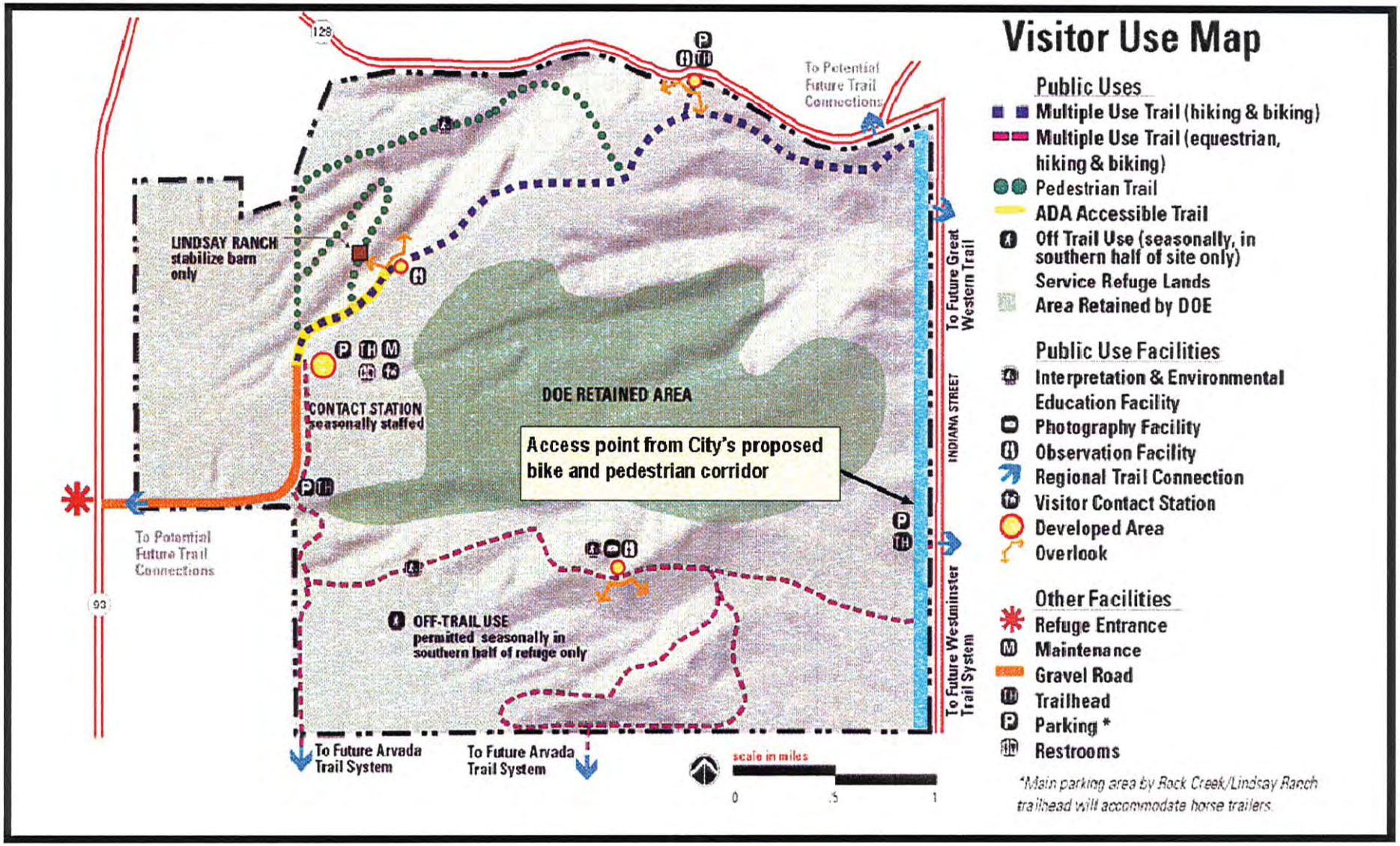
The City's application for use of the Rocky Flats right-of-way as a bicycle and pedestrian corridor would not only minimize impacts to the Refuge as required by the Rocky Flats Act, but it would also assist in realization of the Rocky Mountain Greenway and the Refuge's role in it. By adding a critical link of the Rocky Mountain Greenway along Indiana Street, the City's proposal will connect the Refuge to a network of trails, bike lanes and bicycle-friendly shoulders reaching Rocky Mountain National Park. Specifically, the City's proposed bicycle and pedestrian corridor would provide connections to S.H. 128, the Coalton Trail, and McCaslin Boulevard. These trails connect to City of Boulder and County of Boulder trails and bicycle shoulders that connect all the way to Rocky Mountain National Park along the U.S. 36 and S.H. 7 corridors.[2] The City has added to the Service's Conceptual Graphic of Connecting Urban

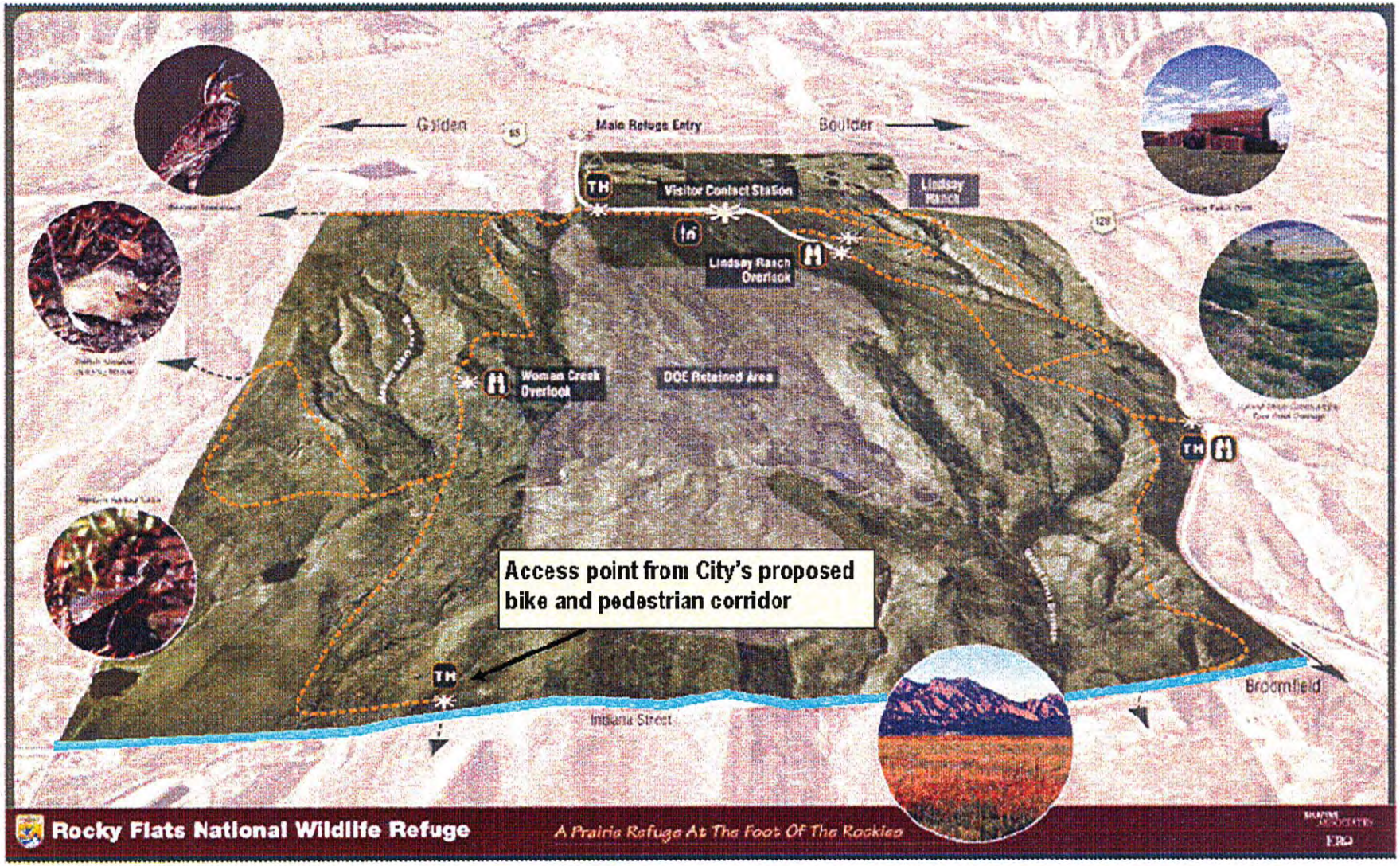
[2] Boulder County, through a voter-funded initiative, has been paving and widening shoulders on roads throughout the County to make them bicycle friendly. This has resulted in attractive bicycle routes along U.S. 36 from Boulder to Lyons, along S.H. 7 in the St. Saint Vrain Canyon from Lyons to Allenspark and along the Peak to Peak Highway from Allenspark to Rocky Mountain Park. Similarly, Boulder County, Town of Superior and City of Boulder efforts provide a wide variety of scenic, safe and attractive routes from the intersection of McCaslin Boulevard to U.S. 36 in north Boulder. All of these routes receive significant bicycle traffic and some also serve pedestrians and equestrians. *See* Boulder County Bikeway Map (Attachment H); Town of Superior Parks, Open Space and Trails Map (Attachment I).

Trails to demonstrate these connections as well as the access points to the Refuge (Attachment G).

The City's proposed bicycle and pedestrian corridor will allow for seamless connections to bicycle and foot access with neighboring open space owned by Boulder, Boulder County, Superior, Westminster, and others without requiring the crossing of two lanes of Indiana Street plus four to six lanes of the Jefferson Parkway. *See* City's Additions to Service's Conceptual Graphic of Connecting Urban Trails (Attachment G); Boulder County Bikeway Map (Attachment H); Town of Superior Parks, Open Space and Trails Map (Attachment I); City of Boulder Bike Route Map (Attachment S). It is unclear how the Greenway approach could or would cross over or under the 300 feet of transportation infrastructure proposed by the JPPHA. Even if such an overpass or underpass were technically and financially possible (which remains unclear), the massive infrastructure would deter use and diminish the user experience that Secretary Salazar is seeking to provide. The City's proposal, therefore, directly supports the management philosophy for the Refuge and the larger Rocky Mountain Greenway by adding access by bicyclists and pedestrians on the east side of Refuge.

Additionally, unlike the Jefferson Parkway, a bicycle and pedestrian corridor along the Refuge will facilitate visitor use of the Refuge by adding a corridor for walking and bicycling along the east side of the Refuge. This use will integrate with and enhance the access plan for the Refuge by providing better options for visitors to access the Refuge by bicycle, foot, or vehicle. *See* the Visitor Use Map and Refuge Map from the Comprehensive Conservation Plan ("CCP") for the Refuge, which are copied below. In fact, the proposed bicycle and pedestrian corridor will be the first funded means of access to the Refuge and could facilitate the building of appurtenant parking facilities contemplated in the CCP for the Refuge. The bicycle and pedestrian corridor can also have pullouts for interpretative facilities, allowing signage and displays to provide maps or interpretive facts about a specific location or various Refuge resources. It would also tie into the Service's plans for north and south trail complexes. As noted in previous comments, the JPPHA's current plans provide no provision for vehicle access to trailhead and parking facilities on the east side of the Refuge that are included in the Refuge CCP. The user experience for persons visiting the eastern side of the Refuge would be vastly diminished compared to the City's transportation proposal. These impacts must be considered in the NEPA analysis and in the consideration of the alternatives under the Rocky Flats Act.


Visitor Use Map
Public Uses
Multiple Use Trail (hiking & biking)
Multiple Use Trail (equestrian, hiking & biking)
Pedestrian Trail
ADA Accessible Trail
Off Trail Use (seasonally, in southern half of site only)
Service Refuge Lands
Area Retained by DOE
Public Use Facilities
Interpretation & Environmental Education Facility
Photography Facility
Observation Facility
Regional Trail Connection
Visitor Contact Station
Developed Area
Overlook
Other Facilities
Refuge Entrance
Maintenance
Gravel Road
Trailhead
Parking *
Restrooms
*Main parking area by Rock Creek/Lindsay Ranch trailhead will accommodate horse trailers.
128
93
LINDSAY RANCH
stabilize barn only
CONTACT STATION
seasonally staffed
DOE RETAINED AREA
Access point from City's proposed bike and pedestrian corridor
OFF-TRAIL USE
permitted seasonally in southern half of refuge only
To Potential Future Trail Connections
To Potential Future Trail Connections
To Future Great Western Trail
INDIANA STREET
To Future Westminster Trail System
To Future Arvada Trail System
To Future Arvada Trail System
scale in miles
0
.5
1
Proposed Bikeway

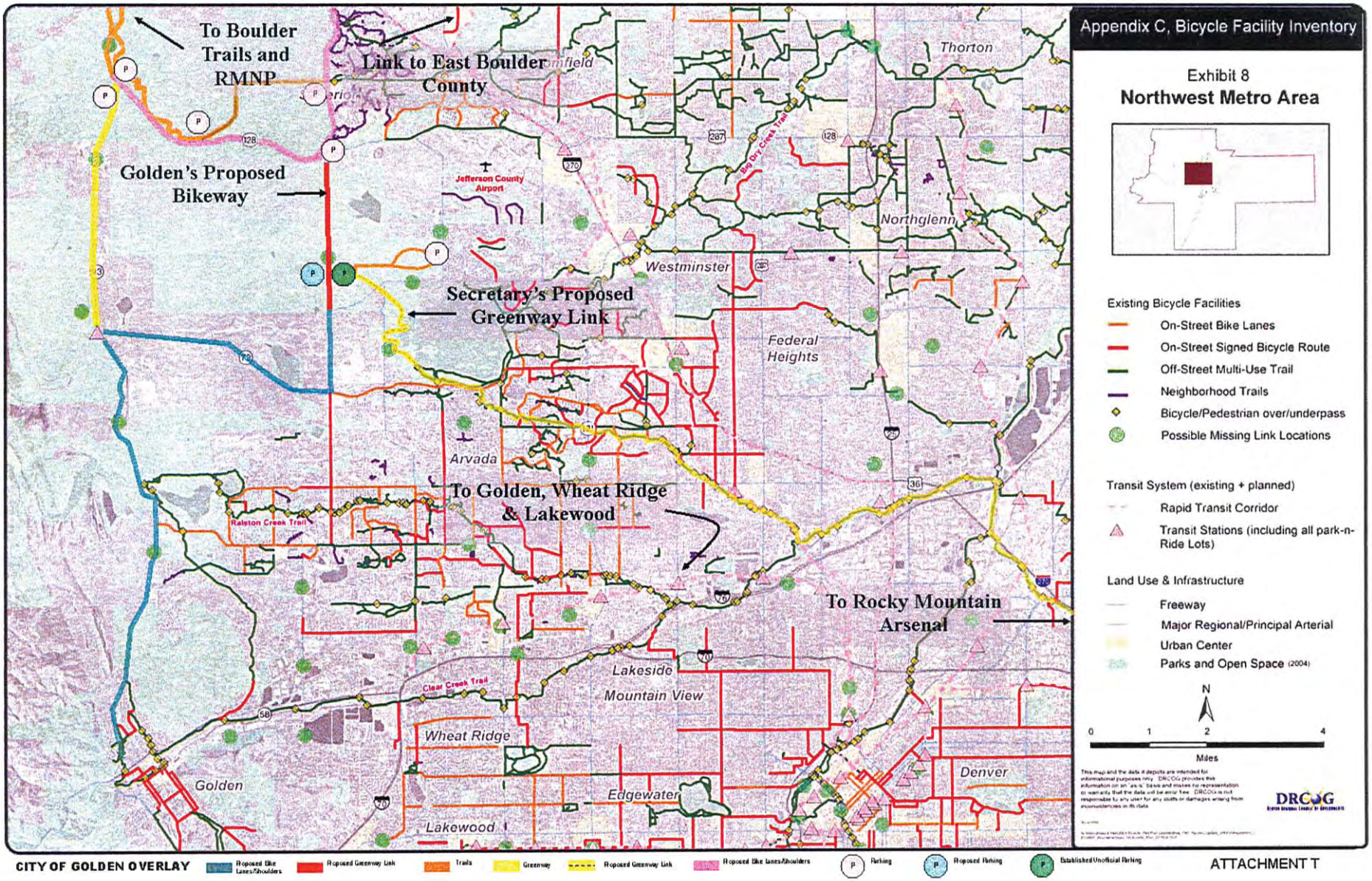

Golden
Main Refuge Entry
Boulder
Visitor Contact Station
Lindsey Ranch
Lindsey Ranch Overlook
Woman Creek Overlook
DOE Retained Area
Access point from City's proposed bike and pedestrian corridor
Indiana Street
Broomfield
Rocky Flats National Wildlife Refuge
A Prairie Refuge At The Foot Of The Rockies
Proposed Golden Bike/Ped Trail

Transportation Benefits of City's Proposed Bicycle and Pedestrian Facility

Not only would the bicycle and pedestrian transportation facility along Indiana Street fill an important missing link of the Rocky Mountain Greenway and short-term public access to the eastern edge of the Refuge, but it would also add a critical missing bicycle corridor in the greater Denver region, as identified by the DRCOG Pedestrian and Bicycle Element of the 2035 Metro Vision Regional Transportation Plan ("Pedestrian and Bicycle Element of the RTP"). *See* Pedestrian and Bicycle Element of the RTP at Fig. 19 (May 2009) (Attachment J). The DRCOG 2035 Metro Vision Regional Transportation Plan specifically incorporates the Pedestrian and Bicycle Element of the RTP. *See* DRCOG 2035 Metro Vision Regional Transportation Plan at 4, 62-63 (pedestrian policies), 67 (bicycle policies) (Feb. 2011) (attached to City's May 20, 2011, Letter to Regional Director Guertin). The Pedestrian and Bicycle Element of the RTP identifies a bicycle facility along Indiana Street as a bicycle facility missing link in the Denver region. *See id.* at Appendix C, Exhibit 8. In the figure below (and included in higher resolution in Attachment T), the City has added to the map from the Pedestrian and Bicycle Element of the RTP to demonstrate how the City's proposal will fill in this missing link and provide connections to existing and proposed bike lanes and multi-use trails.

Regional bicycle commuters from Boulder, Superior, Broomfield, and Louisville to Denver currently lack good connections between S.H. 128 and the Little Dry Creek Trail corridor or other safe and attractive routes in this area. Similarly, current or potential bicycle north-south commuters between Golden, Lakewood, Wheat Ridge or Arvada locations on the south and U.S. 36 corridor communities on the north do not have a safe and attractive route along Indiana or other parallel corridors. Indiana Street itself currently experiences no or limited shoulders and high vehicle speeds.

The City's proposal will also provide access to established transit lines, including the stop at Flat Irons Crossing and the Superior-Louisville stop on U.S. 36. The Pedestrian and Bicycle Element of the RTP recognizes that "[p]rojects that fill in the missing links will significantly help the connectivity of existing bicycle facilities and greatly improve access to transit stations, work places, and other important destinations." *Id.* at 44.



ATTACHMENT T

Rather than filling in missing links to ensure connectivity of existing bicycle facilities and access to transit stations, the Jefferson Parkway proposal would create actual and psychological barriers to bicycle and pedestrian movement, including the Secretary of the Interior's proposed Rocky Mountain Greenway. Its large size will serve as a permanent suppressor of potential bicycle and pedestrian use of both the Refuge and the north-south corridor along Indiana Street.

Additionally, unlike the City's proposed bicycle and pedestrian corridor, the proposed Jefferson Parkway will create additional traffic and associated pollution near the Refuge. This must be accounted for during the NEPA process. Specifically, the Service must study the air quality and transportation benefits of improved alterative transportation achieved by the City's proposal, as opposed to the traffic and sprawl development that will result from the JPPHA's proposal.

Section 16 Land Exchange Cannot Offset the Impacts of the Proposed Parkway on the Refuge

The Service must also carefully consider how it compares the impacts of the no action alternative, the JPPHA alternative and the City's alternative. While the long-term protection of as much of Section 16 as possible in public ownership would be useful for conservation, the reality is that the critical conservation areas within Section 16 are not at risk for development in the foreseeable future and acquisition of this property at this time cannot offset the direct, indirect and cumulative impacts of the proposed Jefferson Parkway on the east side of the Refuge. The most important portions of Section 16 from a wildlife perspective are not at risk for development due to numerous existing protections of the Woman Creek Corridor and the Tall Grass Prairie Parcel. Consequently, the conservation value received from an exchange involving Section 16 does not outweigh the many negative impacts of the proposed parkway on the east side of the Refuge. These protections are set forth below and must be considered in the No Action alternative in the NEPA review.

First, the Woman Creek corridor downstream of Section 16 includes Preble's Mouse habitat, which has been designated as critical habitat by the Service. Fish and Wildlife Service, *Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for the Preble's Meadow Jumping Mouse in Colorado*, 75 Fed. Reg. 78430, 78437 (Dec. 15, 2010). The portion of the Woman Creek corridor on Section 16 is not designated as critical habitat, but any potential developers (including mining) would likely need to secure an incidental take permit to protect against any liability associated with take under the Endangered Species Act. The Service has no such applications pending and would be unlikely to grant any (other than small linear crossings) insofar as it would be difficult, if not impossible, for applicants to meet the Endangered Species Act's requirements to demonstrate that there are no feasible alternatives to taking the habitat. This makes it unreasonable to assume any development along the Woman Creek corridor that provides the primary wildlife habitat and connectivity.

Second, the State Land Board has designated 105 acres of Section 16, including the entire Woman Creek corridor, as part of the Stewardship Trust, a program by which the Board preserves lands for future use. *See* Stewardship Trust Designations at 6 (Attachment K) and The Stewardship Trust: Questions and Answers (July 1, 2002) (Attachment L).

Third, Jefferson County currently has a 30-year conservation lease over approximately 60 acres of the northeast portion of Section 16, which it leased from the State Land Board for the purpose of conservation of the Woman Creek corridor, which protects those acres until 2035. *See* State Board of Land Commissioners' Other Use Lease of State Trust Lands, Lease No. 80031 (Sept. 1, 2005) (Attachment M).

Fourth, Jefferson County has entered into a management agreement with the Service to mange those 60 acres for the establishment of native vegetation beneficial to wildlife. *See id.* at Exhibit B (License and Management Agreement between Jefferson County and the U.S. Fish and Wildlife Service (Aug. 31, 2005)).

Fifth, regarding the Woman Creek corridor, LaFarge West, Inc., currently holds a Sand and Gravel Lease from the State Land Board for mining operations in Section 16, but cannot conduct mining operations within the 144-acre Habitat Preservation Area designated by the Special Use Development Plan for Section 16 Sand and Gravel Mine of the Colorado Board of Land Commissioners, which was accepted by the Jefferson County Board of County Commissioners on June 25, 1996 (Attachment N). The Special Use Development Plan provides that permitted land uses and activities within the Habitat Preservation Area include: environmental monitoring, weed control activities, fencing as required for safety and security, and "other non-intensive, non-disturbing activities that may be necessary to carry out the mining operation (e.g., surveying, well monitoring, and ecological monitoring)." Special Use Development Plan at § 4.3. It provides that "[t]he mining operation shall not adversely affect the wetland and riparian areas of Old Woman Creek. *Id.* at § 6.5(8). It further requires that "[t]he mining operation shall not adversely affect critical wildlife habitats or the habitats of threatened or endangered species, as determined by Jefferson County in conjunction with the Colorado Division of Wildlife and/or the U.S. Fish and Wildlife." *Id.* at § 6.5(9).

Sixth, the City's offer for a land exchange could add to these protections by allowing the Service to hold interests in the property that should be considered in reviewing alternatives based on the City's right-of-way application.

The lack of meaningful opportunities for development on the Woman Creek corridor is confirmed by the State Land Board's appraisal of portions of Section 16. That appraisal assigned a value of only $2,000 per acre in that corridor, an order of magnitude lower than other portions of Section 16 without such protections ($21,000 per acre). *See* State Board of Land Commissioners' Memorandum re: Rocky Flats Section 16 Range of Value Estimate (Oct. 12, 2010) (Attachment A). The Woman Creek corridor value was also vastly lower that the appraised value of the Rocky Flats right-of-way, again confirming its lack of development potential. Thus, the value of the Woman Creek

corridor for migration between the Refuge and the foothills and as potential Preble's Mouse habitat will exist without the need to convey the right-of-way to JPPHA.

Regarding the Tall Grass Prairie Parcel in the southwest corner of Section 16, the Special Use Development Plan recognizes that the 106-acre area referred to as the "Phase II area" has been identified as native tall grass prairie which should be preserved. Special Use Development Plan at § 4.1(13). The Special Use Development Plan provides that "[t]he Phase II area shall be designated as an area that mining and associated activities shall not disturb . . . for at least five (5) years while a detailed study is conducted on the condition and extent of remaining unique or rare tall grass prairie in Jefferson County." *Id.* It then states, "Mining may be allowed if the Board determines, after considering . . . the results of the study . . . that the Phase II area does not contain a rare and unique tall grass prairie or other rare and unique plant communities . . . ." *Id.* At this time, we understand that a final study on the tall grass prairie has not been issued, meaning no action has been taken to change the status of the Phase II area as an area that may not be mined under the Special Use Development Plan. However, the draft study confirmed the ecological value of the Tall Grass Prairie Parcel, indicating that land use approvals should not issue based on the Special Use Development Plan. Additionally, pursuant to an agreement with Jefferson County, LaFarge has agreed to forego mining of the Phase II area during the full term (22 years) of its Sand and Gravel Lease to preserve the tall-grass prairie. *See* Agreement between Jefferson County and LaFarge West, Inc. at § 5 (October 1, 2002) (Attachment O). It also agreed to use its best efforts to assist the County in obtaining a 99 year non-development lease for or to permanently preserve this property. *Id.*

In addition to all of these considerations, other entities, including the City of Boulder, Boulder County, the City and County of Broomfield, Jefferson County, and the Jefferson County Nature Association, have set forth proposals to preserve and protect Section 16 from development utilizing the Natural Resources Damages Fund managed by the Rocky Flats Stewardship Council. *See, e.g.*, Rocky Flats Stewardship Council Board Meeting Packet for April 7, 2008 (Attachment P). The City of Boulder and Boulder County have indicated that they would contribute $4 million to the conservation of Section 16, despite concerns about the Jefferson Parkway. These funds, plus the City's $3 million, could protect the portions of Section 16 with any significant ecological value, especially with the value of the City's proposal for a land swap.

Thus, as stated above, the critical conservation areas within Section 16 are not at risk for development in the foreseeable future and further protection of this property at this time can hardly neutralize the cumulative impacts of the proposed Jefferson Parkway on the east side of the Refuge. Additionally, because, like the JPPHA's plan to incorporate Section 16, the City has also offered a land exchange for expansion of the Refuge through Section 16 or acquisition of an inholding within the Arapaho NWR, the Service must weigh the actual effects and impacts of each proposal for developing the transportation corridor under NEPA and the Rocky Flats Act to determine which proposal minimizes adverse impacts on management of the Refuge. The City has not only offered to exchange land to be held for conservation purposes, but it has offered to exchange

valuable land within the Arapaho NWR *and* the City's proposal has far fewer impacts to the Refuge. When comparing the proposals before it, including a no action alternative, the Service must consider the value of the land exchange proposals as well as the actual impacts of each proposed alternative.

Comparison of Proposals under NEPA

In analyzing whether adverse impacts on the management of the Refuge have been minimized for the purposes of allocating the right-of-way within the Refuge, the Service must consider the relative impacts of the competing transportation proposals on the Refuge and its management, along with other impacts to the human environment. Relative to the Jefferson Parkway proposal, a pedestrian and bicycle transportation corridor along Indiana Street, allowing for some improvements to Indiana Street within 50 feet of its western edge, would minimize adverse impacts on the Refuge.

As the City demonstrated in its May 20th application for the Rocky Flats right-of-way, a pedestrian and bicycle corridor would have far fewer impacts than a four to six lane parkway, including minimizing the footprint of improvements, minimizing effects to critical habitat for the Preble's Mouse, and offering adequate and safe corridor crossing for a variety of wildlife, among others. Regarding the Preble's Mouse, the CCP/FEIS shows that a 300-foot right-of-way would take more than 8 acres of Preble's Mouse habitat. U.S. Fish and Wildlife Service, *Rocky Flats National Wildlife Refuge Final Comprehensive Conservation Plan and Environmental Impact Statement* ("CCP/EIS") 192 (Sept. 2004). The Refuge's Preble's Mouse habitat has now been designated as critical habitat by the Service. Fish and Wildlife Service, *Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for the Preble's Meadow Jumping Mouse in Colorado*, 75 Fed. Reg. 78430, 78437 (Dec. 15, 2010). Because the Service can discharge the requirements of the Act with approximately one acre of habitat impact—as opposed to over eight acres for the Jefferson Parkway (*see* CCP/EIS at 192)—Service must choose the City's proposal rather than the Jefferson Parkway application pursuant to both the Act and Section 7 of the Endangered Species Act. Management of Preble's Mouse habitat is inextricably tied to the management of the Refuge. There is no rational way for the Service to meet its statutory mandates and choose an alternative that *maximizes* impacts to the management of the Refuge.

Because the City anticipates an approximately ten-foot wide right-of-way for the bikeway, all other areas, including xeric grasslands and wetlands, will remain undisturbed. The City would also use bridges and boardwalks to minimize and avoid effects to the Refuge and wildlife habitat. We look forward to working with you to develop these measures. This is in comparison to the JPPHA's proposal, which would add up to a six lane, 300-foot-wide freeway/tollway facility with associated re-grading and structures.

Further, as discussed in the City's May 20 letter, the Jefferson Parkway will create additional direct impacts on the Refuge due to the noise from increased traffic and

speeds. This type of highway noise has been shown to cause impacts to grassland birds and other species. Conservation of grasslands is particularly important because grassland birds are among our nation's fastest declining species. "The percentage distribution of grassland birds on public lands is low because such a small amount of U.S. grassland (less than 2%) is both publicly owned and managed primarily for conservation. Grassland bird conservation should be a higher priority on grasslands with multiple uses." *The State of The Birds 2011: Report on Public Lands and Waters* at 5 and 8-9 (Attachment Q). Increased traffic and vehicle speeds on the proposed Jefferson Parkway would significantly increase noise within the Refuge to the detriment of ground-nesting birds. Recent peer-reviewed research—that the Service has not considered—indicates that increasing the size of and traffic volume on roads (from two to four lanes, for example) greatly increases the zone in which ground nesting birds would be significantly affected. *See* R. Forman, *et al.*, *Road Traffic and Nearby Grassland Bird Patterns in a Suburbanizing Landscape*, ENVIRONMENTAL MANAGEMENT at 782-800 (Vol. 29, No. 6, 2002) (attached to City's May 20, 2011, Letter to Regional Director Guertin). That research showed that the area of disruption to birds from noise would increase from 400 meters for a 2-lane road to 1,200 meters for a multilane, divided highway with more than 30,000 cars per day (which JPPHA claims it will attract). In the context of Rocky Flats, this would mean an increase in approximately 875 acres of impact to ground nesting and grasslands birds. This is a serious impact on the management of the Refuge that far outweighs the ecological value of acquiring fee simple title to Section 16 and must be fully accounted for in the Service's NEPA analysis.

Further, unlike the City's proposed bicycle and pedestrian corridor, the proposed Jefferson Parkway will create additional traffic and associated pollution near the Refuge. The Service must study the air quality and transportation benefits of improved alterative transportation achieved by the City's proposal, as opposed to the traffic and sprawl development that will result from the JPPHA's proposal. The JPPHA's own traffic studies identify unmitigated and significant impacts on traffic congestion from its project, including in the City of Golden. As the City has previously pointed out, under NEPA, the Service must consider the cumulative effects of the transfer of the Rocky Flats right-of-way in weighing the two alternatives before it. As the City explained in its May 20th letter, the Jefferson Parkway will spur sprawl-type development, including the Candelas project, along the south and west sides of the Refuge. In fact, the Jefferson Parkway proponents see development of nearby property as the primary purpose of the project. Proponents have argued that beltway construction would help facilitate 11,482,000 square feet of nonresidential construction and 4,645 new residential units within 20 years.[3] A pedestrian and bicycle facility, on the other hand, has no potential to encourage such development. Instead, a bicycle corridor will help to connect communities as well as avoid fragmentation of habitat. Because the Service has an alternative that would avoid these impacts, it must analyze these impacts under NEPA and consider potential

[3] The appraisal for the right-of-way discussed the connection between the Candelas property development and the value of the right-of-way.

mitigation requirements. Under the Rocky Flats Act, it must ensure all mitigation measures to minimize the impacts on the management of the Refuge.

Additionally, unlike the JPPHA's application, the City's proposal to use the Rocky Flats right-of-way for development of bicycle and pedestrian transportation facilities would not require elimination of water-monitoring stations at Walnut and Woman Creeks, which stations monitor for any harmful contaminants in water from Rocky Flats. There has been public concern, including from Broomfield officials, about eliminating the two water-monitoring stations where each creek meets Indiana Street. *See* Joe Rubino, *Broomfield Officials Concerned New Monitoring Stations at Rocky Flats Not Far Enough Downstream*, BROOMFIELD ENTERPRISE, May 26, 2011 (Attachment R). Eliminating those water-monitoring stations would not be necessary under the City's proposed use of the Rocky Flats right-of-way.

The Service Must Prepare an EIS

Given the impacts at issue and the complexity of the analysis the Service must undertake, as well as the importance of ensuring that this process and analysis are done correctly, the Service must develop an environmental impact statement ("EIS"), not just an environmental assessment ("EA"). The JPPHA proposal will lead to multiple direct and indirect impacts to critical habitat for a threatened species, habitat to ground nesting birds, xeric grassland habitat, migration patterns and other aspects of the Refuge and the habitat surrounding it. It will also lead to many acres of additional sprawl, along with unmitigated significant impacts from traffic congestion in and out of Golden. These are significant impacts that can be avoided through the Golden application and require the preparation of an EIS. Since we filed our application for right-of-way in May, we have heard from many conservation, transportation, historic and other groups that have important information and comments on this right-of-way that the Service will need to carefully consider.

Due to the contentiousness of the issue facing the Service, the public interest in this issue and the likelihood of litigation following the Service's decision, the Service must prepare a defensible NEPA document, which requires an EIS, rather than an EA. Additionally, the timeframe contemplated by the Service to complete the NEPA process is simply not long enough to adequately analyze the proposals and complete an EIS, based on the Service's and other agencies' experience with similar projects. The Service must ensure it takes the time to make a legally supportable determination.

Please contact me if you have any questions.

Sincerely,

Michael C. Bestor
City Manager

Enclosures

Cc: w/o attachments:

Mark Udall, United States Senate
Michael Bennet, United States Senate
Ed Perlmutter, United States House of Representatives
Jared Polis, United States House of Representatives
John Hickenlooper, Governor
Will Shafroth, Interim Assistant Secretary of Fish and Wildlife
Faye Griffin, Jefferson County Commissioner
Donald Rosier, Jefferson County Commissioner
John Odom, Jefferson County Commissioner
Susan Osborne, Mayor, City of Boulder
Andrew Muckle, Town of Superior Mayor
Will Toor, Boulder County Commissioner
Ralph Schell, County Manager, Jefferson County
William Ray, JPPHA
Doug Robotham, State DNR

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August 18, 2011

VIA U.S. MAIL

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Re: Jefferson Parkway Working Group

Dear Ladies and Gentlemen:

I am writing regarding the process that the Governor convened to address local governments' concerns about the proposed Jefferson Parkway ("Jefferson Parkway Working Group"). Initially, I'd like to thank the Governor again for convening the Jefferson Parkway Working Group to address these concerns and

express my appreciation for CDOT's facilitation of this process thus far. I also appreciate the time and efforts of the elected officials and representatives of CDOT, the City of Boulder, Boulder County, the Town of Superior, Jefferson County, the City of Arvada, the City and County of Broomfield, and the Jefferson Parkway Public Highway Authority ("JPPHA") who have participated in the working group.

As all of you know, the City of Golden has supported the resolution of regional transportation issues along the SH 93 corridor and the long-term preservation of Section 16 at Rocky Flats. To advance the first objective, we have identified specific, reasonable projects to address the impacts that construction of the Jefferson Parkway would have on Golden. These projects have been fully vetted through an extensive process with the residents and City Council in Golden.

To address the second objective, the City of Golden would be willing to provide up to $1 million to assist in covering the funding gap for purchase of Section 16 in exchange for an agreement on transportation issues and the City's mitigation requirements. We believe that the region would be best served by a comprehensive agreement that addresses outstanding transportation and conservation interests. The City's offer would help assure that the conservation objectives associated with Section 16 and Rocky Flats mineral leases could be met.

I look forward to a productive dialogue with all of the other participants and to concrete steps regarding resolution of the transportation impacts associated with the Jefferson Parkway.

Sincerely,

Jacob Smith
Mayor

Cc: Sen. Mark Udall
Sen. Michael Bennet
Rep. Ed Perlmutter
Rep. Jared Polis
Doug Young
Will Shafroth
Steven Guertin

APPENDIX F

Jefferson Parkway Public Highway Authority Proposal

Appendix F
Jefferson Parkway Public Highway Authority Proposal

On April 29, 2008, Jefferson County, the City of Arvada, and the City and County of Broomfield, requested from the Secretary of Energy the transfer of a 300-foot-wide transportation corridor pursuant to provisions of the Rocky Flats National Wildlife Refuge Act of 2001 (Act). On May 22, 2008, those same entities formally established the Jefferson Parkway Public Highway Authority (JPPHA) to finance, construct, operate and maintain the Jefferson Parkway Public Highway. The proposed highway, located northwest of Denver, would provide most of the missing link in a circumferential highway around the Denver metropolitan area. With the limited availability of State and Federal highway construction funds, construction of a toll road was being considered. Upon notification that jurisdiction of the corridor had transferred to the Department of Interior, JPPHA re-submitted their request to the Secretary of Interior on August 11, 2008. (See attachment 1.). The Service began discussions with JPPHA and informed them that the agency lacked authority to transfer the property at no cost. Options that could be used for transfer included a transportation corridor in accordance with the Code of Federal Regulations at 50 CFR § 29.21, a direct sale of the property as authorized by the Act, or a land-for-land exchange as authorized by the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee).

On April 16, 2009, JPPHA adopted Resolution 09-001, authorizing the Chairman to bind JPPHA to an agreement with the Service to adopt the minimization/mitigation strategies recommended in the CDOT Northwest Corridor Transportation and Environmental Planning Study.

In a letter dated June 11, 2009, the Service notified JPPHA that additional information would be needed to process an application for a transportation corridor in accordance with procedures outlined in the Code of Federal Regulations at 50 CFR § 29.21. The Service also advised JPPHA that its proposal must be on the Fiscally-Constrained 2035 Regional Transportation Plan adopted by the Denver Regional Council of Governments (DRCOG) pursuant to 49 U.S.C.§ 5303. JPPHA began the process of submitting the project to DRCOG and on January 20, 2010, DRCOG voted to include the Parkway corridor in its Fiscally Constrained 2035 Regional Transportation Plan.

On January 26, 2010, JPPHA submitted a request to purchase the corridor through a direct sale. (See attachment 2.)

Starting in March of 2010, the Service began discussions with JPPHA, the Colorado State Land Board (SLB), and several local municipalities that centered around the concept of a land exchange. In any direct sale of the corridor, the proceeds would be deposited into the U.S. Treasury and would not be available for additional land conservation. A land-for-land exchange would enable the Service to acquire other lands that could provide additional conservation benefits in exchange for the corridor. There was considerable interest in an expansion of the Refuge to include some or all of the adjoining section 16, administered by the SLB, in order to provide connectivity between the existing Refuge and other open space lands to the west of Highway 93. Since the value of the section 16 land (estimated at $9.5 million) is considerably higher than the value of the corridor ($2.8 million), and since the SLB did not wish to subdivide the 617 acres it proposes to transfer, a need for additional funding to complete the transaction was identified. Local governments began pledging various sums of money for the project.

This exchange transaction was envisioned as a 3-way exchange. The Service would provide a deed to the corridor to JPPHA, JPPHA would pay $2.8 million to the SLB, and the SLB would provide a patent on section 16 lands to the Service. The remainder of the purchase price for section 16 would come from other sources, and the remaining interests would be conveyed to the Service as a donation.

Only the surface of section 16 would be transferred to the Service initially. The mineral interest (sand, gravel and aggregate) is currently leased to a private company. Because of concerns over potential mineral development, which would result in significant negative impacts to the surface estate, the Service was not willing to accept the surface interest without having a definitive plan in place to acquire the mineral interest as well. Prior to the surface transfer, a third party (most likely a local government) would acquire the mineral lease and hold it for non-production. This party would continue making Advance Mineral Royalty (ARM) payments to the SLB. Subsequent to transfer of the surface, the Bureau of Land Management (BLM), which has responsibility for management of Federal minerals, would begin processing a mineral exchange. The BLM would work with the SLB to identify other lands in Colorado where the State owns the surface interest and the United States (US) owns the underlying minerals. The SLB's minerals under section 16 would be exchanged for an equal value of US minerals under State lands elsewhere in the State. This would re-unite surface and mineral interests for both parties. Upon BLM's completion of the exchange, the section 16 minerals would be protected as part of the Refuge. The mining lease would be extinguished and the ARM payments to the SLB would terminate. The State would reserve the oil and gas, which are currently leased to a private party.

As the Service worked with JPPHA on identifying various procedural requirements to be met for a land exchange, local governments also were working toward an even larger land protection endeavor. Additional funding from local municipalities and a Natural Resource Damage (NRD) fund would finance the acquisition of various mineral interests in other lands located within the current Refuge acquisition boundary but still under the jurisdiction of the Dept. of Energy (DOE). The mineral interests and/or mineral leases are held by private parties. Under the terms of the Act, the current plan is for the mineral owner/lessee to exercise their rights and extract sand, gravel, and other aggregate material. The mineral operator, in conjunction with DOE, will be responsible for reclamation of the site after extraction activity has concluded but prior to the transfer of jurisdiction of the property from DOE to the Service. As part of the larger conservation proposal, the mineral leases will be extinguished and the mineral rights acquired prior to extraction of any material. These areas could then be transferred to the Service without the disturbance and restoration that mining would entail.

On July 29, 2011, JPPHA submitted scoping comments addressing the environmental assessment for Rocky Flats. (See Attachment 3.) In that document, JPPHA expressed its willingness to continue with either an exchange or a direct sale of the corridor. JPPHA also expressed its commitment to providing pedestrian and bicycle access in conjunction with any roadway development within the corridor.

August 11, 2008

The Honorable Dirk Kempthorne
Secretary of the Interior
U.S. Department of the Interior
1849 C Street, N.W.
Washington D.C. 20240

Subject: Letter of Application for the Rocky Flats National Wildlife Refuge Land Transfer for Transportation Right-of-way

Dear Secretary Kempthorne:

On behalf of the members of the Jefferson Parkway Public Highway Authority (JPPHA), I am pleased to submit this letter of application requesting the transfer of the three hundred (300) easternmost feet of the Rocky Flats National Wildlife Refuge to the JPPHA for transportation improvements, as provided by the Rocky Flats National Wildlife Refuge Act of 2001 (Act) (Attachment A). The conditions, as set forth in the Act, have been met for the transfer, and therefore the JPPHA requests that the process to transfer the land begin promptly. It is the intention of the JPPHA to work expeditiously and cooperatively with the Department of the Interior to provide all necessary information and resolve all outstanding issues in order for the transfer to be executed.

Per the Act, the referenced portion of land shall make available for transportation purposes if it meets the following conditions:

> *(A) is submitted by any county, city or other political subdivision of the State of Colorado; and*
> *(B) includes documentation demonstrating that the transportation improvements for which the land is to be made available –*
> > *(i) are carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge; and*
> > *(ii) are included in the regional transportation plan of the metropolitan planning organization designated for the Denver metropolitan area.*

The Jefferson Parkway Public Highway Authority was established on May 22, 2008 and is a duly formed and registered Public Highway Authority, meeting the requirements of Condition (A). The JPPHA was formed by Jefferson County, the City and County of Broomfield, and the City of Arvada. (Attachment B).

This application also meets condition (B)(i), requiring demonstration that the transportation improvements for which the land is to be made available will be carried out so as to "minimize adverse effects on the management of Rocky Flats as a wildlife refuge." Satisfaction of this requirement is documented through two sources: First, the Rocky Flats National Wildlife Refuge Final Comprehensive Conservation Plan and Environmental Impact Statement, dated September 6, 2004 (CCP/EIS) which contemplates and evaluates the transfer of this parcel for transportation purposes and concludes that "the Service finds that transfer of a corridor up to 300 feet wide would not adversely affect the management of the refuge" (Attachment C); Second, the recently completed and released Northwest Corridor Transportation and Environmental Planning Study conducted by the Colorado

Department of Transportation (CDOT) supports condition (B)(i). The CDOT study was prepared to provide the full analytical support for an Environmental Impact Statement regarding major transportation improvements, including the proposed use underlying this application.

Condition (B)(ii), requiring the proposed improvements for which the land is to be transferred be included in the regional transportation plan of the metropolitan planning organization designated for the Denver metropolitan area, is met through inclusion in the Denver Regional Council of Governments 2035 Metro Vision Regional Transportation Plan (Attachment D).

The JPPHA is committed to following the process for the land transfer as set forth in the Act and is confident that all requirements for the land transfer have been met. It should be noted that the Act does specify a process whereby the land transfer is to be implemented by "the Secretary [of Energy], in consultation with the Secretary of Interior." However, agency jurisdiction over the subject property now resides in the Department of Interior due to the land transfer from the Department of Energy dated July 12, 2007. The Act predated the contemplated transfer of land to Interior, and full agency authority now resides in the Department of Interior. This understanding has been confirmed through a letter from DOE in response to a prior letter of application for the transfer of the subject property by the members of the JPPHA (Attachment E).

When Senator Allard and Congressman Udall had the foresight to create the "Rocky Flats National Wildlife Refuge Act of 2001," they worked with the surrounding communities to ensure preservation of 5,000 acres of a former nuclear weapons production facility as a wildlife refuge and to reserve a 300 foot strip for future transportation needs. The purpose of the 300 foot strip has been clear and explicit since Congress passed the Act and legislated that the Secretary "shall make available" land for a transportation corridor "on submission of an application meeting each of the conditions" set forth in the Act and described above.

We ask that you assist us in working together with the appropriate members of your Department to effect the requested transfer. Please have your designate contact the Interim Executive Director of the JPPHA, Mr. Bill Ray, to discuss any questions and to initiate the process. He may be reached at 720-898-7506. Thank you.

Sincerely yours,

J. Kevin McCasky, Chairman
Jefferson Parkway Public Highway Authority
Jefferson County Commissioner, District 2

Attachments

cc: The Honorable Samuel W. Bodman, Secretary of Energy
The Honorable Wayne Allard, United States Senate
The Honorable Mark Udall, United States House of Representatives
Lyle Laverty, Assistant Secretary for Fish, Wildlife and Parks, Department of Interior
Steve Guertin, Regional Director, USFWS Mountain Prairie Region
Steve Berendzen, Refuge Manager, Rocky Flats National Wildlife Refuge
The Honorable Bill Ritter, Governor of Colorado
Russell George, CDOT Executive Director
Jennifer Schaufele, DRCOG Executive Director

ATTACHMENT A

S.1438

One Hundred Seventh Congress
of the
United States of America
AT THE FIRST SESSION

An Act
To authorize appropriations for fiscal year 2002 for military activities of the Department of Defense, for military construction, and for defense activities of the Department of Energy, to prescribe personnel strengths for such fiscal year for the Armed Forces, and for other purposes.
Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Subtitle F--Rocky Flats National Wildlife Refuge

SEC. 3171. SHORT TITLE.

This subtitle may be cited as the `Rocky Flats National Wildlife Refuge Act of 2001'.

SEC. 3174. FUTURE OWNERSHIP AND MANAGEMENT.

(e) TRANSPORTATION RIGHT-OF-WAY-

(1) IN GENERAL-

(A) AVAILABILITY OF LAND- On submission of an application meeting each of the conditions specified in paragraph (2), the Secretary, in consultation with the Secretary of the Interior, shall make available land along the eastern boundary of Rocky Flats for the sole purpose of transportation improvements along Indiana Street.

(B) BOUNDARIES- Land made available under this paragraph may not extend more than 300 feet from the west edge of the Indiana Street right-of-way, as that right-of-way exists as of the date of the enactment of this Act.

(C) EASEMENT OR SALE- Land may be made available under this paragraph by easement or sale to one or more appropriate entities.

(D) COMPLIANCE WITH APPLICABLE LAW- Any action under this paragraph shall be taken in compliance with applicable law.

(2) CONDITIONS- An application referred to in paragraph (1) meets the conditions specified in this paragraph if the application--

(A) is submitted by any county, city, or other political subdivision of the State of Colorado; and

(B) includes documentation demonstrating that the transportation improvements for which the land is to be made available--

(i) are carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge; and

(ii) are included in the regional transportation plan of the metropolitan planning organization designated for the Denver metropolitan area under section 5303 of title 49, United States Code.

ATTACHMENT B

CERTIFICATE OF ORGANIZATION

FOR THE

JEFFERSON PARKWAY PUBLIC HIGHWAY AUTHORITY

WHEREAS, the Public Highway Authority Law, codified as part 5 of article 4, title 43, Colorado Revised Statutes, authorizes, inter alia, two or more counties or municipalities to create, by contract, a public highway authority; and

WHEREAS, the county of Jefferson, city-county of Broomfield, and city of Arvada, located in the Denver metropolitan region have entered into a contract ("the Contract") to create the Jefferson Parkway Public Highway Authority, and the Division of Local Government in the Department of Local Affairs has received and reviewed a copy of the Contract, in accordance with the provisions of section 43-4-504 (1) Colorado Revised Statutes, together with other material and documentation; and

NOW THEREFORE, THE DIRECTOR OF THE DIVISION OF LOCAL GOVERNMENT IN THE DEPARTMENT OF LOCAL AFFAIRS HEREBY CERTIFIES AND STATES AS FOLLOWS:

1. That the Jefferson Parkway Public Highway Authority has been duly organized according to the laws of the State of Colorado, and is hereafter authorized to exercise the functions conferred by the provisions of the Public Highway Authority Law, except as limited by the Contract.

2. That this Certificate shall be recorded in the appropriate real estate records of the counties of Jefferson and the City and County of Broomfield, Colorado.

THIS CERTIFICATE IS SIGNED THIS 16TH DAY OF JUNE, 2008

By: _____
~~for~~ Tony Hernandez
Director, Division of Local Government

State of Colorado)
) SS.
County of Denver)

The foregoing instrument was acknowledged before me this 16th day of June A.D., 2008, by Charles Unseld, as Deputy Director of the Division of Local Government in the Department of Local Affairs.

Witness my hand and official seal.
My commission expires: 12-1-10.

_____
Notary Public

JUDY A. VENABLE NOTARY PUBLIC STATE OF COLORADO

The existing barbed-wire stock fence would maintain the rural character of the Refuge, would not be visible from most areas, and would not impact views of or from the Refuge.

4.16. POSSIBLE TRANSPORTATION IMPROVEMENTS NEAR THE REFUGE

The Refuge Act directs the Service to address and make recommendations on the land to be made available along Indiana Street for transportation improvements. This section addresses the Service's concerns and recommendations related to transportation improvements to any of the road corridors adjacent to or near the Refuge: Indiana Street, State Highway 128, and State Highway 93. While a definitive analysis of the direct impacts of potential transportation improvements is outside the scope of this CCP/EIS, this section includes potential indirect impacts to the Refuge, as well as recommendations that could minimize or mitigate the effects of transportation improvements surrounding the Refuge. Additional information about the Northwest Corridor Transportation Study EIS, or any other plans that address transportation improvements near Rocky Flats can be obtained from the Colorado Department of Transportation.

Lands Within 300 Feet of Indiana Street

The Refuge Act's §3174 prohibits the construction of a public road through the Refuge. However, the DOE can make available land along the eastern boundary of the Refuge for the sole purpose of transportation improvements along Indiana Street. Land made available under §3174 may not extend more than 300 feet from the west edge of the existing Indiana Street right of way. To be made available, DOE must receive an application submitted by a county, city, or other political subdivision of the State of Colorado that includes documentation demonstrating that the transportation improvements for which the land is to be made available:

- Are carried out so as to minimize adverse effects on the management of the Refuge as a wildlife refuge
- Are included in the regional transportation plan of the metropolitan planning organization designated for the Denver Metropolitan area

The Refuge Act requires that the CCP address and make recommendations on the land to be made available. Three possible alternative widths, 50 feet, 125 feet and 300 feet, are analyzed. A range of widths is analyzed to provide information to the Service and the DOE regarding lands that could be made available. The DOE will be responsible for determining the width of any transferred lands, but it is likely the width would range between 50 and 300 feet. The transfer of a 50-foot right of way would make the right of way along Indiana Street 100 feet wide, wide enough for a four-lane, undivided road. Similarly, the transfer of a 100-foot right of way would make the right of way along Indiana Street 200 feet wide. A 100-foot or 200-foot wide right of way would not be wide enough for a four-lane, divided highway. Typical right of way widths for a four-lane, divided highway are 300 to 400 feet. The transfer of a 300-foot right of way would make the right of way along Indiana Street 350 feet wide, wide enough for a four-lane, divided highway. The transfer would be designed to help meet regional transportation needs.

The amount of land that could be transferred is directly proportional to the possible width; a 300-foot width would transfer about 99 acres (Table 18). A 50-foot width would transfer about 16 acres. The intent of the analysis in Table 18 is to quantify the amount of each resource within each right of way width that has the potential to be impacted by transportation improvements. Some resources require qualitative descriptions. The analysis assumes the transfer of a given width along the entire eastern boundary of the Refuge. In all cases, the lands that could be transferred would be primarily mixed grasslands. Any wetlands directly or indirectly affected by transportation improvements along Indiana Street would require mitigation in accordance with CDOT policy. The Service would review any wetland mitigation plans. Similarly, the Service would consult on any improvement that may affect a threatened or endangered species, such as the Preble's mouse. Based on this analysis, and the need for future coordination and consultation associated with any transportation improvement along Indiana Street, the Service finds that transfer of a corridor up to 300 feet wide would not adversely affect the management of the Refuge.

Potential Impacts from Transportation Improvements

The following discussion briefly describes impacts that may result from any transportation improvement adjacent to or near the Refuge boundaries. It also includes recommended measures that can minimize or help mitigate the effects of the potential impacts. Such

mitigation is typically included for any proposed road improvements along the Front Range. This analysis was not completed in response to any particular plans or proposals, but is instead intended to characterize the types of impacts that could result from transportation improvements around the Refuge.

As discussed previously, a detailed analysis of any specific type of transportation improvement along Indiana Street, such as construction of a four-lane divided highway, is outside the scope of this CCP/EIS. The reader is referred to CDOT for more information about its Northwest Corridor Transportation Study.

Segments of roadway that were considered for potential impacts include Indiana Street along the east boundary of the Refuge, State Highway 128 along the north boundary of the Refuge, and State Highway 93, which runs parallel to the west boundary of the Refuge, ¼ mile to the west.

Water Quality

Additional runoff from Highway 128 and Highway 93 has the potential to impact water quality on the Refuge due to increased storm water runoff. These impacts could be reduced or mitigated through the use of best management practices to minimize discharges and erosion, and dissipate storm flows before they are conveyed to area creeks.

Noxious Weeds

Construction along any of the roadway corridors has the potential to exacerbate existing problems with noxious weeds at Rocky Flats, which could further impact native plant communities and wildlife habitat throughout the Refuge. This is especially the case along Highway 93 because it is generally upwind of the Refuge. Noxious weed impacts could be reduced by designing construction to minimize ground

Table 18. Potential Resource Impacts Within Various Right-of-Way Widths

Resource	Possible Transferred Width		
	50 feet	125 feet	300 feet
Area *(acres)*	16.4	41.0	98.7
Soils	Loss of soil productivity of paved area		
Water Resources *(length of streams/ditches - feet)*	705	2,218	5,133
Vegetation *(acres)*			
Wetlands	0.6	1.5	3.5
Mesic mixed grassland	10.6	25.9	61.0
Reclaimed mixed grassland	2.7	7.0	17.5
Riparian shrubland/woodland	0.1	0.3	0.7
Xeric tallgrass grassland	0.6	1.9	4.0
Xeric needle and thread grassland	1.5	3.8	9.2
Other	0.3	0.6	2.8
Wildlife	No direct impacts to mule deer concentration areas or known raptor nest sites. General impacts to overall wildlife habitat, potential raptor nesting habitat, and movement corridors would occur.		
Prairie dog suitable habitat *(acres)*	12.7	31.9	76.6
Prairie dog active colony *(acres)*	< 0.1	0.4	1.9
Threatened, Endangered, and Candidate Species			
Preble's habitat *(acres)*	0.9	2.8	8.5
Cultural Resources *(number of sites)*	1	1	1
Public Use/Recreation *(Alternatives B/D)*			
Trails *(feet)*	1,300/6,000	1,500/6,200	2,000/6,600
Trail connections	2/2	2/2	2/2
Parking Areas	1/2	1/2	1/2
Trailhead/Restroom	0/1	0/1	0/1
Visual	Easterly views from portions of the Refuge may be affected, depending on road grade and viewer location		
Noise	Increased noise levels may affect wildlife use and visitor use in portions of the Refuge		
Air Quality	May affect air quality in the eastern portion of the Refuge from increased concentrations of gaseous pollutants		

disturbance, developing and implementing a noxious weed management plan prior to and during construction, and monitoring and controlling noxious weeds during and after construction.

Wildlife Corridors

Indiana Street can be a barrier to wildlife movement between the Refuge and the open space lands to the east during high traffic periods. A variety of terrestrial wildlife species, including mule deer, periodically cross between Rocky Flats and open space lands to the east. A larger and/or faster roadway along Indiana Street would increase the barrier effect for wildlife.

During high traffic periods, Highway 128 is a barrier to the movement of a variety of wildlife species, including mule deer, elk, prairie dogs, and other terrestrial species between the Refuge and open space lands to the north. The culvert at the Rock Creek crossing is too small to provide safe passage for many species. Likewise, Highway 93 to the west of the Refuge cuts across a broad plain that is a major movement corridor between the Refuge and the Front Range foothills and open space lands to the west for a variety of wildlife species, including mule deer and elk. A larger and/or faster roadway along Highways 128 or 93 could contribute to wildlife corridor impacts.

In general, impacts to wildlife corridors to and from the Refuge could be minimized or mitigated with the following measures:

- Install below-grade wildlife crossings where necessary to facilitate the movement of wildlife under the roadway
- Locate crossings at stream corridors and in select upland locations
- Create designated wildlife corridors; minimize shared wildlife crossings and trail crossings
- Construct fencing, as appropriate, to prevent wildlife from crossing roadways and encourage the use of constructed crossings

In the case of Indiana Street, the Service does not want to encourage the movement of deer and elk between the Refuge and the open space lands to the east because of the potential for impacts to nearby subdivisions, and efforts to discourage the establishment of a resident elk herd in the grasslands around Rocky Flats. For these reasons, the design of any transportation improvements along the Indiana Street corridor could include crossings that facilitate the movement of smaller species (such as small mammals and reptiles) while prohibiting the movement of deer and elk. Crossings should be located at Woman Creek and Walnut Creek, as well as select upland locations.

If Highway 128 is widened, the Service recommends that the small culvert at Rock Creek be removed and replaced with a roadway design that facilitates the movement of wildlife (including deer and elk) between the Refuge and the open space lands to the north. The Service recommends that roadway designs along Highway 93 include wildlife crossings at several locations to facilitate the movement of wildlife between the Refuge and the open space lands to the west.

Noise and Aesthetics

Increased noise along any of the adjacent corridors could displace or alter the behavior and productivity of some wildlife species on the Refuge. Many species depend on sound to communicate, avoid danger and locate food. Studies have found that noise can impact reproduction, productivity, behavior and energy expenditure in wildlife (Bowles 1995). This is especially true in the case of Highway 128, which crosses through the Rock Creek drainage, one of the most important wildlife habitat areas on the Refuge. Increased traffic volume and/or speeds may impact wildlife species sensitive to noise. Lighting equipment and increased light along the roadway could adversely affect some wildlife species. Artificial light can disrupt bird behavior, affect migration, increase bird collisions with structures, and increase risk of predation (IDA 2002).

Impacts to the Refuge could be reduced by incorporating berms, sound walls, vegetation, or other noise-reducing techniques into the design of transportation improvements to reduce the impacts of traffic noise on wildlife and Refuge visitors. Roadway lighting could be designed to reduce light emission and be positioned to minimize effects to wildlife and Refuge aesthetics.

Public Use Facilities

The northern trailhead and overlook proposed in Alternatives B and D would be located adjacent to Highway 128. Roadway improvements could affect the use and safe access to these facilities. The northern multi-use trail proposed in Alternative B would parallel the south side of Highway 128 for about 1.5 miles in the northeastern part of the Refuge. In addition, a short section of the proposed Rock

Table 19. Adherence to Planning Goals

GOAL	ALTERNATIVES A	B	C	D
1. Wildlife and Habitat Management	○	●	●	●
2. Public Use, Education and Interpretation	✣	●	✣	●
3. Safety	●	●	●	●
4. Effective and Open Communication	○	●	○	●
5. Working with Others	○	●	●	●
6. Refuge Operations	✣	●	●	●

● = The alternative satisfies the goal.
○ = The alternative partially satisfies the goal.
✣ = The alternative does not satisfy the goal.

Creek hiking trail would be in close proximity to the highway. Improvements to the highway could result in visual and noise impacts to trail users. Improvements along Indiana could impact parking areas, trails, and trail connections on the Refuge. A larger and/or faster roadway along Highway 93 could hinder the safe access to the Refuge for visitors and staff.

Impacts to public use facilities can be reduced by relocating trails, trailheads, and other facilities to complement both the transportation improvements and Refuge operations, and by designing the roadway improvements to provide safe and reasonable access to the Refuge entrance, trailheads, and trail connections.

4.17. ADHERENCE TO PLANNING GOALS

Goal 1. Wildlife and Habitat Management

Conserve, restore, and sustain biological diversity of the native flora and fauna of the mountain/prairie interface with particular consideration given to threatened and endangered species.

While basic resource management would occur Refuge-wide under Alternative A, it would not be sufficient to satisfy this goal. However, the resource management activities for the Rock Creek Reserve (as directed by the 2001 Rock Creek Reserve Integrated Natural Resources Management Plan) would satisfy Goal 1.

Alternatives B, C, and D would satisfy Goal 1. The habitat restoration and resource management programs in all of these alternative are sufficient, although they would be the strongest in Alternative C, followed by B and D.

Goal 2. Public Use, Education, and Interpretation

Provide visitors and students high quality recreational, educational, and interpretive opportunities and foster and understanding and appreciation of the Refuge's xeric tallgrass prairie, upland shrub, and wetland habitats; native wildlife; the history of the site; and the NWRS.

While limited guided tours and interpretation would occur in Alternatives A and C, these programs would not be sufficient to satisfy Goal 2. Alternatives B and D both satisfy this goal, with the programs in D having the strongest adherence to the goal.

Goal 3. Safety

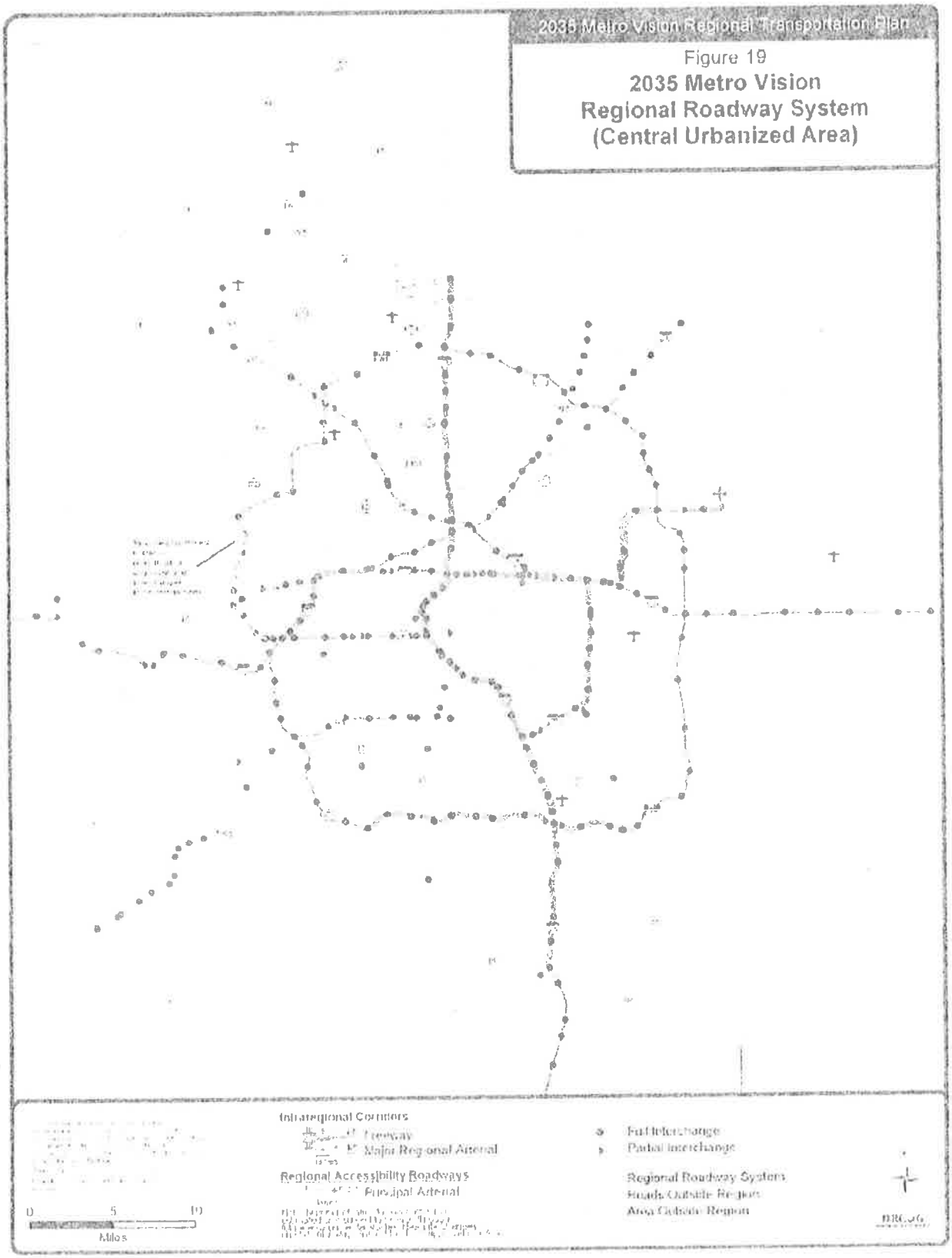
Conduct operations and manage public access in accordance with the final Rocky Flats cleanup decision documents to ensure the safety of the Refuge visitors, staff, and neighbors.

All alternatives would ensure the safety of visitors, staff, and neighbors, and would satisfy Goal 3.

Goal 4. Effective and Open Communication

Conduct communication outreach efforts to raise public awareness about Refuge programs, management decisions, and the mission of the U.S. Fish and Wildlife Service and the NWRS among visitors, students, and nearby residents.

Outreach efforts in Alternative A would be minimal, and would only partially satisfy Goal 4. Efforts in Alternatives B and D would be much more extensive and would satisfy this goal. Outreach efforts in Alternative C would be similar, but would not reach many visitors.


2035 Metro Vision Regional Transportation Plan
Figure 19
2035 Metro Vision
Regional Roadway System
(Central Urbanized Area)
Intraregional Corridors
Freeway
Major Regional Arterial
Regional Accessibility Roadways
Principal Arterial
Full Interchange
Partial Interchange
Regional Roadway System
Roads Outside Region
Area Outside Region
0
5
10
Miles
DRCOG

ATTACHMENT E

Department of Energy
Washington, DC 20585

July 9, 2008

Robert Frie
Mayor, City of Arvada
8101 Ralston Road
Arvada, CO 80001

Dear Mayor Frie:

This is in response to your letter of April 29, 2008, to Secretary Bodman regarding the Rocky Flats National Wildlife Refuge. As the Office of Legacy Management has responsibility for the remainder of the Rocky Flats Site, I have been asked to provide a response.

The Rocky Flats Wildlife Refuge Act of 2001 provided for a transportation corridor of up to 300 feet in width on the eastern side of the Rocky Flats Wildlife Refuge in Jefferson County Colorado. This land was transferred from the Department of Energy (DOE) to the U.S. Fish and Wildlife Service (USFWS) on July 12, 2007. The transfer gave total jurisdiction to the USFWS subject to environmental restrictions that were described in the transfer document and the environmental covenants in existence at the time. DOE therefore has no authority or jurisdiction regarding the 300 foot strip of land on the eastern side of the Rocky Flats Wildlife Refuge except for any appropriate environmental restrictions discussed in the aforementioned transfer document. The USFWS is the appropriate federal entity with jurisdiction to work any transfers provided for in the 2001 Rocky Flats Wildlife Refuge Act.

The DOE Realty Officer, Steven R. Schiesswohl, would be glad to provide background and other information at your request. He can be reached at 720-377-9683 in Westminster, Colorado.

Sincerely,

Michael W. Owen
Director
Office of Legacy Management

cc:

Bill Ray
Deputy City Manager
City of Arvada
8101 Ralston Road
Arvada, CO 80001

January 26, 2010

The Honorable Ken Salazar
U.S. Dept of the Interior
1849 C Street, NW
Washington, DC 20240

Re: Request to Purchase Rocky Flats Transportation Corridor

Dear Secretary Salazar:

When Congress authorized the creation of the Rocky Flats Wildlife Refuge, Representative Udall and Senator Allard worked diligently with the surrounding communities to ensure preservation of 5,000 acres for wildlife, and to provide for future transportation needs by reserving a 300 foot corridor along the eastern edge of the refuge.

The legislation provides that the transportation corridor shall be made available:

A. *upon application of any county, city or other political subdivision for the transportation corridor; and*
B. *includes documentation demonstrating that the transportation improvement for which the land is being made available –*

   i. *are carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge; and*
   ii. *are included in the regional transportation plan of the metropolitan planning organization for the Denver metropolitan area. (DRCOG)*

The legislation also contemplates that this transfer may be made available by easement or sale.

By this letter, the Jefferson Parkway Public Highway Authority (JPPHA) does hereby formally request the transfer of the 300-foot transportation corridor to JPPHA by sale of the property. In support of this request, we offer the following:

1. The Jefferson Parkway is a political subdivision of the State of Colorado established on May 22, 2008 in conformance with applicable state law and certified by the Division of Local Government on June 16, 2008. (Attachment 1)

2. The Rocky Flats National Wildlife Refuge Comprehensive Conservation Plan Final Environmental Impact Study (CCP/EIS) in Section 4.16 entitled "Possible Transportation Improvements near the Refuge" states, "Based on this analysis and the need for future coordination and consultation associated with any transportation improvement along Indiana Street, the Service finds that transfer of a corridor up to 300 feet wide would not adversely

affect the management of the Refuge." (Attachment 2) Additionally, in June 2009 the Region 6 office determined the CCP/EIS has satisfied the Service's NEPA compliance regarding the transfer of the property.

3. The CCP/EIS also discussed potential impact minimization and mitigation strategies in connection with transportation improvements in the areas of water quality, noxious weeds, below grade small animal crossings, noise- and light-reduction techniques, public access points, and impacts to natural resources. The JPPHA Board of Directors on April 16, 2009 adopted Resolution 09-001 that committed JPPHA to negotiate a memorandum of understanding or similar document with US Fish and Wildlife regarding these issues and has authorized the signature of the Chairman subsequent to negotiating a mutually acceptable document. (Attachment 3)

4. The Jefferson Parkway Corridor has been on the DRCOG Metro Vision Regional Transportation Plan since 1987 and is included in the current 2035 Plan. (Attachment 4)

5. On January 20, 2010, the DRCOG Board of Directors voted to include the Jefferson Parkway on the fiscally-constrained regional transportation plan. (Attachment 5)

This documentation is sufficient to satisfy the conditions required for the transfer of the property. Therefore the JPPHA Board of Directors respectfully requests that US Fish and Wildlife implements the process necessary to expeditiously proceed with the sale of the 300 foot transportation corridor as laid out in the Rocky Flats Wildlife Refuge Act.

Respectfully,

Kevin McCasky
JPPHA Chairman

cc:
Senator Mark Udall
Senator Michael Bennet
Representative Jared Polis
Representative Ed Perlmutter
Tom Strickland, Chief of Staff to the Secretary
Will Shafroth, Deputy Secretary for Fish, Wildlife & Parks
Rowan W. Gould, Deputy Director
Eileen Sobeck, Deputy Assistant Secretary
Stephen Guertin, Region 6 Director
JPPHA Board of Directors

Attachment #1

CERTIFICATE OF ORGANIZATION

FOR THE

JEFFERSON PARKWAY PUBLIC HIGHWAY AUTHORITY

WHEREAS, the Public Highway Authority Law, codified as part 5 of article 4, title 43, Colorado Revised Statutes, authorizes, inter alia, two or more counties or municipalities to create, by contract, a public highway authority; and

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THIS CERTIFICATE IS SIGNED THIS 16TH DAY OF JUNE, 2008

By: _____
~~for~~ Tony Hernandez
Director, Division of Local Government

State of Colorado)
) SS.
County of Denver)

The foregoing instrument was acknowledged before me this 16th day of June A.D., 2008, by Charles Unseld, as Deputy Director of the Division of Local Government in the Department of Local Affairs.

Witness my hand and official seal.
My commission expires: 12-1-10.

JUDY A. VENABLE NOTARY PUBLIC STATE OF COLORADO

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Notary Public

Attachment #2

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- Construct fencing, as appropriate, to prevent wildlife from crossing roadways and encourage the use of constructed crossings

In the case of Indiana Street, the Service does not want to encourage the movement of deer and elk between the Refuge and the open space lands to the east because of the potential for impacts to nearby subdivisions, and efforts to discourage the establishment of a resident elk herd in the grasslands around Rocky Flats. For these reasons, the design of any transportation improvements along the Indiana Street corridor could include crossings that facilitate the movement of smaller species (such as small mammals and reptiles) while prohibiting the movement of deer and elk. Crossings should be located at Woman Creek and Walnut Creek, as well as select upland locations.

If Highway 128 is widened, the Service recommends that the small culvert at Rock Creek be removed and replaced with a roadway design that facilitates the movement of wildlife (including deer and elk) between the Refuge and the open space lands to the north. The Service recommends that roadway designs along Highway 93 include wildlife crossings at several locations to facilitate the movement of wildlife between the Refuge and the open space lands to the west.

Noise and Aesthetics

Increased noise along any of the adjacent corridors could displace or alter the behavior and productivity of some wildlife species on the Refuge. Many species depend on sound to communicate, avoid danger and locate food. Studies have found that noise can impact reproduction, productivity, behavior and energy expenditure in wildlife (Bowles 1995). This is especially true in the case of Highway 128, which crosses through the Rock Creek drainage, one of the most important wildlife habitat areas on the Refuge. Increased traffic volume and/or speeds may impact wildlife species sensitive to noise. Lighting equipment and increased light along the roadway could adversely affect some wildlife species. Artificial light can disrupt bird behavior, affect migration, increase bird collisions with structures, and increase risk of predation (IDA 2002).

Impacts to the Refuge could be reduced by incorporating berms, sound walls, vegetation, or other noise-reducing techniques into the design of transportation improvements to reduce the impacts of traffic noise on wildlife and Refuge visitors. Roadway lighting could be designed to reduce light emission and be positioned to minimize effects to wildlife and Refuge aesthetics.

Public Use Facilities

The northern trailhead and overlook proposed in Alternatives B and D would be located adjacent to Highway 128. Roadway improvements could affect the use and safe access to these facilities. The northern multi-use trail proposed in Alternative B would parallel the south side of Highway 128 for about 1.5 miles in the northeastern part of the Refuge. In addition, a short section of the proposed Rock

Table 19. Adherence to Planning Goals

GOAL	ALTERNATIVES A	B	C	D
1. Wildlife and Habitat Management	○	●	●	●
2. Public Use, Education and Interpretation	✣	●	✣	●
3. Safety	●	●	●	●
4. Effective and Open Communication	○	●	○	●
5. Working with Others	○	●	●	●
6. Refuge Operations	✣	●	●	●

● = The alternative satisfies the goal.
○ = The alternative partially satisfies the goal.
✣ = The alternative does not satisfy the goal.

Creek hiking trail would be in close proximity to the highway. Improvements to the highway could result in visual and noise impacts to trail users. Improvements along Indiana could impact parking areas, trails, and trail connections on the Refuge. A larger and/or faster roadway along Highway 93 could hinder the safe access to the Refuge for visitors and staff.

Impacts to public use facilities can be reduced by relocating trails, trailheads, and other facilities to complement both the transportation improvements and Refuge operations, and by designing the roadway improvements to provide safe and reasonable access to the Refuge entrance, trailheads, and trail connections.

4.17. ADHERENCE TO PLANNING GOALS

Goal 1. Wildlife and Habitat Management

Conserve, restore, and sustain biological diversity of the native flora and fauna of the mountain/prairie interface with particular consideration given to threatened and endangered species.

While basic resource management would occur Refuge-wide under Alternative A, it would not be sufficient to satisfy this goal. However, the resource management activities for the Rock Creek Reserve (as directed by the 2001 Rock Creek Reserve Integrated Natural Resources Management Plan) would satisfy Goal 1.

Alternatives B, C, and D would satisfy Goal 1. The habitat restoration and resource management programs in all of these alternative are sufficient, although they would be the strongest in Alternative C, followed by B and D.

Goal 2. Public Use, Education, and Interpretation

Provide visitors and students high quality recreational, educational, and interpretive opportunities and foster and understanding and appreciation of the Refuge's xeric tallgrass prairie, upland shrub, and wetland habitats; native wildlife; the history of the site; and the NWRS.

While limited guided tours and interpretation would occur in Alternatives A and C, these programs would not be sufficient to satisfy Goal 2. Alternatives B and D both satisfy this goal, with the programs in D having the strongest adherence to the goal.

Goal 3. Safety

Conduct operations and manage public access in accordance with the final Rocky Flats cleanup decision documents to ensure the safety of the Refuge visitors, staff, and neighbors.

All alternatives would ensure the safety of visitors, staff, and neighbors, and would satisfy Goal 3.

Goal 4. Effective and Open Communication

Conduct communication outreach efforts to raise public awareness about Refuge programs, management decisions, and the mission of the U.S. Fish and Wildlife Service and the NWRS among visitors, students, and nearby residents.

Outreach efforts in Alternative A would be minimal, and would only partially satisfy Goal 4. Efforts in Alternatives B and D would be much more extensive and would satisfy this goal. Outreach efforts in Alternative C would be similar, but would not reach many visitors.

Attachment #3

RESOLUTION
OF THE
BOARD OF DIRECTORS
OF THE
JEFFERSON PARKWAY PUBLIC HIGHWAY AUTHORITY

Resolution 09-001

At a regular meeting of the Board of Directors of the Jefferson Parkway Public Highway Authority (the "Authority"), held at 9:00 A.M., on Thursday, April 16, 2009, at the Arvada City Hall, 8101 Ralston Road, Arvada, Colorado 80001, at which a quorum was present, the following resolution was adopted:

WHEREAS, the Authority was created pursuant to the Public Highway Authority Law, Section 43-4-501, et seq., C.R.S., to finance, construct, operate and maintain the Jefferson Parkway Public Highway ("Jefferson Parkway"); and

WHEREAS, the Authority is a political subdivision of the State of Colorado; and

WHEREAS, the Jefferson Parkway is on the Denver Regional Council of Governments' regional transportation plan and the Denver Regional Council of Governments is the Denver area metropolitan planning organization; and

WHEREAS, the Rocky Flats National Wildlife Refuge Act of 2001 (Section 3174) (the "Act") provides for the conveyance of a 300-foot wide area of land on the east side of the Rocky Flats National Wildlife Refuge (west side of Indiana Street) to a political subdivision of the State of Colorado for use as a transportation right-of-way (the "Right-Of-Way"); and

WHEREAS, the Authority has pending with the appropriate federal agency, the United States Fish and Wildlife Service ("USFWS"), which is responsible for transfer of the Right-Of-Way, the Authority's request for transfer of thereof; and

WHEREAS, the Act contains certain criteria for transfer of the Right-Of-Way, notably: (1) the applicant for the Right-Of-Way is a political subdivision of the State of Colorado, (2) the transportation improvements are contained on the regional transportation plan of the Denver area metropolitan planning organization, and (3) documentation demonstrating the transportation improvements are carried out so as to minimize adverse effects on the Rocky Flats Wildlife Refuge ("Conditions"); and

WHEREAS, the Final Rocky Flats National Wildlife Refuge Comprehensive Conservation Plan & Environmental Impact Statement (the "Study"), a document of the USFWS, dated September 2004, concluded: "Based on this analysis, and the need for future coordination and consultation associated with any transportation improvement along Indiana Street, the Service finds that transfer of a corridor up to 300 feet wide would not adversely affect the management of the Refuge"; and

WHEREAS, the Study contains a discussion of potential impact minimization and mitigation strategies in the following particulars:

(a) Identify and implement best management practices for water quality;
(b) Identify and implement best management practices for noxious weed control;
(c) Work with USFWS to design and construct below-grade small animal crossings and large animal preventative fencing;
(d) Work with USFWS to include noise-reducing and light-reducing techniques;
(e) Coordinate with USFWS on location of Refuge public access and use facilities;
(f) Address impacts to natural resources, including water, wetlands, vegetation and various habitat; and

WHEREAS, implementation of all of these strategies are acceptable to the Authority and will be required of those designing, constructing, maintaining and operating the Jefferson Parkway; and

WHEREAS, it is the express intent of Congress to provide this parcel for transportation purposes and consistent with conclusions and recommendations of the US Fish and Wildlife Service EIS and the CDOT Northwest Corridor Transportation and Environmental Study to transfer the Right-Of-Way to the Authority.

NOW, THEREFORE, be it resolved by the Board of Directors of the Jefferson Parkway Public Highway Authority, as follows:

1. Upon thorough review and analysis of the impact minimization and mitigation strategies contained in the Study, the Authority is capable of and willing to implement each of the strategies.

2. The Authority's executive director, program manager and general counsel is directed to proceed with negotiation with USFWS of a memorandum of understanding or similar document to memorialize the Authority's commitment to accomplish the desired impact minimization and mitigation, thus allowing conveyance of the Right-Of-Way.

3. Upon negotiation of such an agreement to the satisfaction of the executive director, the program manager, general counsel and the Chairman of the Board, and approval by the Board, the Board hereby authorizes its Chairman to execute and bind the Authority to that agreement.

[Remainder of page intentionally left blank.]

ADOPTED AND APPROVED THIS 16TH DAY OF APRIL, 2009.

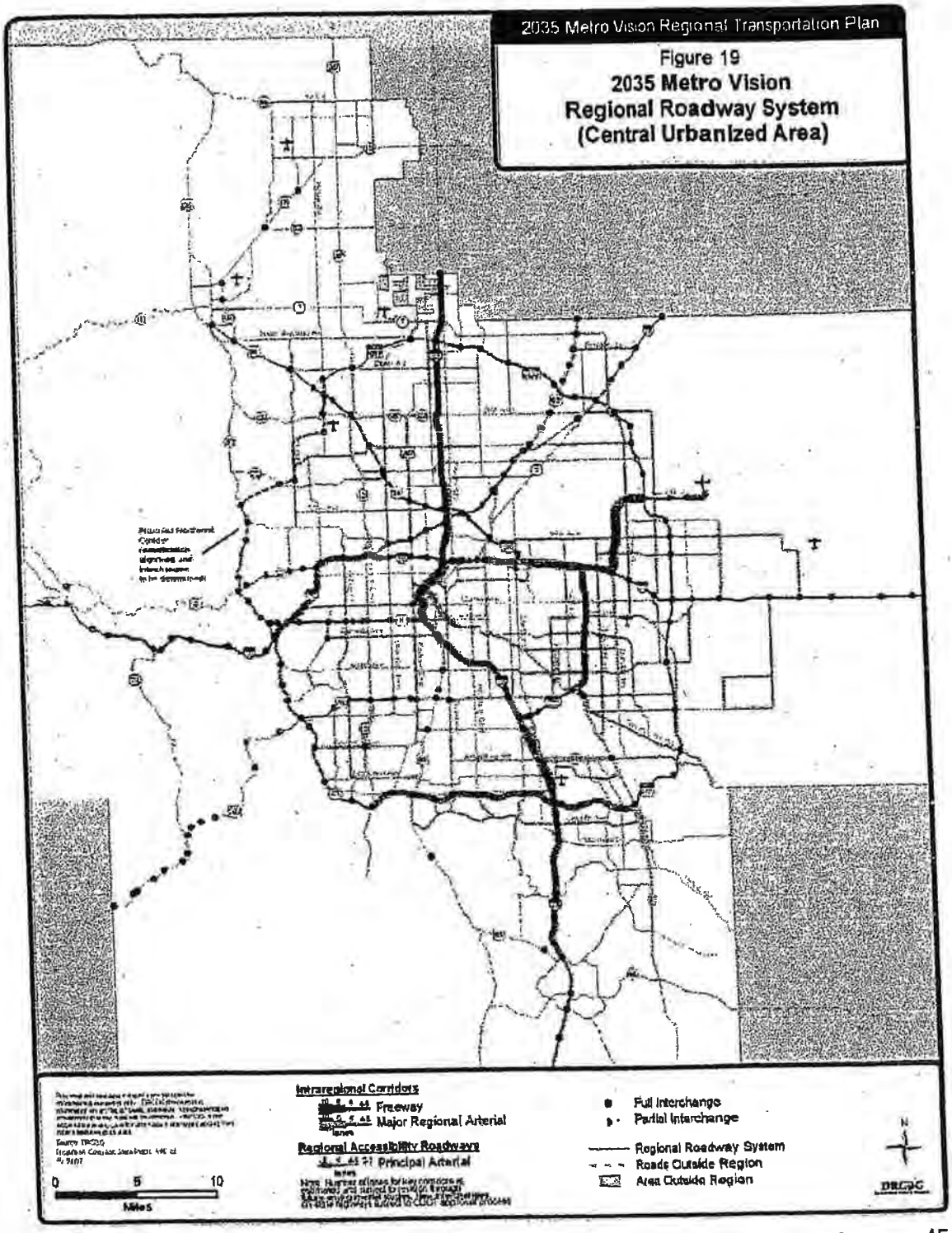
JEFFERSON PARKWAY PUBLIC HIGHWAY AUTHORITY BOARD OF DIRECTORS

Chairman

Attest:

M:\JPPHA\Reso\2009
TEI1414
1125.0007

Attachment #4



Attachment #5

JEFFERSON PARKWAY

Proposed toll road added to regional transportation plan

By Jeffrey Leib *The Denver Post* 11/21/10

The Denver Regional Council of Governments board of directors voted Wednesday night to include the proposed Jefferson Parkway toll road in the group's long-range transportation plan.

The vote — 35 for and 17 against — came after more than two hours of often passionate debate.

Jefferson County, Broomfield and Arvada have been promoting the toll highway, which would run from the Interlocken commercial complex just off U.S. 36 to Colorado 93 on the north end of Golden, as a key link for completing the beltway around the entire metro area.

Getting DRCOG to include the toll highway in its transportation plan was a prerequisite for luring private investment in the road, according to some board members who backed the measure.

"We're grateful to the DRCOG board for their commitment to serve the best interests of the entire region," said Jefferson County Commissioner Kevin McCasky, who also is board chairman of the toll parkway authority.

Officials from the city of Golden and communities in Boulder County were among those opposing the effort to include the toll highway in DRCOG's plan.

Golden will bear "most of the impacts" of a toll highway that ends on the city's north side while other cities get the benefits from the road, said Jacob Smith, the city's mayor and a member of the DRCOG board.

Approval of the Jefferson Parkway, as currently planned, "throws Golden off the cliff and throws a huge amount of traffic down (Colorado) 93," Smith said.

Another opponent of putting the parkway in the long-range plan, Boulder City Council member Macon Cowles, noted the toll highway would be constructed without connections at its north and south ends to make it a true beltway.

But numerous other DRCOG board members reminded colleagues that a beltway segment in the northwest quadrant of metro Denver has been a goal of planners and local officials for decades.

Denver public works chief Bill Vidal, a board member, said completing a beltway in segments, using whatever funds are available, whether public or private, has been the rule for years. The drying-up of public funds for transportation has left jurisdictions "little choice but to pursue private money," Vidal said.

'ARKWAY: Golden to bear brunt of toll-road impact, mayor say

Jefferson Parkway Public Highway Authority
P.O. Box 1108
Arvada, CO 80001-1108
www.jppha.org

July 29, 2011

Via Electronic Mail and Hand Delivery
Email: rockyflatsea@fws.gov

Michael D. Dixon, Ph.D.
Planning Team Leader
Division of Refuge Planning
U.S. Fish and Wildlife Service
134 Union Boulevard
Lakewood, CO 80228

Re: Proposed Expansion of the Rocky Flats National Wildlife Refuge

Dear Dr. Dixon:

Introduction

This letter provides the Jefferson Parkway Public Highway Authority's ("JPPHA")[1] comments on the scope of the United States Fish and Wildlife Service's ("Service") Environmental Assessment ("EA") to evaluate the Proposed Expansion of the Rocky Flats National Wildlife Refuge ("Refuge" or "RFNWR"). The JPPHA requests that this letter and all of the attachments, documents referenced in the cited websites and other sources be included in the Service's administrative record for the EA.

Background

At a public meeting held on July 20, 2011, the Service outlined the EA's purpose, process and schedule. This information was presented on several "story" boards and the public was invited to submit comments. *See* Scoping Materials at www.fws.gov/rockyflats/.

According to the scoping materials, the Service is proposing to expand the currently approved acquisition boundary of the Refuge to include nearly six hundred seventeen (617) acres of school lands owned by the Colorado State Land Board ("SLB") on the southwestern border of the Refuge ("Section 16"). The Service has received land exchange proposals that "arose because,

[1] The JPPHA is comprised of the City of Arvada, the County of Jefferson and the City and County of Broomfield. *See* Establishing Contract for the Jefferson Parkway Public Highway Authority dated May 15, 2008, Attachment A. *See also*, The Amended and Restated Establishing Contract for the Jefferson Parkway Public Highway Authority, dated October 4, 2010, Attachment B.

under the [Rocky Flats National Wildlife Refuge Act of 2001], the Service is required to make available a 300-foot wide parcel comprising the refuge's eastern boundary for transportation improvements ["ROW"]." *See* U.S. Fish and Wildlife Service Scoping Materials, July 20, 2011.

Comments on Scope of EA

The JPPHA concurs with the Service's Proposed Action, namely, the expansion of the approved acquisition boundary of the RFNWR with associated potential land exchange opportunities. In addition, the JPPHA believes that the proposals received by the Service, discussed below, along with the required no action alternative, would constitute a reasonable range of alternatives as required by the National Environmental Policy Act ("NEPA") and the Service's NEPA regulations and guidance. The JPPHA also understands that the Service's EA process will result in a decision by the Service whether to proceed with a full Environmental Impact Statement ("EIS") or to issue a Finding of No Significant Impact.

- Jefferson Greenway Proposal

The JPPHA in conjunction with the SLB, Colorado's Natural Resources Trustees ("Trustees"), Jefferson County, the City of Boulder, and Boulder County have worked collaboratively to present a proposal which would exchange the 300-foot ROW for Section 16, including acquisition of the mineral rights and extinguishment of mineral leases on Section 16 ("Jefferson Greenway Proposal"). The Jefferson Greenway Proposal also includes a provision to acquire mineral rights and to extinguish mineral leases on portions of Department of Energy ("DOE") property within the current RFNWR acquisition boundary. We believe that the Jefferson Greenway Proposal should be evaluated as an alternative in the EA.

In the event that the Jefferson Greenway Proposal cannot be accomplished, the JPPHA believes that the Service is obligated by law to sell the ROW directly to the JPPHA:

- Direct Sale of ROW to JPPHA

If the Service were to decide not to select or pursue the Jefferson Greenway Proposal, then the Service is, we believe, obligated by law to sell the ROW directly to the JPPHA and the JPPHA is, as originally planned, fully prepared to purchase the ROW. In a direct sale, the JPPHA would retain space for a pedestrian and bicycle pathway in the ROW corridor and along the entire Parkway from State Highway ("SH") 128 to SH 93. Finally, in a direct sale the JPPHA commitment to mitigate impacts associated with the ROW purchase would remain in place. For these reasons, the JPPHA believes the direct sale option should be evaluated by the Service as an alternative in the EA.

- Golden Proposal

Golden has submitted an application and proposal to exchange the 300-foot ROW for a partial interest in Section 16 or in-holdings elsewhere in the Service's national Refuge system. We assume Golden's proposal, if deemed feasible, will also be evaluated by the Service as an alternative in the EA.

Jefferson Greenway Proposal Complies with the Act

In accordance with the Rocky Flats National Wildlife Refuge Act ("Act"), the Department of Interior ("DOI") shall make "available land along the eastern boundary of Rocky Flats for the *sole purpose of transportation improvements* along Indiana Street"[2] (Emphasis added).

To obtain the 300-foot ROW a governmental entity must submit an application to the DOI, and include "documentation demonstrating that the *transportation improvements* for which the land is to be made available—

(i) are carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge; and

(ii) are included in the regional transportation plan of the metropolitan planning organization designated for the Denver metropolitan area under section 5303 of title 49, United States Code."[3] (Emphasis added.)

The JPPHA has submitted an application to DOI requesting that the ROW corridor be transferred to it for purposes of development of the Jefferson Parkway. *See* Letter dated January 26, 2010 from Kevin McCasky to Secretary Salazar, Attachment C. The Jefferson Parkway is included in the Metro Vision 2035 Cycle 2-2009 fiscally constrained plan amendments for the Regional Transportation Plan ("RTP") approved by the Denver Regional Council of Governments ("DRCOG") on January 20, 2010.[4]

Most importantly, the Jefferson Parkway meets the intent of Congress that the 300-foot ROW corridor be used for solely transportation improvements and to move forward the completion of the Denver metropolitan beltway.

During Congress' debate on passage of the Act, then-Congressman Udall stated:

> "... transportation issues. Rocky Flats is located in the midst of a growing Area of the Denver metropolitan region. As this area's population continues to grow, pressure is being put on the existing transpirations facilities just outside of the [Rocky Flats] borders. The communities that surround the [Rocky Flats] have been considering transportation improvements in this area for a number of years – *including the potential completion of a local beltway. In recognition of this*, the [Act] allows for some Rocky Flats land along Indiana Street (the eastern boundary

[2] Rocky Flats National Wildlife Refuge Act of 2001, Pub. L. No. 107-107, § 3171, 115 Stat. 1379 (2001) (amended 2006).

[3] *Id.*

[4] *Available at*: http://www.drcog.org/PublicComment/documents/JeffersonParkway_All.pdf and including materials associated with the JPPHA 2009 CY 2 Plan Amendment.

> of [Rocky Flats]) to be used for this purpose under certain circumstances."[5] (Emphasis added.)

Clearly and unequivocally, Congress intended that the 300-foot ROW be transferred to a governmental entity that would "complete the local beltway" – only the JPPHA proposes to build and operate a roadway that would lead to completion of the metropolitan beltway.

In summary, the JPPHA application meets all of the conditions established in the Act and the Service is, respectfully, legally obligated to complete the transfer of the ROW. The JPPHA does not believe that the Golden proposal meets either the express terms or intent of the Act.

Benefits of Jefferson Greenway Proposal

While a singular and direct transfer of the ROW to the JPPHA is well within the Service's legal authority, the JPPHA has worked collaboratively on a complex multi-party agreement exchange the ROW for 617 acres within Section 16.

As indicated above, the Jefferson Greenway Proposal is the result of an agreement among the City of Boulder, Boulder County, Jefferson County, the SLB and Colorado's Natural Resources Trustees ("Trustees"). *See*, Intergovernmental Agreement Between Jefferson County, Boulder County, and the City of Boulder Regarding the Jefferson Parkway and the Acquisition of Section 16, Attachment D; *See also* Letter dated May 5, 2011 from the City of Boulder, Jefferson County and Boulder County to the SLB, Attachment E, (attaching letter to William G. Shafroth, Acting Assistant Secretary for Fish Wildlife and Parks, dated May 5, 2011).

Section 16 has been historically protected from development and will provide significant and long-lasting benefits to wildlife, natural habitat and the people of Colorado. Because of its critical location, the acquisition and perpetual protection of Section 16 would provide security for wildlife, and connections to vital wildlife and plant habitat as well as open space and recreational trail connectivity in the region. Significant acres of tall grass prairie will also be permanently preserved. The Jefferson Greenway Proposal would also transfer mineral rights in Section 16 to the Service thereby providing additional security from development for this valuable land – surface intrusions, such as mine and quarrying activities, will be permanently barred. The Woman Creek drainage, also located in Section 16, is known habitat for the Preble's mouse.

The addition of Section 16 to the Refuge would easily mitigate for the limited impacts from development of the Jefferson Parkway within the 300-foot ROW, including Parkway crossings of Woman Creek.

It should be noted, that current plans for the Jefferson Parkway include maintaining a portion of the ROW available for pedestrian and bike paths for the *entire* length of the Jefferson Parkway

[5] Congressional Record, 107th Congress, First Session, Vol. 147, No. 173, December 13, 2001, p. H10071.

from SH 128 to SH 93. In contrast the Golden proposal would preserve right-of-way for pathways only for the length of the 300-foot ROW along the eastern boundary of the RFNWR.

It is also important to note, that the Jefferson Parkway, will provide multi-modal transportation opportunities for trails and transit, and its design will fully support regional trail and open space connectivity goals for the metropolitan and Front Range region. Stated another way, the exchange of the 99 acres of the ROW for 617 acres of prairie land (and control of mineral rights) is an outstanding net benefit to the Service and the public – a 6 acres for 1 acre benefit to wildlife and plant habitats.

To achieve the benefits of the Jefferson Greenway Proposal the following entities have agreed to undertake certain actions, namely:

(i) the JPPHA will provide $2.8 million towards the Jefferson Greenway Proposal, *See* Resolution of the Board of Directors of the Jefferson Parkway Public Highway Authority Concerning the Acquisition of Real Property in the Rocky Flats National Wildlife Refuge as Right-of-Way, Resolution 11-03, dated January 27, 2011, Attachment F;

(ii) the Trustees have officially agreed to provide cash to acquire sand and gravel leasehold interests on DOE land, *See* Colorado Natural Resource Trustee Resolution 2011-7-19-01, Adopted July 19, 2011, Attachment G;

(iii) Jefferson County will contribute $5.1 million while the City of Boulder and Boulder County will submit $2.0 million each – a total of $9.1 million towards acquisition of Section 16. *See* Attachments D and E.

(iv) the owners of the mineral interests in Section 16 and the DOE properties adjacent to the Refuge would transfer these interests to the Service;

(v) in consideration of the foregoing, among other items, the SLB has agreed to dispose of 617 surface acres and the associated mineral estates in Section 16, *See* Board Order 2011-040, Colorado Board of Land Commissioners, dated June 3, 2011, Attachment H; and,

(v) if the Jefferson Greenway Proposal is selected as the preferred alternative through the NEPA process, the Service would provide a deed to JPPHA for the ROW.

The JPPHA understands that the SLB element of the agreement is fully dependent on the exchange of all 617 acres of Section 16 – a partial transfer of parcels within Section 16 would not meet the obligations of the SLB to properly manage School Lands.

Comments on Golden Proposal

As understood by the JPPHA, there may be several alternatives contained within Golden's proposal. Golden's proposal is based on a $3 million offer that can be used for outright ROW

purchase or a combination of options involving partial purchase of Section 16 and/or land to expand refuges outside of the RFNWR site.

As a matter of law, the JPPHA believes that Golden's application does not meet the requirements of the Act because it is not in DRCOG's approved fiscally constrained RTP. Although the Indiana Street Corridor is shown as a "community bicycle corridor on the RTP (along with miles of other "wish list" trails in the RTP), there is no committed funding at this time. In addition, a bike and pedestrian path does not meet Congress' intent to require transfer of the 300-foot ROW for transportation improvements, that is, to support completion of the metropolitan beltway.

The JPPHA believes it is apparent that none of the alternatives Golden's proposal would provide the benefits to the public, wildlife and habitat that would result from the Service obtaining 617 acres and mineral rights in Section 16 in exchange for the ROW. Under the Golden proposal the residents of Jefferson and Boulder Counties, the City and County of Broomfield and contiguous local entities such as Arvada, Westminster, Superior and even the City of Golden would be deprived of the significant benefits of having all of Section 16 within the Refuge

Golden's proposal focuses on the greenway and open space connectivity provided by a trail along the east side of the RFNWR. *See* Letter from City of Golden to Service, dated July 1, 2011. These benefits, however, are not unique to Golden's proposal. These benefits, and more, would ge gained under the Jefferson Greenway Proposal, including regional benefits from pedestrian and bicycle connectivity for recreation as well as commuter transportation uses.

Although, the Jefferson Parkway design has not yet occurred, the JPPHA has committed to trail crossings and connectivity for existing networks. *See* System Level Study ("SLS"), dated July 2009.[6] The SLS clearly indicates that accommodations are to be made for future trail continuity and connectivity. *See* SLS, pp 4-52 and 4-53. The Jefferson Parkway cross sections also include trail options. *See* SLS, p 1-5. Identification of a location for a trail along the Jefferson Parkway will be occur during project design.

In summary, the multiple benefits of the Jefferson Greenway Proposal include obtaining 617 acres of Section 16, removing mineral leaseholds to provide for perpetual protection, and providing regional connectivity. Extinguishing mineral leases and conveying mineral rights to DOI within the approved Refuge boundary is an added benefit of the Jefferson Greenway Proposal. These benefits far outweigh the limited benefits of any alternative that might be developed from Golden's proposal.

Previous Environmental Studies

In 2004 the Service prepared and issued a Comprehensive Conservation Plan and EIS ("CCP/EIS") which, among other things, considered the environmental effects of the ROW transfer for transportation improvements. The CCP/EIS concluded that such a transfer would

[6] *Available at:* http://www.drcog.org/PublicComment/documents/JeffersonParkway_All.

have no adverse impacts on the management of the Refuge.[7] As noted above, selection of the Jefferson Greenway Proposal and acquisition of Section 16 would provide a significant and substantial mitigation contribution for potential effects on Preble's mouse habitat that might be caused by transfer of the ROW.[8]

The Final CCP/ EIS included a list of environmental impacts associated with land transfer widths ranging from 50 to 300 feet for a variety of resources. The JPPHA has expressed its commitment to work with the Service to mitigate those impacts. *See* Resolution 09-001 of the JPPHA, dated April 16, 2009, Attachment I.

The JPPHA believes that the analysis of the 300-foot ROW divestiture by the Service was fully completed as a part of the Final CCP/EIS and supported by the RFNWR Final CCP Record of Decision.

In addition, the Colorado Department of Transportation ("CDOT") and the Federal Highway Administration conducted a $15 million environmental and planning study that identified 73 alternative alignments, including a "Combined Alternative" for the northwest corridor. CDOT's draft environmental impact statement process was concluded before going final and was subsequently repackaged as the Northwest Corridor Transportation and Environmental Planning Study (TEPS). The July 2008 TEPS fully discloses the environmental analysis for a series of alternatives, including the Combined Alternative.

The Combined Alternative is identified at the "Recommended Alternative" in the CDOT study. The central portion of the Combined Alternative, classified as a tollway, coincides with the proposed alignment of the Jefferson Parkway, including that portion of the Parkway that will utilize the ROW. The CDOT analysis included detailed impacts and mitigation strategies for the entire corridor. This information is readily available and accessible to the Service for consideration in its EA process.[9]

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[7] *Available at*: http://www.fws.gov/rockyflats/Documents/FEIS/Summary.pdf

[8] Note that common project modifications for road and bridge construction projects that impact Preble's habitat include directional boring (to minimize ground-level disturbance), providing connectivity of habitat across highways by installing ledges in piping and culvers, purchasing mitigation land, activity timing restrictions, on-site monitoring of construction activities, and habitat restoration and enhancement. *See* Section 4.2.3, Economic Analysis of Critical Habitat Designation for PMJM in Colorado (IEC) April 2, 2010.

[9] *Available at:* http://www.coloradodot.info/library/studies/northwest-corridor-eis In 2003, the FHWA, in cooperation with CDOT, initiated a NEPA process to study the need, merits, and possible impacts of potential transportation improvements in the Northwest Corridor of the Denver metropolitan area. The NOI to prepare an EIS identified the proposed action as: "an improved connection between the western terminus of the Northwest Parkway in Broomfield County and the SH 58, I-70, or C-470 freeway systems to the south in Jefferson County. This connection is considered necessary to address the need for system linkage, to provide for existing and projected transportation demand, to improve safety, and to enhance modal interrelationships, within the Northwestern Quadrant of the Denver Metropolitan Area." *See* Northwest Corridor Transportation and Environmental Planning Study, July 2008.

Conclusion

The JPPHA believes that the multi-party Jefferson Greenway Proposal provides significant and long-lasting benefits to the people of Colorado, to wildlife and to plant biodiversity and connectivity in the region of the RFNWR. The Jefferson Greenway Proposal will provide multi-modal (bus, bicycle, transit) opportunities for a broad segment of the northwest Denver metropolitan region as well as completing a portion of metropolitan beltway as envisioned by Congress. If the Jefferson Greenway Proposal is not the Service's preferred alternative, the JPPHA is prepared to proceed with the required direct sale of the ROW and to work with the Service to mitigate impacts associated with such purchase.

Thank you for the opportunity to comment on the Service's Proposed Expansion of the RFNWR and the EA process.

JEFFERSON PARKWAY PUBLIC HIGHWAY AUTHORITY

By: Marc Williams, Chair of Board of Directors

cc: Don Rosier, Vice-Chairman, Board of Directors, JPPHA
Patrick Quinn, Secretary/Treasurer, Board of Directors, JPPHA
John Odom- Jefferson County, Board of Directors, JPPHA
Don Allard- City of Arvada, Board of Directors, JPPHA
Walt Spader - City & County of Broomfield, Board of Directors, JPPHA
Lorraine Anderson- RTD Representative, Board of Directors, JPPHA
Ken Lloyd – Regional Air Quality Council Representative, Board of Directors, JPPHA
Bill Ray, JPPHA Interim Director
Senator Mark Udall, United States Senate
Senator Michael Bennet, United States Senate
Congressman Ed Perlmutter, United States House of Representatives
Congressman Jared Polis, United States House of Representatives
Alan J. Gilbert, Senior Advisor to the Secretary, Southwest and Rocky Mountain Regions
William Ryan, Director, Colorado State Land Board
Doug Robotham, Assistant Director of Lands, Colorado Dept. of Natural Resources

APPENDIX G

FWS Letter to CDPHE & EPA and EPA/CDPHE Response

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mountain-Prairie Region

IN REPLY REFER TO:
NWRS/Planning
RFL 4.4
Mailstop 60130

MAILING ADDRESS:
P.O. Box 25486, DFC
Denver, Colorado 80225-0486

STREET LOCATION:
134 Union Boulevard
Lakewood, Colorado 80228-1807

SEP 1 2011

Mr. Carl Spreng
Rocky Flats Program Manager
Colorado Department of Public Health and Environment
Hazardous Materials and Waste Management Division
4300 Cherry Creek Drive, South
Denver, CO 80246-1530

Ms. Vera Moritz
Rocky Flats Project Coordinator
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street (8EPR-F)
Denver, CO 80202-1129

Dear Ms. Moritz and Mr. Spreng:

In the past the U.S. Fish and Wildlife Service (Service) has corresponded with your offices to seek necessary clarification related to its management actions associated with the Rocky Flats National Wildlife Refuge (Refuge). The Service has utilized your responses to assist with our understanding of the site conditions, risk assessments, and any additional restrictions necessary to ensure the safety of the wildlife refuge worker and visiting public. The Service recognizes that on May 25, 2007, the EPA, as lead regulatory agency, deleted the Peripheral Operable Unit from the National Priorities List allowing unlimited use and unrestricted exposure. This decision was based upon the RI/FS Report and the Corrective Action Decision/Record of Decision (CAD/ROD) dated September 29, 2006. We also understand that this decision supersedes all prior communications with the Service. Therefore, we request your assistance with the following additional questions.

1. In September 2004, the Service issued the Final Comprehensive Conservation Plan and Environmental Impact Statement (CCP/EIS) to guide its management activities of the Refuge upon transfer of Department of Energy lands. Based on the Rocky Flats National Wildlife Refuge Act of 2001 (Rocky Flats Act), this plan was required to be completed in advance of cleanup. In its 2006 and 2007 decisions, the Colorado Department of Public Health and Environment (CDPHE), U.S. Department of Energy (DOE) and U.S. Environmental Protection Agency (EPA) selected a no action alternative for its final remedy for the Peripheral OU. The final decision was based upon a comprehensive risk assessment done as part of the CRA Facility Investigation-Remedial

Investigation/Corrective Measures Study-Feasibility Study Report (RFI-RI Report) for the Site. Please provide the Service with a qualitative summary of risk for both the wildlife refuge worker (WRW) and the wildlife refuge visitor (WRV) at final transfer conditions. Since the risk assessment in the RFI-RI Report is based on exposure units that contain both lands transferred to the Service and lands retained by DOE, your qualitative risk summary should focus only on the transferred lands. This information will be helpful to the Service in communicating the current risk from exposure within the Refuge. As part of this assessment, please include updates and proposed modifications to Table 1 and Figure 4 of the Service's 2004 plan.

2. In August 2003, the Service requested clarification from both the CDPHE and EPA related to any restrictions that may be placed upon certain activities essential to management of the Refuge. The responses received from both agencies were incorporated into the Service's 2004 plan. After that date, the remedial investigations, cleanup, risk assessments, and final remedy decisions were completed. The Service therefore requests an updated statement regarding what, if any, restrictions apply on Refuge lands.

3. Section 3174 of the Rocky Flats Act requires that the Secretary of Energy make certain lands available for transportation improvements along the Site's easternmost boundary. This transfer of lands was not accomplished prior to deletion. These lands are now under Service jurisdiction and we have received requests to transfer the transportation corridor pursuant to the Rocky Flats Act. The Service would like additional information on how the disposal of lands associated with the transportation corridor was handled in the CAD/ROD and other regulatory documents. In addition, the Service requests an evaluation of how exposure pathways for construction workers and future users of proposed non-motorized trails on these lands would differ from the WRW and/or WRV. This information should also include discussion of any impacts to the general public resulting from construction of roads and/or trails in the transportation corridor.

The Service fully recognizes that the cleanup of Rocky Flats has been a complex endeavor for both the CDPHE and EPA. Please recognize that the transfer and future management of these lands is equally complex for the wildlife refuge worker. Your responses to these questions are both helpful to our understanding and essential to our future management responsibilities.

Thank you and please do not hesitate to contact me at (303) 236-4366 with any questions.

Sincerely,

David Lucas
Chief, Division of Refuge Planning

Colorado Department
of Public Health
and Environment

September 21, 2011

David Lucas, Chief
Division of Refuge Planning
U.S. Fish and Wildlife Service
Mountain-Prairie Region
P.O. Box 25486, DFC
Denver, CO 80225-0486

RE: Service's requests for additional information regarding residual risk at Rocky Flats National Wildlife Refuge

Dear Mr. Lucas,

The Colorado Department of Public Health and Environment (CDPHE) and Region 8 of the U.S. Environmental Protection Agency (EPA) are responding to your letter of September 1, 2011 requesting assistance in better understanding site conditions as they affect the safety of refuge workers and visitors. Our responses to your specific questions are on pages attached to this correspondence.

Please let us know if you have additional questions or need further information.

Sincerely,

Carl Spreng
CDPHE

Vera Moritz
EPA

cc: Steve Berendzen, USFWS
Dan Miller, AGO
Lorraine Ross, EPA
Simon Lipstein, DOE

Responses to U.S. Fish and Wildlife Service's letter of September 1, 2011

Response to item #1 - Provide a qualitative summary of risk to Wildlife Refuge Worker (WRW) and Wildlife Refuge Visitor (WRV) within the lands transferred to the Refuge.

- Major Rocky Flats Site documents demonstrate and declare that the risks to the WRW and WRV are within or below the acceptable CERCLA risk range (10^{-4} – 10^{-6} risk of excess cancer incidence) and that radiation doses are below State standards. These documents include:
-

1) *RCRA Facility Investigation – Remedial Investigation/Corrective Measures Study – Feasibility Study Report for the Rocky Flats Environmental Technology Site*, June 2006 (RI/FS Report) [document available on-line at: http://www.lm.doe.gov/Rocky_Flats/Regulations.aspx#RIFS]
2) *Corrective Action Decision/Record of Decision for Rocky Flats Plant Peripheral Operable Unit and the Central Operable Unit* (CAD/ROD) [document available on-line at: http://www.lm.doe.gov/Rocky_Flats/Regulations.aspx].
3) Notice of partial deletion of the Rocky Flats Plant from the National Priorities List (72 ed. Reg. 29276, May 25, 2007)

At Rocky Flats, potentially contaminated sites were originally divided into 16 "operable units" (OUs) to facilitate the orderly investigation and cleanup of the Site. Based on the final comprehensive environmental investigation (RI/FS Report), The US Environmental Protection Agency (EPA), the Colorado Department of Public Health and Environment (CDPHE) and the US Department of Energy (DOE) decided to re-configure the Site OU boundaries to consolidate all areas might require controls or further remedial action into a single OU named the Central OU. Areas that would not any require controls or further remedial action were merged into the Peripheral OU. The final boundaries are shown in Figure 1, Site map (DOE, Figure 1, CAD/ROD Amendment, September 2011). The majority of the land in the Peripheral OU was subsequently transferred to the Service and became the Rocky Flats Wildlife Refuge.

For purposes of assessing risk to human health, the Rocky Flats Site was partitioned into 12 Exposure Units (EUs). At least a portion of all of these EUs constitutes what is now the Refuge and a slice along the eastern edge of four of these EUs comprises land that is now proposed for use as a transportation corridor.

The evaluation of the nature and extent of contamination in the RI/FS Report identified 14 contaminants of interest in surface soil and sediments. Of these contaminants, only one – plutonium – was identified by the Human Health Risk Assessment as requiring further evaluation. The EU with concentrations of plutonium compelling evaluation was the Wind Blown EU where the risk to a WRW was calculated to be 2×10^{-6}, which is at the very low end of the CERCLA risk range for excess cancer. The risk estimates provided for the Wind Blown EU in the RI/FS Report are for the entire exposure unit

and, as noted above, are well within the acceptable risk range. However, the most contaminated parts of the Windblown EU were retained in the Central Operable Unit and not transferred to the Refuge. This partitioning of the Windblown EU results in a much lower average concentration in those lands now comprising the Refuge, which would result in even lower risks, estimated to be less than 1×10^{-6} for theWRW. The average concentration of the 135 samples from 66 locations within the Refuge portion of the Wind Blown EU (see attached Figure 2) is about 3.2 pCi/g, well below the 9.8 pCi/g that corresponds to a 1×10^{-6} risk for aWRW. In comparison, the average plutonium concentration of the 586 samples collected throughout the entire Peripheral OU is 1.09 pCi/g.

The following table shows a comparison of risk levels to plutonium soil concentrations that are assumed to be uniformly distributed over the entire exposure area.

Approximate plutonium concentrations in surface soil and sediments at Rocky Flats*

CERCLA risk range for Refuge Worker/Refuge Visitor **		Average plutonium concentration - Refuge	Average plutonium concentration – DOE lands
$1x10^{-4}$***	980 pCi/g	1.09 pCi/g	2.3 pCi/g
$1x10^{-6}$***	9.8 pCi/g		

* Source: Derived from Task 3, Soil Action Levels Technical Memorandum

**Exposure Assumptions:

Refuge Worker – 4 hours indoors and 4 hours outside for 250 days a year for 18.7 years

Refuge Visitor – 2.5 hours outside for 100 days a year for 6 years (child) or 24 years (adult)

*** $1 \times 10^{-4} - 1 \times 10^{-6}$ means a 1 in 10,000 – 1 in 1,000,000 lifetime excess cancer risk (risk of cancer added to the human lifetime risk of cancer that would normally be expected from all causes)

Response to item #2 - Provide an updated statement regarding restrictions.

- The lands comprising the Refuge are suitable for unlimited use and unrestricted exposure.

As noted in your letter, the Service's CCP/EIS was required to be completed prior to cleanup and final decision making. Subsequent to the 2004 CCP, additional sampling of the area that was to become the Refuge was performed, numerous environmental analyses, including the Comprehensive Risk Assessment (CRA), were completed and the boundaries of the Refuge were configured. The additional data and the results of the CRA demonstrated that no use restrictions on the Refuge were necessary, and the final remedial decisions for the site did not impose any restrictions. These investigations and the remedy decision supersede prior responses from CDPHE and EPA written back in 2003.

In the Final CAD/ROD, dated September 2006, the agencies selected the "no action" alternative for the Peripheral OU and no use restrictions were imposed. On March 13, 2007, EPA published a notice of intent to delete the Peripheral OU from the Superfund

National Priorities List. With regard to the Peripheral OU, the Notice of Intent states, in part, that "no hazardous substances, pollutants, or contaminants occur in the Peripheral OU above levels that allow for unlimited use and unrestricted exposure." On May 25, EPA deleted the Peripheral OU from the National Priorities List (72 ed. Reg. 29276, May 25, 2007).

On June 11, 2007, EPA sent a letter to the Secretaries of Energy and the Interior certifying that the cleanup and closure of Rocky Flats had been completed. That letter incorporated the Federal Register notice announcing the deletion of the Peripheral Operable Unit from the Superfund National Priorities List. The only portion of the Rocky Flats site that has land use restrictions is the Central OU. In accordance with the Rocky Flats Refuge Act, this area will remain under DOE management.

Please refer to the following sections of the CAD/ROD:

> The selected remedy/corrective action for the Peripheral OU is no action. The RI/FS report concludes that the Peripheral OU is already in a state protective of human health and the environment. The NCP provides for the selection of a no action remedy when an OU is in such a protective state and therefore, no remedial action for the Peripheral OU is warranted. (p.3)
>
> Considering the results of the RI/FS Report, DOE, EPA and CDPHE concluded that the Peripheral OU was unaffected by hazardous wastes. They also concluded that the risk and dose from low levels of residual radionuclides in the Peripheral OU were well within the EPA's CERCLA range of acceptable risk and below the State of Colorado's 25-mrem dose criterion for rural residents. Conditions in the Peripheral OU are acceptable for unrestricted use and unlimited exposure. (p.65)
>
> Considering the results of the RI, DOE, EPA and CDPHE concluded that the Peripheral OU was unaffected by site activities from a hazardous waste perspective; that is, no hazardous wastes or constituents have been placed in or migrated to the Peripheral OU. This determination is based on process knowledge including past waste management practices, research into evidence of disturbed areas, and results of extensive sampling in the former Buffer Zone OU. .... A small portion of the Peripheral OU was impacted by site activities from a radiological perspective; for example, plutonium-239/240 exists above background in surface soil in the Wind Blown EU. (p. 49)

The decommissioning criteria in Section 4.61 of the Colorado Standards for Protection Against Radiation (6 CCR 1007-1) set dose limits for members of the public. These limits were considered relevant and appropriate requirements for determining if the Refuge lands were acceptable for unrestricted use. Surface soil sample results in the Refuge indicate that doses to members of the public would be less than 1 mrem/year, far below the residual radiological criteria for unrestricted use (25mrem/year). Section 4.60 provides a level of activity from plutonium that triggers a requirement to use "special techniques of construction" in "uncontrolled areas." This level, 2 dpm (approximately 1

pCi/g), was set back in 1973 and was designed to keep radiation exposure as low as reasonably achievable. These requirements have been determined to not apply to refuge lands because the land is under federal jurisdiction and therefore is not "uncontrolled." The requirements would, however, apply to land that is transferred out of federal jurisdiction.

In cases where §§ 4.60 and 4.61 apply, the Colorado Department of Public Health and Environment would evaluate appropriate construction controls, which would likely consist of dust suppression. Since dust suppression is not considered a restriction, applying this control would not limit use of the property proposed for transfer. The declaration that the refuge is available for unrestricted use would not be violated by the application of Part 4 of the Colorado Radiation Control Regulations.

There are a number of state and federal environmental requirements that may apply to the proposed construction, such as a stormwater permit, dredge and fill permit, air permit, etc. None of these are considered "restrictions" on land use, though a regulatory agency may impose conditions that must be met to perform the work, but are applied to mitigate environmental (including human health) impacts.

Response to item #3 - Provide information on 1) how disposal of lands associated with transportation was handled in Site documents, and 2) how exposures to construction workers and trail users would differ from those calculated for the WRW and WRV.

1) The CAD/ROD contemplated a future land transfer at the eastern edge of the site, as per provisions of the Refuge Act:

> The Refuge Act prohibits the United States from transferring any rights, title, or interest in land within the boundaries of Rocky Flats, except for the purpose of transportation improvements on the eastern edge of the site that is bordered by Indiana Street. (p. 37)

2) The CRA developed a site conceptual model which identified multiple exposure pathways, which were analyzed as part of the human health risk assessment. Pathways for the WRV include inhalation and ingestion of surface soil and sediment, direct contact with surface soil and sediment, and external irradiation from surface soil and sediment. Hiking was one of the WRV activities that was evaluated, so exposure to "trail users" is included in that receptor scenario.

Risk to a construction worker was not directly calculated in the RI/FS Report. Because the exposure pathways and assumptions are similar to those used for a WRW, the risks should be somewhat similar to the risks calculated for a WRW. Differences include the potential for greater rates of inhalation and ingestion of soil by the construction worker. Those differences are likely offset by the much greater exposure duration for the WRW (18.7 years versus a few months for a construction worker). Due to the very short exposure duration, the very low levels of residual plutonium in the strip of land proposed

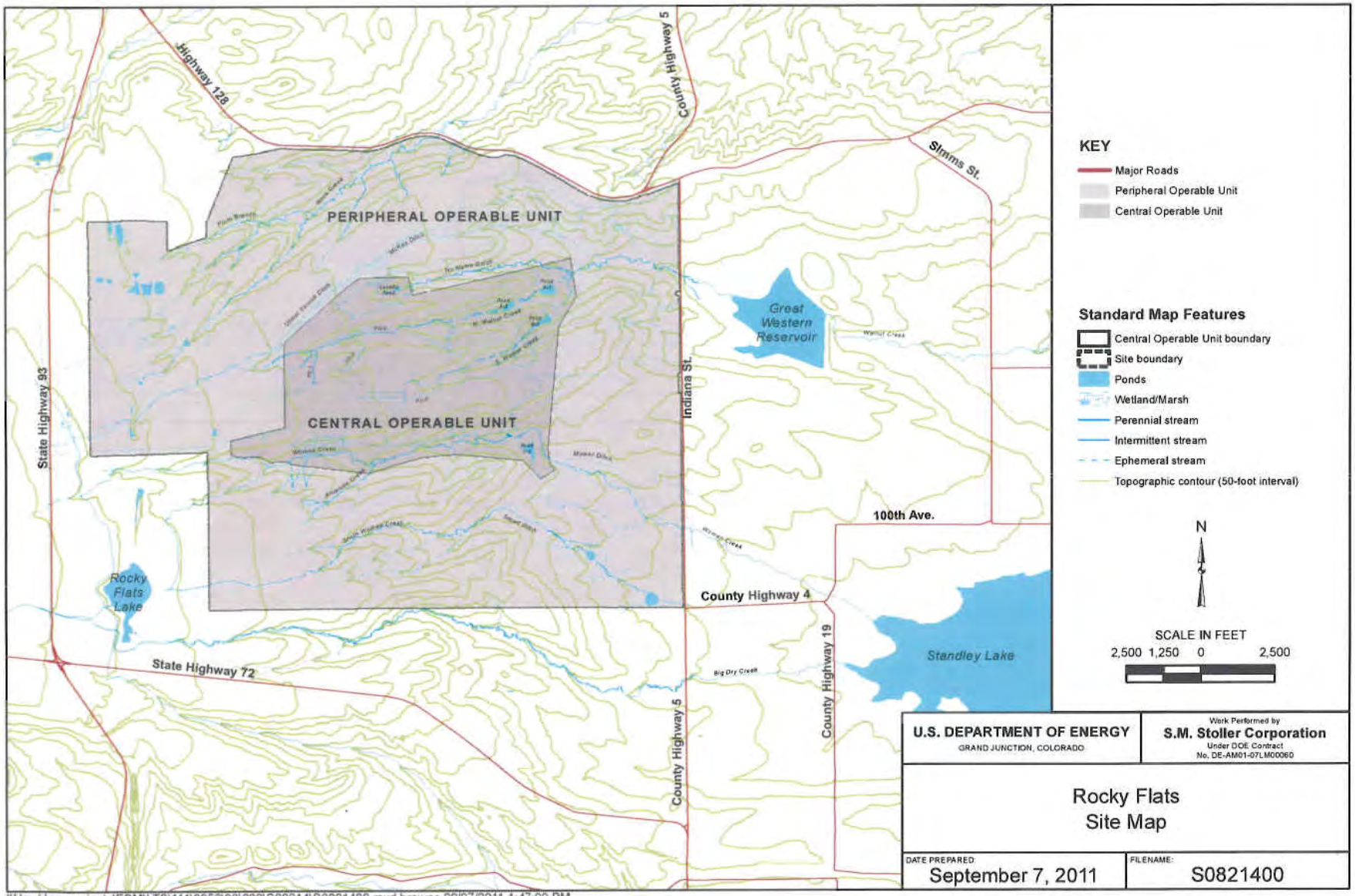
for transfer and the calculated low radiation dose (see response to item #1), the risk to a construction worker would be at or below the low end of the CERCLA risk range.

Air emissions from the Rocky Flats Site do not present health or environmental concerns in ambient air. This key factor in one of the potential exposure pathways is addressed in the "Air Contamination" section of the CAD/ROD, quoted below (p. 29):

> *Air Contamination* - - Monitoring programs and other studies were conducted during both the production era and cleanup phase at Rocky Flats. These data show that contaminant emissions and resulting ambient airborne concentrations during both the weapons production era and cleanup phase were always compliant with all regulatory requirements. In fact, compliance monitoring at the facility fence line showed maximum airborne radionuclide concentrations of no more than three per cent of the limiting standard during the entire cleanup phase. With completion of all accelerated actions and the attendant removal of all historical air emissions sources except for wind erosion of the minor, remnant contamination in surface soils, future air emissions from the site will be less than those in the past.

The CAD/ROD acknowledges that resuspension of residual radioactive contaminants attached to surface soil particles remains a potential source of ongoing air emissions. However, sources of radionuclide contamination were removed during cleanup - former processing and waste storage buildings were decommissioned, decontaminated, and demolished and contaminated soils were removed) and the Site is now much less susceptible to air emissions. The CAD/ROD states (p. 30):

> Air modeling conducted for radionuclide parameters predict that, even for scenarios involving a fire in the historic 903 Pad area, emissions will be much lower than the EPA's ten millirem benchmark level for an airborne exposure pathway."



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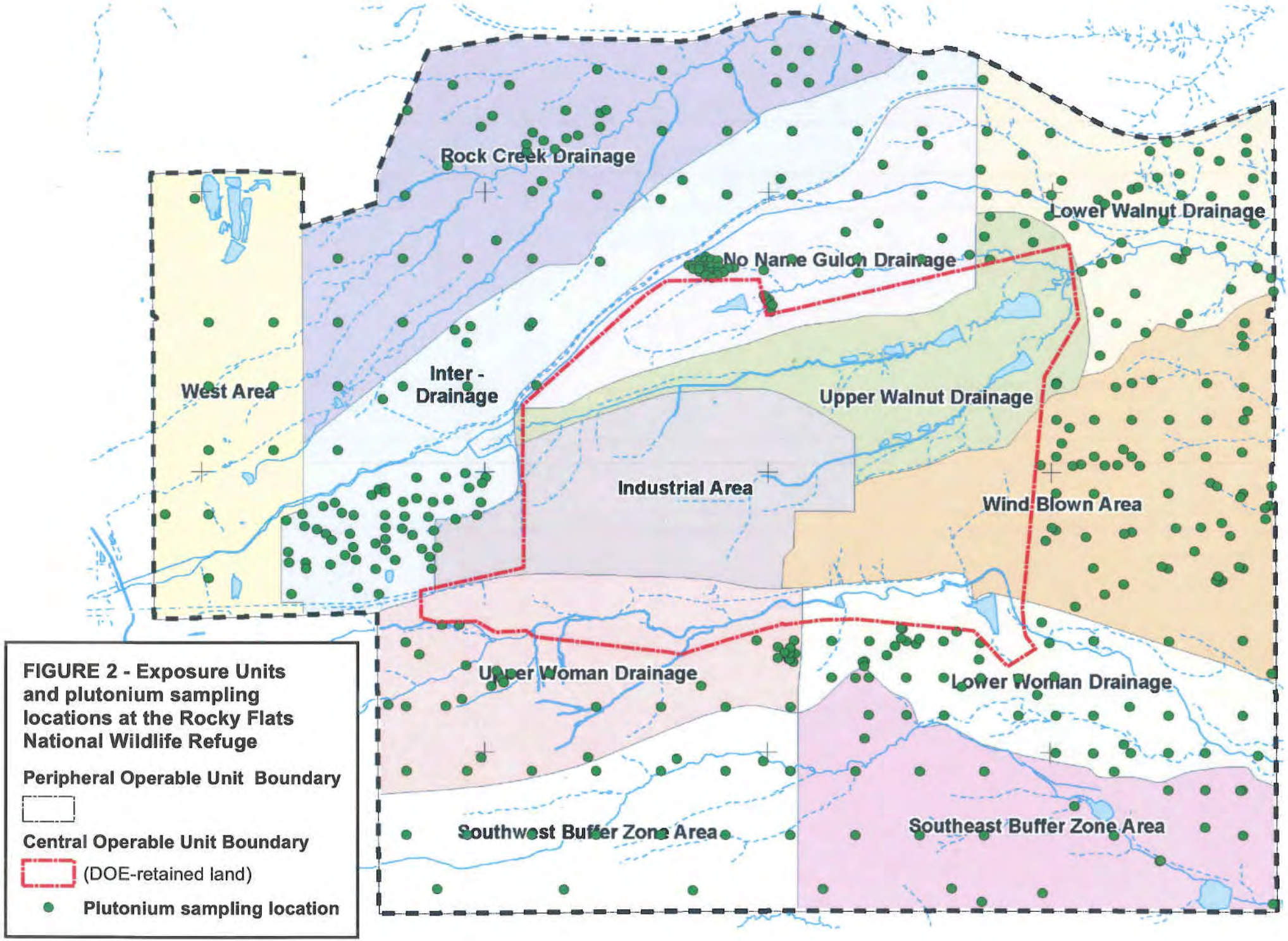
Rock Creek Drainage
Lower Walnut Drainage
No Name Gulch Drainage
West Area
Inter - Drainage
Upper Walnut Drainage
Industrial Area
Wind Blown Area
Upper Woman Drainage
Lower Woman Drainage
Southwest Buffer Zone Area
Southeast Buffer Zone Area
FIGURE 2 - Exposure Units and plutonium sampling locations at the Rocky Flats National Wildlife Refuge
Peripheral Operable Unit Boundary
Central Operable Unit Boundary
(DOE-retained land)
Plutonium sampling location

APPENDIX H

Scoping Letters from Government Agencies

CITY OF ARVADA

CITY COUNCIL
FACSIMILE: 720-898-7515 ▲ TDD: 720-898-7869
PHONE: 720-898-7500

July 29, 2011

Via Electronic Mail and Hand Delivery

Michael D. Dixon, Ph.D.
Planning Team Leader
Division of Refuge Planning
U. S. Fish and Wildlife Service
P. O. Box 25486, DFC
Denver, CO 80225
Email: rockyflatsea@fws.gov

RE: Proposed Expansion of the Rocky Flats National Wildlife Refuge

Dear Dr. Dixon:

Thank you for the opportunity to comment on the proposed inclusion of State Land Board Section 16 ("Section 16") in the Rocky Flats Wildlife Refuge, along with the acquisition of certain mineral rights within the existing Refuge, and the extinguishment of an existing mining lease on Section 16. Arvada has worked for many years in cooperation with Jefferson County Open Space to obtain significant open space in and around northern and western Arvada and spent millions of local dollars in that effort. This Jefferson County initiative to acquire Section 16 provides additional open space. The Arvada City Council strongly supports this proposal. In addition, the City of Arvada is prepared to offer up to $300,000 toward the overall land and mineral rights acquisition/exchange to reach the goal of including this parcel into the Refuge.

The City strongly supports the scoping alternative presented by the Fish and Wildlife Service on July 20, 2011. That alternative, referred to as the Jefferson Greenway Proposal in the letter from the Jefferson Parkway Public Highway Authority (JPPHA), will allow the Section 16 inclusion and mineral rights acquisition through the exchange process that effectuates the transfer of the 300-foot transportation corridor to the JPPHA. Arvada endorses the comments already submitted by JPPHA on these matters and believes that the acquisition/exchange scoping alternative is the one that best meets all the opportunities, obligations and responsibilities the Rocky Flats National Wildlife Refuge Act imposes on the Service.

One of those explicit obligations was to make the eastern 300 feet of the refuge available for the sole purpose of a transportation corridor to any local government or combinations of local governments upon the satisfaction of certain conditions. As proposed under this scoping alternative, the Authority would contribute the equivalent of the sales price for the mineral rights to Jefferson County. They would in turn use those proceeds for the acquisition of mineral rights that would be subsequently exchanged for the transportation corridor. Proceeds from the transportation corridor sale would otherwise be sent back to Washington instead of being retained locally for the benefit and improvement of the Refuge. By becoming part of the exchange process, these funds can be used for the benefit of Arvada and Jefferson County residents by expanding the Refuge and removing the possibility of future mining activities within the existing Refuge.

In addition to the acquisition/exchange scoping alternative, the Service must consider the alternative of sale of the transportation corridor to JPPHA. JPPHA already has a valid application before the Service for the sale of the 100-acre transportation corridor for $2.8 million dollars – the appraised price established by the Service. In fact, the JPPHA application is the only valid one that has been submitted and therefore must be considered on that basis alone. It is a valid and viable application for the following reasons:

1) JPPHA's application for the sole purpose of transportation. In addition to the plain language of the Refuge act itself, then U.S. Representative Mark Udall, the original House sponsor of the Refuge Act, made clear in his remarks in the Congressional Record (December 13, 2001) his intent as the sponsor, stating it was for:

> "... transportation issues. Rocky Flats is located in the midst of a growing Area of the Denver metropolitan region. As this area's population continues to grow, pressure is being put on the existing transportation facilities just outside of the [Rocky Flats] borders. The communities that surround the [Rocky Flats] have been considering transportation improvements in this area for a number of years - including the potential completion of a local beltway. In recognition of this, the [Act] allows for some Rocky Flats land along Indiana Street (the eastern boundary of [Rocky Flats]) to be used for this purpose under certain circumstances."

2) The Refuge Act requires that the transfer of the property for transportation uses will minimize adverse effects to the management of the balance of the Refuge. The 2004 Rocky Flats CCP/EIS makes precisely that conclusion. There were several mitigation measures the CCP/EIS recommended be undertaken as part of the construction process. The JPPHA Board in Resolution #1-2009 recognized those as necessary and appropriate. The Board further committed the Authority to work with the Service in their mitigation.

3) The Refuge Act requires that the applicant's project be included in the regional transportation plan of the metropolitan planning organization designated for the Denver metropolitan area under section 5303 of title 49, United States Code." The Service's Solicitor General has previously opined that this means the transportation project must be included on the DRCOG fiscally constrained regional transportation plan. The Jefferson Parkway has met the DRCOG requirements for inclusion, including a demonstration of reasonable prospects for funding the project. The DRCOG Board voted on January 20, 2010 to include this project in the 2035 fiscally constrained plan.

Conversely, there should ***not*** be a scoping alternative regarding the sale of some portion of the designated transportation corridor to the City of Golden for a recreational bike path for the following reasons:

A) Golden's request is for a recreational use. Golden's July 1 letter to Regional Fish and Wildlife Director Steve Guertin offers its primary justification for its application is consistency with the Rocky Mountain Greenway Plan within the Great Outdoors Initiative. The City of Arvada also supports the Great Outdoors Initiative as a premier recreational plan linking together many federal, state and local parks and open space. That said it is plainly not a transportation program.

B) Golden's proposed bicycle path project is not on the DRCOG Fiscally Constrained plan. Golden's application only speaks to proposed bike paths found in the 2035 metro vision transportation plan. The Solicitor General's office has already determined that any project for the use of the transportation corridor must be included in the fiscally-constrained regional transportation plan. No bicycle path project meeting the requirements for inclusion in the fiscally-constrained plan, including reasonable prospects for funding, as ever even been submitted by the City of Golden to DRCOG let alone approved by the DRCOG Board as a specific project amendment to the fiscally-constrained regional transportation plan.

C) Golden's proposal is to buy land outside of Jefferson County and exchange it for the transportation corridor. This is counter to the goal of having the proceeds from the transportation corridor inure to the benefit of the Rocky Flats Wildlife Corridor. Alternatively, a straight sale to Golden would have that $3 million sent to Washington for deficit reduction rather than be retained for amenities and additions to the Rocky Flats Wildlife Refuge. In either case, the effect of Golden's acquisition strategy for the transportation corridor is to reduce the funds available to effectuate the desired Section 16 inclusion/exchange proposal (Jefferson Greenway Proposal) also being evaluated as part of this process.

For these reasons, the Service should not further consider the Golden alternative within the scoping process; their proposal is fatally deficient, does not meet the plain requirements of the Refuge Act, and cannot further the goals of acquiring, including and exchanging Section 16 and the associated mineral rights to the benefit of the Rocky Flats Wildlife Refuge.

Again, thank you for the opportunity to comment on this matter.

Sincerely,

Robert Frie,
Mayor of Arvada

cc: Arvada City Council
Arvada City Manager
JPPHA Board of Directors

July 22, 2011

Dr. Mike Dixon, Planning Team Leader
U.S. Fish and Wildlife Service
PO Box 25486, DFC
Denver, CO 80225

Re: Public Scoping Comments for Rocky Flats National Wildlife Refuge Environmental Assessment Process

Dear Dr. Dixon:

The City of Boulder and Boulder County write to provide comments on the public scoping process for the Environmental Assessment ("EA") regarding the Proposed Expansion of the Rocky Flats National Wildlife Refuge ("Refuge"). The EA will consider the divestiture of the 300'-wide transportation corridor along Indiana Avenue on the east side of the Refuge and the proposed expansion of the Rocky Flats National Wildlife Refuge to include the Colorado State Land Board-owned "Section 16" on the southwest corner of the existing Refuge.

As part of an intergovernmental agreement entered into on May 3, 2011 with Jefferson County, the City of Boulder and Boulder County have formally taken a neutral position with regard to the divestiture of the 300'right of way. Consequently, our governments have no comment as to whether that part of the Refuge should be transferred for a right-of-way, or to whom it should be transferred. However, should it be transferred, our governments are supportive of having any funds from such divestiture retained locally for the enhancement of the Refuge. In particular, we would support the addition of wildlife habitat, particularly that which promotes increased connectivity between the Refuge and adjacent open spaces and which protects valuable natural resources including significant plant and animal species.

With regard to the proposed expansion of the Refuge, the City of Boulder and Boulder County strongly support the inclusion of Section 16 into the Refuge. In fact, such expansion has been a priority for the City of Boulder and Boulder County for nearly five years. As part of the IGA entered into with Jefferson

County, our governments each pledged $2 million to facilitate the purchase and transfer of that parcel into the Refuge.

Among the many benefits of protecting this parcel are the connectivity provided from the Refuge to open spaces located west of Co. State Highway 93 for the numerous wildlife species that migrate back and forth from the foothills to the plains, particularly for those species who utilize key drainages such as Woman Creek drainage for wildlife habitat and for movement corridors. While some parts of Section 16 holder greater ecological value than others, our governments are interested in preserving all property interests in Section 16 and having as much of them as possible eventually transferred to USWFS.

Thank you for the opportunity to provide input on this matter.

Sincerely,

Ben Pearlman, Chair
Boulder County Commissioners

Susan Osborne, Mayor
City of Boulder

CC:
Mark Udall, United States Senate
Michael Bennet, United States Senate
Jared Polis, United States House of Representatives
Faye Griffin, Chair, Jefferson County Commissioners
Jacob Smith, Mayor, City of Golden
Andrew Muckle, Mayor, Town of Superior
Doug Robotham, Assistant Director of Lands, Colorado Department of Natural Resources

City of Golden

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July 29, 2011

VIA HAND DELIVERY

Mike Dixon
Planning Team Leader
U.S. Fish and Wildlife Service
P.O. Box 25486, DFC
Denver, CO 80225

Re: City of Golden's Scoping Comments Addressing Environmental Assessment for Rocky Flats National Wildlife Refuge

Dear Mr. Dixon:

The City of Golden respectfully offers the following comments regarding scoping for the U.S. Fish and Wildlife Service's ("Service") environmental assessment ("EA") addressing the proposed boundary expansion and land exchange of the Rocky Flats National Wildlife Refuge ("Refuge"). The scope identified by the Service at its July 20, 2011, scoping meeting is too narrow to meet the requirements of the National Environmental Policy Act ("NEPA"), the Rocky Flats National Wildlife Refuge Act of 2001 ("Rocky Flats Act") and other legal requirements, but can be readily remedied by the Service. The City of Golden remains ready to work with the Service to address any questions it has regarding the City's application for the transportation right-of-way on the east side of the Refuge.

The Service stated that the EA will analyze the following options: direct sale of the 300-foot-wide transportation corridor along Indiana Street; potentially expanding the boundary of the Refuge to include 617 acres (Section 16) on its western border for conservation purposes; potentially exchanging the 300-foot-wide transportation corridor along Indiana Street for property, mineral rights and the extinguishment of mineral leases in Section 16 and mineral rights and the extinguishment of mineral leases on portions of Department of Energy ("DOE") property within the current approved acquisition boundary; potentially exchanging the 300-foot-wide transportation corridor for an interest in all or a portion of Section 16, or for property elsewhere in the refuge system; and other reasonable alternatives if identified during scoping. At the public scoping meeting, representatives of the Service stated numerous times that the divestiture of the 300-foot-wide transportation corridor was not being analyzed by the Service because the divestiture is mandated by the Rocky Flats Act and is, consequently, not a federal action subject to review under NEPA.

For reasons the City has identified in previous correspondence on this matter and in this letter, the divestiture is not a ministerial action that does not require NEPA review. Federal law is quite clear that there are sufficient places where the Service can and must exercise its discretion, triggering NEPA, Endangered Species Act ("ESA") Section 7, and other obligations relating to the transfer of the right-of-way.

Further, the City disagrees with the statements made by Service representatives at the public scoping meeting on July 20, 2011, that the Service does not have sufficient information to study and analyze the competing proposals for use of the right-of-way—*i.e.*, the City's proposal to use the right-of-way for pedestrian and bicycle facilities and the Jefferson Parkway Public Highway Authority's ("JPPHA") proposal to use the right-of-way for a four-lane tolled parkway. The City has provided comparable information to JPPHA's initial application and has made repeated offers and requests to the Service to meet to answer any remaining questions or provide further details. To date, the Service has not identified any questions or needed information.

Finally, all available law and facts relating to this matter indicate that the Service must prepare an environmental impact statement ("EIS"), rather than an EA, in order to comply with its NEPA, Rocky Flats Act, ESA and other obligations.

Because the Service Will Exercise Its Discretion in Divesting the Right-of-Way, It Must Comply with NEPA

The Service asserts that it must divest the right-of-way for transportation use under the Rocky Flats Act, and, consequently, it is not required to analyze the divestiture under NEPA. However, the Rocky Flats Act requires that the Service comply with applicable law when it divests the right-of-way, which includes compliance with NEPA. *See* Pub. L. No. 107-107, § 3174(e)(1)(D) (codified at 16 U.S.C. § 668dd note). Additionally, because the Service will exercise considerable discretion in divesting the right-of-way, particularly in the choice between two applications for the right-of-way under the Rocky Flats Act, the divestiture is a federal action requiring NEPA review. *See Sierra Club v. Babbitt*, 65 F.3d 1502, 1512 (9th Cir. 1995) (NEPA procedural requirements are triggered by a discretionary federal action).

The Service will exercise discretion regarding the divestiture in a number of ways. First, the Service will exercise discretion in choosing between the competing proposals for use of the right-of-way. Second, because the alternative proposed by the JPPHA ties the divestiture of the right-of-way to funding for the Section 16 land exchange and Refuge mineral acquisition options, the Service cannot separate the divestiture from the exchange and/or the expansion of the Refuge boundary in its NEPA analysis. Finally, the Service will exercise discretion in imposing the terms and conditions of the divestiture, including requiring mitigation to offset the impacts of the effects of transportation improvements on the Refuge. Such mitigation and other conditions are necessary to ensure that proposed transportation improvements "are carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge," which is

a requirement of the Rocky Flats Act. Pub. L. No. 107-107, § 3174(e)(2)(B)(i). Consequently, the Service must analyze the various alternatives and their environmental effects under NEPA.

Even where an agency has no discretion not to proceed with an exchange, imposing appropriate terms and conditions on exchange is sufficient discretion to require NEPA compliance. *See RESTORE: North Woods v. United States Dep't of Agric.*, 968 F. Supp. 168, 174 (D. Vt. 1997) (An agency must comply with NEPA where "it does not lack all discretion in the process, its actions are not purely ministerial, nor will compliance with NEPA be an empty formality."); *Forelaws on Board v. Johnson*, 743 F.2d 677, 681 (9th Cir. 1984).

The Service currently has before it two proposals for use of the transportation right-of-way. The City of Golden has proposed to use the right-of-way for development of an approximately ten-foot-wide bicycle and pedestrian facility, while the JPPHA has proposed to use the right-of-way for development of a 300-foot-wide, four-lane tolled parkway. Not only is the Service required to choose between these two uses of the right-of-way, but under the Rocky Flats Act, the Service must find the proposed transportation improvements "are carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge." Pub. L. No. 107-107, § 3174(e)(2)(B)(i). The only way that it can make that determination is with complete analysis and information of the direct, indirect and cumulative effects of the competing alternatives for the transfer of the right-of-way.

As the City has demonstrated in its previous communications to the Service, the City's proposed pedestrian and bicycle corridor would have far fewer impacts than a four-lane parkway, including minimizing the footprint of improvements, minimizing effects to critical habitat for the Preble's meadow jumping mouse, and offering adequate and safe corridor crossing for a variety of wildlife, among others. Because the Service must decide between the two competing proposed uses and must do so in the context of minimizing adverse effects on the Refuge, it will clearly exercise discretion in divesting the right-of-way.

Additionally, because the JPPHA's alternative has tied the divestiture of the right-of-way to the Section 16 land exchange option, the Service cannot separate the divestiture from the exchange and/or the expansion of the Refuge boundary in its NEPA analysis. Specifically, the Service cannot focus on the benefits of the proposed land exchange deal without analyzing the impacts of the connected action of the right-of-way, as these two actions are intertwined.

The exchange proposed by the JPPHA includes the acquisition of property, mineral rights and the extinguishment of mineral leases in Section 16 as well as acquisition of mineral rights and the extinguishment of mineral leases within the existing Refuge boundary. The parties involved in the deal are numerous and, in addition to the JPPHA and State Land Board, include Jefferson County, Boulder County and the City of Boulder, which entered into an intergovernmental agreement ("IGA") whereby each has committed money to effectuate the transfer of Section 16 and whereby Boulder and Boulder County withdrew their opposition of the Jefferson Parkway in exchange for financial assistance from Jefferson County to acquire property interests in Section

16 to create a permanent wildlife conservation area. Jefferson County explicitly conditioned the availability of its funds on the conveyance of the right-of-way to JPPHA, making the Section 16 transaction under any JPPHA-related alternative a connected action for NEPA purposes. *See* Intergovernmental Agreement between Jefferson County, Boulder County and the City of Boulder Regarding the Jefferson Parkway and Acquisition of Section 16 (Attachment A). As is evidenced by the IGA, the deal struck to effectuate the land exchange is directly tied to the conveyance of the right-of-way to the JPPHA to build its toll road. Additionally, some of the parties to the IGA have also entered into negotiations with the holder of sand and gravel mining leases on Section 16 to acquire those leases in order to exchange the mineral rights with the federal government. *See* Letter to W. Ryan from B. Pearlman, S. Osborne, and F. Griffin re: Non-simultaneous Exchange of Rocky Flats Section 16 (Transaction No. 11/005) (May 5, 2011) (Attachment B). We understand from statements of state and federal officials that the offers for the mining leases on Section 16 for purchase are also directly tied to transfer of the right-of-way to the JPPHA. This elaborate land-and-mineral-rights exchange has been developed specifically so that that JPPHA may acquire the transportation right-of-way to build a four-lane tolled parkway. Consideration of the land exchange and expansion of the Refuge boundary without consideration of the impacts of the parkway that necessitated the exchange is untenable under NEPA.

While there are certainly conservation benefits in expanding the boundary of the Refuge to include Section 16, as the City detailed in its July 1st letter, the conservation value received from an exchange involving Section 16 and the transfer of the right-of-way to JPPHA necessarily entails the many negative impacts of the proposed Jefferson Parkway on the east side of the Refuge, and, under NEPA, the Service must consider these negative impacts. Although the City agrees that the long-term protection of as much of Section 16 as possible in public ownership would be useful for conservation, the reality is that due to numerous existing protections of the Woman Creek Corridor and the Tall Grass Prairie Parcel, the critical conservation areas within Section 16 are not at risk for development in the foreseeable future and acquisition of this property at this time cannot offset the direct, indirect and cumulative impacts of the proposed Jefferson Parkway on the east side of the Refuge and in its vicinity, which impacts the City has set forth in detail in its prior communications to the Service.

Because the divestiture of the transportation corridor has been linked by the JPPHA to the potential land exchange and expansion of the Refuge boundary in its alternatives, the Service must study the impacts of the divestiture, specifically the impacts of the proposed Jefferson Parkway on the Refuge, as a connected action under NEPA.

Finally, the Service will exercise discretion in imposing various terms and conditions, including mitigation measures, on the divestiture of the transportation corridor. The Comprehensive Conservation Plan and Environmental Impact Statement for the Refuge ("CCP/EIS") recognized that the Service must consider the impacts of transportation improvements near the Refuge and recommended measures that could minimize or mitigate the effects of transportation improvements. CCP/EIS at § 4.16. The CCP/EIS contemplated inclusion of mitigation

measures such as developing and implementing a noxious weed management plan; installing below-grade wildlife crossings to facilitate the movement of wildlife under a roadway; creating designated wildlife corridors; constructing fencing to prevent wildlife from crossing roadways and to encourage use of constructed crossings; incorporating berms, sound walls, vegetation or other noise-reducing techniques to reduce the impacts of traffic noise on wildlife and Refuge visitors; designing roadway lighting to reduce light emission and minimize effects on wildlife and Refuge aesthetics; and designing roadway improvements to provide safe and reasonable access to the Refuge entrance, trailheads and trail connections. *Id.* Certainly the Service will require similar mitigation when it divests the right-of-way to ensure minimization of impacts on the Refuge. Any failure to identify and require enforceable mitigation measures would mean that the Service is not complying with the requirement of the Rocky Flats Act to minimize the effects of the transfer on the management of the Refuge. The requirement of specified mitigation and any other terms and conditions that the divestiture and exchange may be subject to is an exercise of discretion that subjects the act to NEPA review. *See Forelaws on Board v. Johnson*, 743 F.2d 677 (9th Cir. 1984) (Power Administration not exempt from NEPA requirements where statute mandated that Administration offer long term contracts for power delivery but left Administration a great deal of discretion as to the contract terms and provisions, including provisions directly addressed to environmental concerns).

Another term or condition that the Service may impose is a right of termination or reversion of the right-of-way if it is not used for transportation purposes. The Rocky Flats Act contemplates that the right-of-way be made available "for the sole purpose of transportation improvements along Indiana Street." Pub. L. No. 107-107, § 3174(e)(1)(A). This language allows and may compel the Service to exercise continuing review of the use of the right-of-way. Certainly the Service's right-of-way regulations for the refuge system include that an easement may be terminated for failure to comply with any or all of the terms or conditions of the grant. 50 C.F.R. §29.21-4(b)(9). The ability to manage the use of the right-of-way into the future is an additional source of the Service's discretion.

The Service Has Sufficient Information about the Two Proposals for Use of the Right-of-Way to Study the Impacts of Each Proposal

Various representatives of the Service stated at the public scoping meeting that the Service did not have enough information about the JPPHA's proposed parkway or the City of Golden's proposed bike and pedestrian facility to study either option. The City was surprised by this statement and disagrees that the Service does not have enough information about at least the City's proposal to study the alternatives. The City again extends its invitation to meet with the Service regarding its proposal and to provide whatever information and documentation the Service may require to fully understand and analyze the City's proposed use of the right-of-way. If the Service lacks sufficient information regarding either proposal, it is not in a position to lawfully convey the right-of-way in compliance with the requirement of the Rocky Flats Act to minimize effects on the management of the Refuge or in compliance with applicable laws like NEPA and the Endangered Species Act.

The City stated in its July 1st letter that it would be willing to engage in a land exchange whereby it would purchase approximately $3 million worth of property to exchange with the Service upon the transfer of the Rocky Flats right-of-way to the City in order to keep the value of the land within the Service for use in the region and help maximize the value of any exchange to the City. The City proposed that the land to be exchanged could include property within the adjoining Section 16 or land within the Arapaho National Wildlife Refuge. The City has not heard from the Service regarding its land-exchange proposals but looks forward to having a substantive conversation about the City's proposals. Given that the Service is currently refining the alternatives under consideration, the City believes that a conversation with the Service regarding its proposal is critical.

Alternatives to be Considered by the Service

As the Service refines the alternatives it plans to study, the City suggests that at least the alternatives set forth below need to be considered. To simplify the analysis for the Service, the City limits its proposed use of the transportation right-of-way to development of bicycle and pedestrian transportation facilities and does not seek to reserve the easternmost 50 feet for arterial improvements to Indiana Street. Specifically, the City plans to use 10 to 15 feet of the right of way for bicycle and pedestrian facilities, to include appurtenant trailhead parking facilities contemplated in the CCP/EIS for the Refuge, and for connection to trails, bike lanes and open space. The alternatives the Service should analyze include:

- Direct sale of the 300-foot transportation right-of-way to the City of Golden for $3 million.

- Direct sale of the 300-foot transportation right-of-way to the JPPHA for $2.8 million.

- Land exchange involving Section 16 in which the City of Golden would receive the 300-foot transportation right-of-way.
    - The City has offered to apply its $3 million for use in a land exchange.[1]
    - Based on the City of Boulder and Boulder County's scoping comments dated July 22, 2011, as well as their past views, the Service should assume that the City and County's combined interest in investing $4 million to facilitate the purchase and transfer of Section 16 into the Refuge would remain available. These communities have never conditioned their support for Section 16 acquisition to the transportation corridor right-of-way issue.

- Land exchange involving Section 16 in which the JPPHA would receive the 300-foot transportation right-of-way.

[1] As the City stated in its July 1, 2011, letter, the acquisition of the Section 16 parcels would obviously require a willing seller in the State Land Board and possibly owners of mineral leases.

- Land exchange involving inholdings in other refuges within Colorado.
    - The City of Golden remains interested in discussing its offer to supply $3 million for a land exchange involving inholdings within the Arapaho National Wildlife Refuge and has tried to set up a meeting with the Service to discuss this proposal. To date, the Service has been unable to meet with the City about this alternative.

The Service Must Prepare an EIS

As the City has stated in previous communication to the Service, given the direct, indirect and cumulative impacts at issue and the complexity of the analysis the Service must undertake, as well as the importance of ensuring that this process and analysis are done correctly, the Service must develop an EIS, not just an EA. Due to the contentiousness of the issue facing the Service, the public interest in this issue and the likelihood of litigation following the Service's decision, the Service must prepare a defensible NEPA document, which requires an EIS, rather than an EA.

As the City identified in previous communications, the Service must address at least the following issues in an EIS:

- Actual and potential quality of the critical habitat of the Preble's meadow jumping mouse that would be destroyed under the JPPHA's proposal in comparison to potential habitat on Section 16
- Noise and visual impacts to wildlife resources and recreational use on the east side of the Refuge consistent with the study of traffic noise on parks and refuges
- Visual impacts on the Refuge and open space
- Barriers to wildlife movement
- Grassland, weed and soil impacts
- Effects on wildlife-related recreation, including the effects on trails, trailheads and connectivity on the east side of the Refuge
- Connectivity to Department of Interior's ("DOI") new management direction involving the Rocky Mountain Greenway
- Air quality and transportation benefits of improved alternative transportation achieved by the City's proposal as opposed to the sprawl and other induced development that will result from the JPPHA's proposal
- Unmitigated traffic impacts and consequential air quality impacts associated with the construction of the Jefferson Parkway, including the effects of emissions of criteria and air toxic pollutants at and near the location of unmitigated Jefferson Parkway-induced congestion on SH 93 and U.S. 6 in Golden
- Soil and dust-related impacts associated with construction-related disturbances

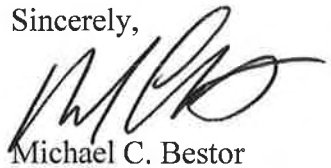
Regarding the traffic impacts, as the City stated in its October 20, 2009, letter to Mr. Gregory Siekaniec, significant congestion and traffic impacts associated with the proposed Jefferson

Parkway must be studied in the EIS. The JPPHA's own analyses have identified significant unmitigated impacts from its toll road, as its own traffic modeling shows that traffic volumes will increase on already congested SH 93, U.S. 6, Wadsworth and other roads because traffic would be diverted onto the Jefferson Parkway. *See* JPPHA's submission to the Denver Regional Council of Governments ("DRCOG") for inclusion of the Jefferson Parkway on the 2035 Metro Vision Regional Transportation Plan ("RTP") at p. 3-18, 3-20 (July 2009) (Attachment C). Specifically, the JPPHA's data shows that its road would create 33% more traffic on SH 93, 21% more traffic on U.S. 6, and 111% more traffic on part of Wadsworth Boulevard depending on the year of review. *Id.*; *see* Traffic Changes from Jefferson Parkway in 2015 (Attachment D) and Traffic Changes from Jefferson Parkway in 2035 (Attachment E). It will put significantly more traffic on SH 93 (33% more) and SH 128 north of the Refuge (29% more), increasing their effects as barriers to movement of both wildlife and visitors. Additionally, the JPPHA's study shows that the Jefferson Parkway will cause some intersections to fail from a level of service perspective and exacerbate the degree of failure of other intersections. These are exactly the sort of significant impacts that trigger EIS preparation around the country.

Information regarding these significant traffic impacts was included in the JPPHA's submissions to the Colorado Department of Transportation and DRCOG to secure approvals for its road, including inclusion in the RTP amendment which was necessary for the JPPHA to meet the requirements of the Rocky Flats Act. These significant impacts led to CDOT's identified need to develop an EIS rather than an EA for the Northwest Corridor, and these significant impacts must be analyzed by the Service. The fact that the Service is not a transportation agency is irrelevant to whether it has an obligation to consider the impacts of its actions, including connected actions. Federal agencies that have permitting or right-of-way roles still must analyze the effects of their actions.

The City incorporates its previous comments and letters to the Service by reference, specifically its initial application to the Service and its July 1, 2011, supplemental letter, and makes those communications part of the City's scoping comments. Additional letters to the DOI, DOE and the Service addressing this issue, which letters the City incorporates by reference, include: M. Bestor Letter to Secretary Bodman and Secretary Kempthorne (July 2, 2008); M. Bestor Letter to Secretary Kempthorne (Sept. 2, 2008); M. Bestor Letter to Secretary Salazar (June 8, 2009); and J. Smith Letter to G. Siekaniec (Oct. 20, 2009).

Sincerely,



Michael C. Bestor
City Manager

Enclosures

Town of Superior

July 27, 2011

Via US Mail and Email to: rockyflatsea@fws.org

Mike Dixon
US Fish and Wildlife Service
Division of Refuge Planning
PO Box 25486, DFC
Denver, CO 80225

Re: Rocky Flats National Wildlife Refuge - Public Scoping Comments for the Environmental Assessment Concerning the Possible Expansion of the Refuge and Transfer of 300 Foot Transportation Right-of-Way

Dear Dr. Dixon:

On behalf of the Town of Superior, please accept the following comments concerning scoping of the Environmental Assessment (the "EA") for the possible transfer of a 300 foot wide transportation corridor (the "right-of-way") on the eastern boundary of the Rocky Flats National Wildlife Refuge (the "Refuge") and expansion of the Refuge. As Superior is directly impacted by decisions concerning the Refuge and, in particular, the right-of-way, we are eager to be an active participant in this process.

When the Refuge was created by the Rocky Flats National Wildlife Refuge Act of 2001, Pub. L. No. 107-107, 115 Stat. 1379 (2001) (the "Act"), it was specified that the right-of-way was reserved "for the sole purpose of transportation improvements along Indiana Street." Both easement and sale were specified as acceptable means of making the right-of-way available and though "transportation improvements" is not defined in the Act, the right-of-way was to be made available only when a qualified application for such was submitted. A qualifying application would have the following characteristics:

- the applicant must be a political subdivision of the State of Colorado, that being a city, county or otherwise; and

- the application must document that the transportation project will minimize adverse effects on the management of the [Refuge] and is part of the regional transportation plan for the Denver metro area.

Pub. L. No. 107-107, §3174(c).

With this reminder of the few but important conditions under which a transfer of the right-of-way may occur, we now turn to the EA being undertaken by the U.S. Fish and Wildlife Service ("FWS"). In its publicly available materials, FWS has identified three generic alternatives concerning the proposed right-of-way and expansion of the Refuge:

- Direct sale of the right-of-way
- Expansion of the Refuge through acquisition of Section 16
- Exchange of the right-of-way for some combination of property and mineral rights along with extinguishment of mineral leases.

For the reasons noted below, this is a false and misleading characterization of the proposals currently before FWS.

Alternatives are Improperly and Unfairly Defined

FWS is violating its obligations under the National Environmental Policy Act ("NEPA") by generically describing alternatives when it has before it three competing and specific proposals concerning the right-of-way. It is critical to recognize at the outset that while FWS is not limited to evaluating only those alternatives stated in the applications currently pending before it, it does not have the discretion to ignore those specific alternatives in favor of a generalized approach. To do so would render NEPA meaningless.

Accordingly, in addition to other alternatives which may be identified through the scoping process and the three generic alternatives presented publicly by FWS, we insist that FWS evaluate the following proposals as stand-alone alternatives:

- Jefferson Parkway Public Highway Authority's ("JPPHA") offer to purchase the right-of-way for the purpose of constructing a four-lane divided highway to replace Indiana Street (Alternative #1);

- Jefferson County, Boulder County and the City of Boulder's Intergovernmental Agreement (the "IGA") that proposes the exchange of Section 16 ("Alternative #2").
  - We fully recognize that the proposed exchange is contingent upon transfer of the right-of-way to JPPHA; however, the exchange must stand on its own as an alternative with the contingency evaluated as a second step; and

- The City of Golden's proposal to create a bike path along the reserved right-of-way in exchange for either cash or a land exchange of interest to the FWS ("Alternative #3).

It is apparent that FWS has predetermined its desired outcome and structured the alternatives to be considered in the EA in such a way as to render all the benefit to the JPPHA proposal or it would have specifically listed the details of each pending proposal in its list of alternatives. FWS would have the public believe they are proposing a wonderful conservation and Refuge expansion project, one minor side-effect of which is a silly little four-lane divided toll road. FWS must clearly define the actual applications before it as well as theoretical alternatives conjured during the process in order for the NEPA evaluation to have its intended effect.

False Linkages Must be Avoided

In addition to properly defining alternatives, FWS must also avoid creating false linkages between current applications as well as between current applications and alternatives not

presently identified in any pending application. It is patently unfair for the JPPHA application to be evaluated in light of the perceived benefits associated with expansion of the Refuge. FWS must recognize and acknowledge clearly in its evaluation that, while Alternative #2 is dependent upon the happening of Alternative #1 (i.e. the Section 16 land exchange will not happen unless JPPHA wins approval to build its desired highway), the converse is not true. Alternative #1 is in no way dependent upon the Section 16 transfer pursuant to the IGA.

In other words, JPPHA could purchase the right-of-way with no impact on Section 16 whatsoever. In fact, that is the proposal on the table from JPPHA. JPPHA has not relied on Section 16 for mitigation and is prohibited from reliance on Section 16 for mitigation quite clearly because JPPHA does not presently own, nor have we seen evidence that it is willing to acquire, that land or interests associated with that land as part of their proposed transportation improvement. The JPPHA project proponents have not created a link to Section 16; therefore, it is critically important that the FWS not impose a false link where none exists for purposes of consideration of Alternative #1. FWS is prohibited from considering the Section 16 transfer in its evaluation of Alternative #1.

Similarly, Alternative #2, the IGA, must be considered as a stand-alone proposition before being paired with any other alternative, in particular the JPPHA proposal. Only after the Section 16 acquisition and its impacts on the management of the Refuge have been fully evaluated may it then be combined with any other alternative. To analyze the proposals otherwise will introduce prejudice into the process of analysis for any given alternative that is being paired with a conservation or other desirable outcome, as FWS has already done for the JPPHA proposal.

Impacts on the Refuge are Paramount

The Act requires that all alternatives be evaluated in terms of their impacts on management of the Refuge. Specifically, as noted above, the Act requires that the successful application for transfer of the right-of-way, among other things, demonstrate that the contemplated

transportation improvements for which the land is to be made available (i) *are carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge*; and (ii) are included in the regional transportation plan of the metropolitan planning organization designated for the Denver metropolitan area... (emphasis added).

Pub. L. No. 107-107, §3174(e)(2)(B).

The effects on the management of the Refuge cannot possibly be adequately analyzed under FWS' identified alternatives because, for example, as currently structured, they have failed even to consider whether direct sale of the right-of-way is for the purpose of a bike path or a four-lane divided highway. It is not the mere transfer of a 300 foot wide strip of land that is important; rather, it is what impacts on the management of the Refuge will be created based on the actual and intended use of that land. A bike path has a very different impact on wildlife than a four-lane divided toll road. FWS must consider these differences.

Other Alternatives Must be Considered

We commend FWS on its efforts to reach out to the public in an effort to properly scope its NEPA analysis. Unfortunately, the actions of FWS to date have served only to mislead the public. Again, there is a strong conservation bent introduced by FWS' treatment and discussion of Refuge expansion opportunities and possibilities while the true applications for the right-of-way sit idly by in the quiet corner of the room.

There are quite obviously numerous variations and other alternatives to each of the three actual pending proposals noted above as Alternatives 1-3 and the generic combinations of those and other alternatives presented by FWS. We assume that FWS will also receive credible suggested alternatives from interested or impacted parties. The FWS should not constrain itself to the four

corners of the three pending proposals as they exist today when defining the appropriate scope of alternatives in the EA. Other credible alternatives such as transferring the right-of-way to facilitate improvements to Indiana Street should also be considered and evaluated fully.

The ROW Need Not be Transferred Now

It goes unstated that FWS must consider the alternative of taking no action at this time. In furtherance of that, it is important to note that the Act does not set a deadline by which the transportation right-of-way must be transferred. While the right-of-way must be dedicated to transportation improvements, that need only happen when a qualifying proposal is received. As noted, a successful proposal will only be one which minimizes adverse effects on the management of the Refuge. As we will have the opportunity to comment on more in the future, the applications currently before FWS differ wildly in their effects on the management of the Refuge. It is important that FWS not rush into a bad decision simply because it has been asked to make one.

FWS may not Rely on the 2004 EIS

FWS specifically states in its public information materials that "[a]nalysis of the 300'-wide transportation corridor divestiture was completed as part of the Rocky Flats Comprehensive Conservation Plan EIS (2004)." This statement is misleading and should be retracted.

As Superior has expressed previously in written comments, the Final Comprehensive Conservation Plan and Environmental Impact Statement completed in 2004 by ERO Resources, Inc. (the "2004 EIS") did not analyze the impacts associated with the right-of-way transfer currently contemplated in the pending applications. In fact, the 2004 EIS very specifically states:

> **As discussed previously, a detailed analysis of any specific type of**

> **transportation improvement along Indiana Street, such as construction of a four-lane divided highway, is outside the scope of this [EIS].**

2004 EIS, Section 4.16.

Given this language, how can it possibly be more clear that FWS did not conduct a NEPA compliant evaluation of any specific transportation improvement in the designated right-of-way area? Simply, it cannot be more clear. FWS is wrong to rely on the 2004 EIS for evaluation of the specific transportation improvement proposals currently pending.

In conclusion, we must note that we are very troubled by what appears to be a rush to judgment on the part of FWS that the only way it can accomplish its greater conservation goals for the Refuge is to hurry through the process of approving the JPPHA proposal, all the while ignoring the improper linkages and lack of actual enforceable commitments on behalf of numerous entities and organizations identified in the conjured alternatives. We strongly encourage FWS to regroup and redefine the work it has ahead of it in carrying out this EA.

Please let us know if you have questions or require further information.

Best regards,

Andrew Muckle
Mayor

cc: Senator Mark Udall
Senator Michael Bennett
Representative Ed Perlmutter
Representative Jared Polis
Ben Pearlman, Chair, Boulder County Commissioners
Faye Griffin, Chair, Jefferson County Commissioners
Jacob Smith, Mayor, City of Golden
Susan Osborne, Mayor, City of Boulder

Rowan W. Gould, U.S. Fish and Wildlife Service
Steve Guertin, U.S. Fish and Wildlife Service
Sue Oliveira, U.S. Fish and Wildlife Service

July 28, 2011

Mike Dixon, Planning Team Leader
U.S. Fish and Wildlife Service
P.O. Box 25486, DFC
Denver, Colorado 80225

Dear Mr. Dixon:

Thank you for the opportunity to submit Jefferson County's comments on the scoping process for the Rocky Flats National Wildlife Refuge (Refuge) Environmental Assessment (EA).

Section 1.7, Adjacent Land Protection, of the 2004 Rocky Flats National Wildlife Refuge Environmental Impact Statement and Comprehensive Conservation Plan (EIS/CCP) identifies the importance of the protection of lands outside the Refuge's boundary. Specifically, the EIS/CCP states the "protection of the grassland habitat that buffers the Refuge's western boundary (east of Highway 93) is important for the health of ungulate populations that migrate from the foothills down to the prairie." Further, it states "degradation of this habitat may deter wildlife from migrating to the Refuge and threaten existing ungulate populations that reside and/or calve within the Refuge" and allows the United States Fish and Wildlife Service (USFWS) to pursue habitat-protection partnerships.

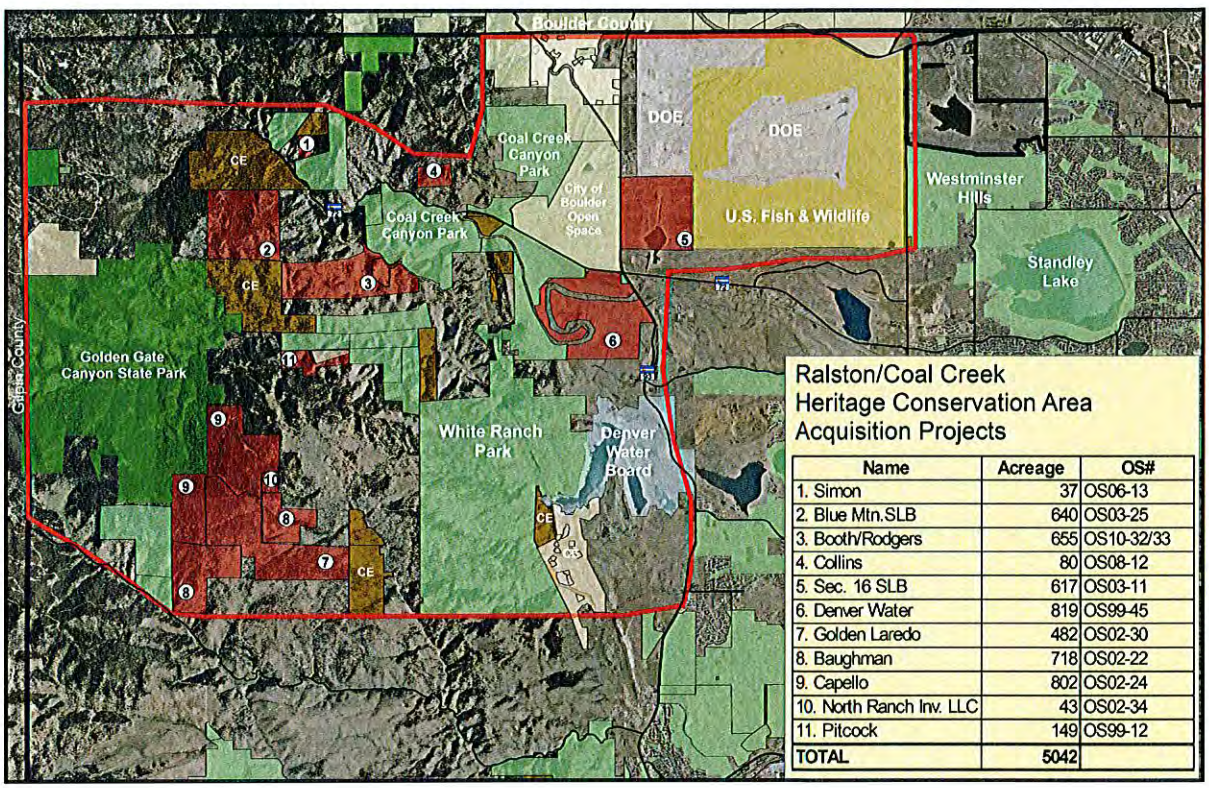
Jefferson County, in collaboration with many entities including Boulder County, the City of Boulder, Colorado State Board of Land Commissioners (State Land Board), the Jefferson Parkway Public Highway Authority (JPPHA), and mineral interest owners, proposes a land exchange (Jefferson Greenway Proposal) that involves the expansion of the Refuge boundary and elimination of private mineral interests in the Refuge. The Jefferson Greenway Proposal is a viable, comprehensive habitat-protection partnership, and should be selected as the EA Preferred Alternative under a Finding of No Significant Impact.

The Jefferson Greenway Proposal would eliminate significant mining encumbrances within the existing Refuge boundaries. The exercise of these existing privately owned mineral rights, particularly surface mining of gravel and other aggregate material, on the Refuge would have an adverse impact on the management of the Refuge. In fact, Section 3177(e)(2) of the Rocky Flats National Wildlife Refuge Act of 2001 (Act) would not be met if certain mineral rights are exercised. Acquisition of these mineral rights was so important to the Federal Government, that the 2006 Defense Reauthorization Act authorized $10 million to purchase essential mineral rights on the Refuge. Jefferson County and its partners have worked with the owners of the essential mineral rights and will be able to protect the Refuge by funding the cancellation of the majority of these rights.

The Jefferson Greenway Proposal would also expand the Refuge to include Rocky Flats Section 16 (Section 16), which is home to rare and endangered plant and wildlife species. For example, the Colorado Natural Heritage Program notes that the bald eagle and Ottoe skipper butterfly make use of Section 16. The Woman Creek drainage on the north end of Section 16

serves as habitat for the Preble's Meadow Jumping Mouse and provides a wildlife movement corridor. A five year-study conducted by ESCO Associates found a rare example of xeric tallgrass prairie on Section 16 that contains more than 50 native species. In general, grasslands are regarded as among the most imperiled ecosystems in North America.

As shown on the map, habitat protection in this region is a major focus area through Jefferson County Open Space's Heritage Conservation Program. Acquisition and preservation of Section 16 will accomplish Jefferson County's goals as well as USFWS goals of enabling wildlife to migrate to and from the Refuge, and sustaining wildlife populations at the interface of mountains and prairies on Colorado's Front Range. It will help ensure open space connectivity from Standley Lake to the Golden Gate Canyon State Park.



Name	Acreage	OS#
1. Simon	37	OS06-13
2. Blue Mtn.SLB	640	OS03-25
3. Booth/Rodgers	655	OS10-32/33
4. Collins	80	OS08-12
5. Sec. 16 SLB	617	OS03-11
6. Denver Water	819	OS99-45
7. Golden Laredo	482	OS02-30
8. Baughman	718	OS02-22
9. Capello	802	OS02-24
10. North Ranch Inv. LLC	43	OS02-34
11. Pitcock	149	OS99-12
TOTAL	5042	

The Jefferson Greenway Proposal is a viable, well-analyzed, and advantageous proposal. It represents over $17 million of property interests conveyed to the United States or removed as encumbrances. The Jefferson Greenway Proposal elements and accomplishments to date are summarized as follows:

1. Jefferson County acquires the McKay clay, gravel, and rock mineral interests in approximately 128 acres of Section 9 within the Refuge's existing boundaries for $2,800,000. The County conveys these mineral interests to the United States.

2. Lafarge West, Inc. (Lafarge) is awarded $3,316,000 of Natural Resource Damages grant funds for the purchase and cancellation of its leased mining interests in portions of the Refuge's existing boundaries. Jefferson County, Boulder County, and the City of Boulder have formally supported Lafarge's proposal and on July 19, 2011, the Trustee Council for Natural Resources at Rocky Flats adopted a resolution approving the Lafarge proposal. $2,566,000 of the grant is contingent on the County's acquisition of the McKay minerals and their subsequent transfer to the United States.

3. The State Board of Land conveys 617 surface acres of Section 16 to the United States for incorporation in the Refuge. The sale price of $9,437,000 would be paid by Jefferson County, Boulder County, the City of Boulder and other contributors. Jefferson County, Boulder County and the City of Boulder have executed an Intergovernmental Agreement dated May 3, 2011, under which Jefferson County has committed $5,100,000, Boulder County $2,000,000, and the City of Boulder $2,000,000 towards transfer of Section 16 to the United States. These partners have been working diligently to secure the remaining funds for the Section 16 surface and other property interests. For example, the City of Arvada has agreed to commit $300,000. Jefferson County is optimistic that within a short period of time the remaining funds will be secured.

4. The State Land Board conveys the Section 16 mineral estate to the United States in exchange for mineral interests to be determined. On June 3, 2011, the State Land Board initiated the disposal of the 617 surface acres of Section 16 to the United States and the exchange of the Section 16 mineral estate with the United States.

5. The Section 16 sand and gravel lease held by Lafarge is acquired and cancelled. Lafarge has offered to sell its rights on Section 16 to Jefferson County, Boulder County, and the City of Boulder for a reduced price.

6. The Section 16 McKay recreation and grazing leases are cancelled. Once Section 16 is conveyed to the United States, a grazing permit is issued to McKay.

7. The JPPHA obtains title to the 300 foot wide transportation corridor (Transportation Corridor) along the eastern edge of the Refuge. The JPPHA has met the conditions of the Act, including the demonstration of available funding for the parkway and its inclusion on the Fiscally-Constrained 2035 Regional Transportation Plan adopted by the Denver Regional Council of Governments, has submitted an application for the divestment of the Transportation Corridor, and has authorized the expenditure of $2.8 million for the Transportation Corridor.

Please note that many financial contributions to the Jefferson Greenway Proposal are contingent on JPPHA receiving the Transportation Corridor.

Given the substantial due diligence and conservation leadership that Jefferson County and its partners have demonstrated relative to the Jefferson Greenway Proposal, the Board of County Commissioners believes this is a viable proposal and has direct benefit to the Refuge, meeting and enhancing the purposes for which the Refuge was established: to restore and preserve native ecosystems; provide habitat for and population management of native plants and migratory and resident wildlife; conserve threatened and endangered species; and provide opportunities for compatible scientific research.

Thank you for the opportunity to comment on the scoping process for the expansion of the Refuge.

Sincerely,

BOARD OF COUNTY COMMISSIONERS

Faye Griffin
Chairman

Donald Rosier

John Odom

BCC/KN/mm

Jefferson Parkway Public Highway Authority
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July 29, 2011

Via Electronic Mail and Hand Delivery
Email: rockyflatsea@fws.gov

Michael D. Dixon, Ph.D.
Planning Team Leader
Division of Refuge Planning
U.S. Fish and Wildlife Service
134 Union Boulevard
Lakewood, CO 80228

Re: Proposed Expansion of the Rocky Flats National Wildlife Refuge

Dear Dr. Dixon:

Introduction

This letter provides the Jefferson Parkway Public Highway Authority's ("JPPHA")[1] comments on the scope of the United States Fish and Wildlife Service's ("Service") Environmental Assessment ("EA") to evaluate the Proposed Expansion of the Rocky Flats National Wildlife Refuge ("Refuge" or "RFNWR"). The JPPHA requests that this letter and all of the attachments, documents referenced in the cited websites and other sources be included in the Service's administrative record for the EA.

Background

At a public meeting held on July 20, 2011, the Service outlined the EA's purpose, process and schedule. This information was presented on several "story" boards and the public was invited to submit comments. *See* Scoping Materials at www.fws.gov/rockyflats/.

According to the scoping materials, the Service is proposing to expand the currently approved acquisition boundary of the Refuge to include nearly six hundred seventeen (617) acres of school lands owned by the Colorado State Land Board ("SLB") on the southwestern border of the Refuge ("Section 16"). The Service has received land exchange proposals that "arose because,

[1] The JPPHA is comprised of the City of Arvada, the County of Jefferson and the City and County of Broomfield. *See* Establishing Contract for the Jefferson Parkway Public Highway Authority dated May 15, 2008, Attachment A. *See also,* The Amended and Restated Establishing Contract for the Jefferson Parkway Public Highway Authority, dated October 4, 2010, Attachment B.

under the [Rocky Flats National Wildlife Refuge Act of 2001], the Service is required to make available a 300-foot wide parcel comprising the refuge's eastern boundary for transportation improvements ["ROW"]." *See* U.S. Fish and Wildlife Service Scoping Materials, July 20, 2011.

Comments on Scope of EA

The JPPHA concurs with the Service's Proposed Action, namely, the expansion of the approved acquisition boundary of the RFNWR with associated potential land exchange opportunities. In addition, the JPPHA believes that the proposals received by the Service, discussed below, along with the required no action alternative, would constitute a reasonable range of alternatives as required by the National Environmental Policy Act ("NEPA") and the Service's NEPA regulations and guidance. The JPPHA also understands that the Service's EA process will result in a decision by the Service whether to proceed with a full Environmental Impact Statement ("EIS") or to issue a Finding of No Significant Impact.

- Jefferson Greenway Proposal

The JPPHA in conjunction with the SLB, Colorado's Natural Resources Trustees ("Trustees"), Jefferson County, the City of Boulder, and Boulder County have worked collaboratively to present a proposal which would exchange the 300-foot ROW for Section 16, including acquisition of the mineral rights and extinguishment of mineral leases on Section 16 ("Jefferson Greenway Proposal"). The Jefferson Greenway Proposal also includes a provision to acquire mineral rights and to extinguish mineral leases on portions of Department of Energy ("DOE") property within the current RFNWR acquisition boundary. We believe that the Jefferson Greenway Proposal should be evaluated as an alternative in the EA.

In the event that the Jefferson Greenway Proposal cannot be accomplished, the JPPHA believes that the Service is obligated by law to sell the ROW directly to the JPPHA:

- Direct Sale of ROW to JPPHA

If the Service were to decide not to select or pursue the Jefferson Greenway Proposal, then the Service is, we believe, obligated by law to sell the ROW directly to the JPPHA and the JPPHA is, as originally planned, fully prepared to purchase the ROW. In a direct sale, the JPPHA would retain space for a pedestrian and bicycle pathway in the ROW corridor and along the entire Parkway from State Highway ("SH") 128 to SH 93. Finally, in a direct sale the JPPHA commitment to mitigate impacts associated with the ROW purchase would remain in place. For these reasons, the JPPHA believes the direct sale option should be evaluated by the Service as an alternative in the EA.

- Golden Proposal

Golden has submitted an application and proposal to exchange the 300-foot ROW for a partial interest in Section 16 or in-holdings elsewhere in the Service's national Refuge system. We assume Golden's proposal, if deemed feasible, will also be evaluated by the Service as an alternative in the EA.

Jefferson Greenway Proposal Complies with the Act

In accordance with the Rocky Flats National Wildlife Refuge Act ("Act"), the Department of Interior ("DOI") shall make "available land along the eastern boundary of Rocky Flats for the *sole purpose of transportation improvements* along Indiana Street"[2] (Emphasis added).

To obtain the 300-foot ROW a governmental entity must submit an application to the DOI, and include "documentation demonstrating that the *transportation improvements* for which the land is to be made available—

(i) are carried out so as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge; and

(ii) are included in the regional transportation plan of the metropolitan planning organization designated for the Denver metropolitan area under section 5303 of title 49, United States Code."[3] (Emphasis added.)

The JPPHA has submitted an application to DOI requesting that the ROW corridor be transferred to it for purposes of development of the Jefferson Parkway. *See* Letter dated January 26, 2010 from Kevin McCasky to Secretary Salazar, Attachment C. The Jefferson Parkway is included in the Metro Vision 2035 Cycle 2-2009 fiscally constrained plan amendments for the Regional Transportation Plan ("RTP") approved by the Denver Regional Council of Governments ("DRCOG") on January 20, 2010.[4]

Most importantly, the Jefferson Parkway meets the intent of Congress that the 300-foot ROW corridor be used for solely transportation improvements and to move forward the completion of the Denver metropolitan beltway.

During Congress' debate on passage of the Act, then-Congressman Udall stated:

> "... transportation issues. Rocky Flats is located in the midst of a growing Area of the Denver metropolitan region. As this area's population continues to grow, pressure is being put on the existing transpirations facilities just outside of the [Rocky Flats] borders. The communities that surround the [Rocky Flats] have been considering transportation improvements in this area for a number of years – *including the potential completion of a local beltway. In recognition of this*, the [Act] allows for some Rocky Flats land along Indiana Street (the eastern boundary

[2] Rocky Flats National Wildlife Refuge Act of 2001, Pub. L. No. 107-107, § 3171, 115 Stat. 1379 (2001) (amended 2006).

[3] *Id.*

[4] *Available at*: http://www.drcog.org/PublicComment/documents/JeffersonParkway_All.pdf and including materials associated with the JPPHA 2009 CY 2 Plan Amendment.

> of [Rocky Flats]) to be used for this purpose under certain circumstances."[5] (Emphasis added.)

Clearly and unequivocally, Congress intended that the 300-foot ROW be transferred to a governmental entity that would "complete the local beltway" – only the JPPHA proposes to build and operate a roadway that would lead to completion of the metropolitan beltway.

In summary, the JPPHA application meets all of the conditions established in the Act and the Service is, respectfully, legally obligated to complete the transfer of the ROW. The JPPHA does not believe that the Golden proposal meets either the express terms or intent of the Act.

Benefits of Jefferson Greenway Proposal

While a singular and direct transfer of the ROW to the JPPHA is well within the Service's legal authority, the JPPHA has worked collaboratively on a complex multi-party agreement exchange the ROW for 617 acres within Section 16.

As indicated above, the Jefferson Greenway Proposal is the result of an agreement among the City of Boulder, Boulder County, Jefferson County, the SLB and Colorado's Natural Resources Trustees ("Trustees"). *See*, Intergovernmental Agreement Between Jefferson County, Boulder County, and the City of Boulder Regarding the Jefferson Parkway and the Acquisition of Section 16, Attachment D; *See also* Letter dated May 5, 2011 from the City of Boulder, Jefferson County and Boulder County to the SLB, Attachment E, (attaching letter to William G. Shafroth, Acting Assistant Secretary for Fish Wildlife and Parks, dated May 5, 2011).

Section 16 has been historically protected from development and will provide significant and long-lasting benefits to wildlife, natural habitat and the people of Colorado. Because of its critical location, the acquisition and perpetual protection of Section 16 would provide security for wildlife, and connections to vital wildlife and plant habitat as well as open space and recreational trail connectivity in the region. Significant acres of tall grass prairie will also be permanently preserved. The Jefferson Greenway Proposal would also transfer mineral rights in Section 16 to the Service thereby providing additional security from development for this valuable land – surface intrusions, such as mine and quarrying activities, will be permanently barred. The Woman Creek drainage, also located in Section 16, is known habitat for the Preble's mouse.

The addition of Section 16 to the Refuge would easily mitigate for the limited impacts from development of the Jefferson Parkway within the 300-foot ROW, including Parkway crossings of Woman Creek.

It should be noted, that current plans for the Jefferson Parkway include maintaining a portion of the ROW available for pedestrian and bike paths for the *entire* length of the Jefferson Parkway

[5] Congressional Record, 107th Congress, First Session, Vol. 147, No. 173, December 13, 2001, p. H10071.

from SH 128 to SH 93. In contrast the Golden proposal would preserve right-of-way for pathways only for the length of the 300-foot ROW along the eastern boundary of the RFNWR.

It is also important to note, that the Jefferson Parkway, will provide multi-modal transportation opportunities for trails and transit, and its design will fully support regional trail and open space connectivity goals for the metropolitan and Front Range region. Stated another way, the exchange of the 99 acres of the ROW for 617 acres of prairie land (and control of mineral rights) is an outstanding net benefit to the Service and the public – a 6 acres for 1 acre benefit to wildlife and plant habitats.

To achieve the benefits of the Jefferson Greenway Proposal the following entities have agreed to undertake certain actions, namely:

(i) the JPPHA will provide $2.8 million towards the Jefferson Greenway Proposal, *See* Resolution of the Board of Directors of the Jefferson Parkway Public Highway Authority Concerning the Acquisition of Real Property in the Rocky Flats National Wildlife Refuge as Right-of-Way, Resolution 11-03, dated January 27, 2011, Attachment F;

(ii) the Trustees have officially agreed to provide cash to acquire sand and gravel leasehold interests on DOE land, *See* Colorado Natural Resource Trustee Resolution 2011-7-19-01, Adopted July 19, 2011, Attachment G;

(iii) Jefferson County will contribute $5.1 million while the City of Boulder and Boulder County will submit $2.0 million each – a total of $9.1 million towards acquisition of Section 16. *See* Attachments D and E.

(iv) the owners of the mineral interests in Section 16 and the DOE properties adjacent to the Refuge would transfer these interests to the Service;

(v) in consideration of the foregoing, among other items, the SLB has agreed to dispose of 617 surface acres and the associated mineral estates in Section 16, *See* Board Order 2011-040, Colorado Board of Land Commissioners, dated June 3, 2011, Attachment H; and,

(v) if the Jefferson Greenway Proposal is selected as the preferred alternative through the NEPA process, the Service would provide a deed to JPPHA for the ROW.

The JPPHA understands that the SLB element of the agreement is fully dependent on the exchange of all 617 acres of Section 16 – a partial transfer of parcels within Section 16 would not meet the obligations of the SLB to properly manage School Lands.

Comments on Golden Proposal

As understood by the JPPHA, there may be several alternatives contained within Golden's proposal. Golden's proposal is based on a $3 million offer that can be used for outright ROW

purchase or a combination of options involving partial purchase of Section 16 and/or land to expand refuges outside of the RFNWR site.

As a matter of law, the JPPHA believes that Golden's application does not meet the requirements of the Act because it is not in DRCOG's approved fiscally constrained RTP. Although the Indiana Street Corridor is shown as a "community bicycle corridor on the RTP (along with miles of other "wish list" trails in the RTP), there is no committed funding at this time. In addition, a bike and pedestrian path does not meet Congress' intent to require transfer of the 300-foot ROW for transportation improvements, that is, to support completion of the metropolitan beltway.

The JPPHA believes it is apparent that none of the alternatives Golden's proposal would provide the benefits to the public, wildlife and habitat that would result from the Service obtaining 617 acres and mineral rights in Section 16 in exchange for the ROW. Under the Golden proposal the residents of Jefferson and Boulder Counties, the City and County of Broomfield and contiguous local entities such as Arvada, Westminster, Superior and even the City of Golden would be deprived of the significant benefits of having all of Section 16 within the Refuge

Golden's proposal focuses on the greenway and open space connectivity provided by a trail along the east side of the RFNWR. *See* Letter from City of Golden to Service, dated July 1, 2011. These benefits, however, are not unique to Golden's proposal. These benefits, and more, would ge gained under the Jefferson Greenway Proposal, including regional benefits from pedestrian and bicycle connectivity for recreation as well as commuter transportation uses.

Although, the Jefferson Parkway design has not yet occurred, the JPPHA has committed to trail crossings and connectivity for existing networks. *See* System Level Study ("SLS"), dated July 2009.[6] The SLS clearly indicates that accommodations are to be made for future trail continuity and connectivity. *See* SLS, pp 4-52 and 4-53. The Jefferson Parkway cross sections also include trail options. *See* SLS, p 1-5. Identification of a location for a trail along the Jefferson Parkway will be occur during project design.

In summary, the multiple benefits of the Jefferson Greenway Proposal include obtaining 617 acres of Section 16, removing mineral leaseholds to provide for perpetual protection, and providing regional connectivity. Extinguishing mineral leases and conveying mineral rights to DOI within the approved Refuge boundary is an added benefit of the Jefferson Greenway Proposal. These benefits far outweigh the limited benefits of any alternative that might be developed from Golden's proposal.

Previous Environmental Studies

In 2004 the Service prepared and issued a Comprehensive Conservation Plan and EIS ("CCP/EIS") which, among other things, considered the environmental effects of the ROW transfer for transportation improvements. The CCP/EIS concluded that such a transfer would

[6] *Available at:* http://www.drcog.org/PublicComment/documents/JeffersonParkway_All.

have no adverse impacts on the management of the Refuge.[7] As noted above, selection of the Jefferson Greenway Proposal and acquisition of Section 16 would provide a significant and substantial mitigation contribution for potential effects on Preble's mouse habitat that might be caused by transfer of the ROW.[8]

The Final CCP/ EIS included a list of environmental impacts associated with land transfer widths ranging from 50 to 300 feet for a variety of resources. The JPPHA has expressed its commitment to work with the Service to mitigate those impacts. *See* Resolution 09-001 of the JPPHA, dated April 16, 2009, Attachment I.

The JPPHA believes that the analysis of the 300-foot ROW divestiture by the Service was fully completed as a part of the Final CCP/EIS and supported by the RFNWR Final CCP Record of Decision.

In addition, the Colorado Department of Transportation ("CDOT") and the Federal Highway Administration conducted a $15 million environmental and planning study that identified 73 alternative alignments, including a "Combined Alternative" for the northwest corridor. CDOT's draft environmental impact statement process was concluded before going final and was subsequently repackaged as the Northwest Corridor Transportation and Environmental Planning Study (TEPS). The July 2008 TEPS fully discloses the environmental analysis for a series of alternatives, including the Combined Alternative.

The Combined Alternative is identified at the "Recommended Alternative" in the CDOT study. The central portion of the Combined Alternative, classified as a tollway, coincides with the proposed alignment of the Jefferson Parkway, including that portion of the Parkway that will utilize the ROW. The CDOT analysis included detailed impacts and mitigation strategies for the entire corridor. This information is readily available and accessible to the Service for consideration in its EA process.[9]

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[7] *Available at*: http://www.fws.gov/rockyflats/Documents/FEIS/Summary.pdf

[8] Note that common project modifications for road and bridge construction projects that impact Preble's habitat include directional boring (to minimize ground-level disturbance), providing connectivity of habitat across highways by installing ledges in piping and culvers, purchasing mitigation land, activity timing restrictions, on-site monitoring of construction activities, and habitat restoration and enhancement. *See* Section 4.2.3, Economic Analysis of Critical Habitat Designation for PMJM in Colorado (IEC) April 2, 2010.

[9] *Available at:* http://www.coloradodot.info/library/studies/northwest-corridor-eis In 2003, the FHWA, in cooperation with CDOT, initiated a NEPA process to study the need, merits, and possible impacts of potential transportation improvements in the Northwest Corridor of the Denver metropolitan area. The NOI to prepare an EIS identified the proposed action as: "an improved connection between the western terminus of the Northwest Parkway in Broomfield County and the SH 58, I-70, or C-470 freeway systems to the south in Jefferson County. This connection is considered necessary to address the need for system linkage, to provide for existing and projected transportation demand, to improve safety, and to enhance modal interrelationships, within the Northwestern Quadrant of the Denver Metropolitan Area." *See* Northwest Corridor Transportation and Environmental Planning Study, July 2008.

Conclusion

The JPPHA believes that the multi-party Jefferson Greenway Proposal provides significant and long-lasting benefits to the people of Colorado, to wildlife and to plant biodiversity and connectivity in the region of the RFNWR. The Jefferson Greenway Proposal will provide multi-modal (bus, bicycle, transit) opportunities for a broad segment of the northwest Denver metropolitan region as well as completing a portion of metropolitan beltway as envisioned by Congress. If the Jefferson Greenway Proposal is not the Service's preferred alternative, the JPPHA is prepared to proceed with the required direct sale of the ROW and to work with the Service to mitigate impacts associated with such purchase.

Thank you for the opportunity to comment on the Service's Proposed Expansion of the RFNWR and the EA process.

JEFFERSON PARKWAY PUBLIC HIGHWAY AUTHORITY

By: Marc Williams, Chair of Board of Directors

cc: Don Rosier, Vice-Chairman, Board of Directors, JPPHA
Patrick Quinn, Secretary/Treasurer, Board of Directors, JPPHA
John Odom- Jefferson County, Board of Directors, JPPHA
Don Allard- City of Arvada, Board of Directors, JPPHA
Walt Spader - City & County of Broomfield, Board of Directors, JPPHA
Lorraine Anderson- RTD Representative, Board of Directors, JPPHA
Ken Lloyd – Regional Air Quality Council Representative, Board of Directors, JPPHA
Bill Ray, JPPHA Interim Director
Senator Mark Udall, United States Senate
Senator Michael Bennet, United States Senate
Congressman Ed Perlmutter, United States House of Representatives
Congressman Jared Polis, United States House of Representatives
Alan J. Gilbert, Senior Advisor to the Secretary, Southwest and Rocky Mountain Regions
William Ryan, Director, Colorado State Land Board
Doug Robotham, Assistant Director of Lands, Colorado Dept. of Natural Resources

STATE OF COLORADO

Governor
John W. Hickenlooper

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Since 1876

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July 28, 2011

Dr. Michael Dixon
Planning Team Leader
Division of Refuge Planning
U.S. Fish and Wildlife Service
P.O. Box 25486, DFC
Denver, CO 80225

RE: Public Scoping Comments relative to Rocky Flats National Wildlife Refuge Environmental Assessment Process

Dear Dr. Dixon:

This letter constitutes the comments of the Colorado State Land Board (SLB) and the Executive Director's Office of the Colorado Department of Natural Resources (DNR) submitted in response to the public scoping phase of the Environmental Assessment process to analyze environmental, social and cultural impacts associated with the proposed expansion of the Rocky Flats National Wildlife Refuge (Refuge) acquisition boundary and the proposed divestiture of a 300-foot wide transportation corridor located along Indiana Street on Refuge's current eastern boundary. We understand the U.S. Fish and Wildlife Service (USFWS) is preparing this Environmental Assessment and is conducting the associated public scoping process pursuant to the National Environmental Policy Act (NEPA).

Purpose and Need for the Environmental Assessment

Council on Environmental Quality regulations require lead federal agencies to specify the purpose and need of NEPA analysis, which generally consists of a concise description of the "underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action. " 40 C.F.R. §1502.13. This discussion is important for general context and understanding as well as to provide the framework in which "reasonable alternatives" to the proposed action will be identified.

For reasons presented in the remainder of this section, the SLB and DNR concur with the USFWS's broadly stated purpose and need for the Environmental Assessment as communicated through written material distributed in advance of the July 20, 2011 public scoping open house in Westminster, Colorado. We are aware that the USFWS is in receipt of at least two separate proposals that address ways to divest ownership of the 300-foot wide transportation corridor located along Indiana Street, consistent with the provisions of Pub. 107-107, §3174(e)(1)(A), both

of which articulate a possible a role for the SLB parcel at Rocky Flats (commonly referred to as Section 16) in completing this divestiture in such a manner "as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge." Pub. 107-107, §3174(e)(2)(B)(i).

The SLB and DNR have been working closely with a large coalition of local governments and private parties since early in 2010 to explore how and under what terms Section 16 might be incorporated into the Refuge. The parties have been seeking to achieve this outcome as a means to realize value for the School Trust, permanently protect the outstanding natural values supported by Section 16, link the Refuge to existing protected open space located to the west of the Refuge's current boundaries for purposes of maintaining a wildlife movement corridor and for other related objectives, and help ensure that any adverse effects on the management of Rocky Flats as a wildlife refuge that may result from transportation improvements along Indiana Street are minimized.

On June 3, 2011, the SLB adopted the attached Board Order 2011-040. This Board Order, which speaks for itself, came on the heels of months of painstaking negotiation and consensus building among a diverse group of public and private stakeholders, and is in response to offers to the SLB of compensatory funding by the City of Boulder, Boulder County, Jefferson County, and other funding sources for the value of 617 acres of Section 16 surface rights. This value has been set by the SLB at $9.437 million.

The same parties offering compensatory funding for the proposed transfer of Section 16 to the United States also have agreed to support a complementary effort by the SLB to exchange all 640 acres of Section 16's sand and gravel subsurface estate to the United States via exchange with the USFWS's sister agency, the U.S. Bureau of Land Management (BLM). This support goes beyond mere lip service: the local governments in question are actively negotiating with the sand and gravel lessee to acquire and extinguish the existing sand and gravel lease on Section 16 so that the aggregate mineral estate can be transferred to the United States in an unencumbered condition, something the United States has communicated as being an essential precondition for its acceptance of any subsurface property interest from the SLB via exchange. The SLB and BLM are in the early stages of implementing this exchange.

In addition, the parties offering compensatory funding to the SLB for the value of the 617 acres of surface rights have also initiated discussions with SLB staff to acquire a conservation easement over the remaining 23 acres of Section 16 that will remain in SLB ownership. These 23 acres are located in the extreme northwest corner of Section 16, where an existing oil and gas well and power substation are located.

Finally, the SLB, in association with DNR and the local governments named above, has been active in promoting and supporting related efforts to acquire privately owned mineral rights and lease rights within the existing Refuge acquisition boundaries for conveyance to the United States, thereby eliminating virtually all remaining threats to plant and wildlife resources along 727 acres of land within the western quarter of the Refuge. Jefferson County and the state and federal Natural Resource Damage Trustees for Rocky Flats have committed funding in the amount of $6.1 million to the acquisition and extinguishment of these mineral rights and leases.

In total, the constellation of transactions briefly described above, if consummated, would add 617 acres of Section 16 to the Refuge, protect via conservation easement the 23 acres of Section 16 that would remain in SLB ownership, and remove existing mining threats to an additional 727 acres of land within the existing Refuge acquisition boundary, resulting in permanent protection of approximately 1,370 acres of land within and adjacent to the Refuge. The value of these

protective conservation actions to the Refuge and to the United States is very conservatively estimated to approach $18 million, exclusive of any additional donation of value from current holders of mineral rights and mineral leases within the current Refuge acquisition boundary. In exchange, the United States would be asked to divest from the Refuge's eastern edge about 100 acres of land that recently appraised at $2.8 million.

The proposed transaction constellation noted above is a well-conceived, feasible, and realistic approach to fulfilling the USFWS's congressional mandate "to make available land along the eastern boundary of Rocky Flats for the sole purpose of transportation improvements along Indiana Street", Pub. 107-107, §3174(e)(1)(A), in such a manner "as to minimize adverse effects on the management of Rocky Flats as a wildlife refuge." Pub. 107-107, §3174(e)(2)(B)(i). It will produce significant environmental benefits to the Refuge and to communities throughout northern Jefferson County and southern Boulder County. As such, it is worthy of evaluation by the USFWS in the respect that it conforms to USFWS' purpose and need, and, in fact should be the touchstone against which other alternatives proposed to meet the stated purpose and need are evaluated.

Alternatives Identification and Evaluation

The SLB and DNR encourage the USFWS to consider the constellation of transactions briefly described above in its identification and evaluation of alternatives. Further, the SLB and DNR stand ready to assist the USFWS in any manner needed and appropriate to accurately characterize this alternative and to analyze its environmental, social, and cultural impacts.

Perhaps the most important point to understand about this constellation of transactions is that the each is linked to the others in mutually dependent and mutually beneficial ways. It has been only by linking the various transactions that diverse parties, whose interests on issues related to Rocky Flats often have been divergent in the past, have been able to set aside historical disagreements to work toward a common purpose.

The SLB and DNR have worked with numerous interested and committed partners to develop a transaction structure that respects the importance of these intricate linkages. Furthermore, SLB believes it is in the best interest of the School Trust to proceed with the transfer of Section 16 and its aggregate mineral estate within the context of the constellation of transactions described above, because only this constellation, and none other that SLB and DNR have been able to identify over the course of months of careful work, ensures the SLB will be not be left with remnant property interests at Section 16 that would be at risk of financial underperformance. Finally, this constellation of transactions holds the greatest potential for ensuring that the SLB's stewardship responsibilities with respect to Section 16 are fulfilled over the long-term. For all these reasons, it is highly unlikely that the SLB will entertain other proposed transaction structures for Section 16 that don't exhibit all these characteristics.

Should you have questions or need elaboration of any of the points made in this letter, please don't hesitate to contact Doug Robotham at 303-866-3311 ext. 8666 or Christopher Smith at 303-866-3454.

Sincerely,

Tobin Follenweider, Deputy Director
Colorado State Land Board

Douglas M. Robotham,
Assistant Director for Lands
Colorado Department of Natural Resources

APPENDIX I

Rocky Flats NWR Land Protection Plan for Section 16 Acquisition

Appendix I
Rocky Flats NWR Land Protection Plan for Section 16 Acquisition

Introduction

Rocky Flats National Wildlife Refuge (NWR) sits at the interface of the Great Plains and Rocky Mountains, about 2 miles from the foothills of the Front Range. It has a somewhat unusual history. It was established in 2001 and came into U.S. Fish and Wildlife Service (Service) stewardship in 2007 following the closure and subsequent cleanup of a nuclear weapons plant operated by the Department of Energy. The establishing legislation, the Rocky Flats National Wildlife Refuge Act of 2001 (Rocky Flats Act), mandated that land up to 300 feet[13] in width extending west from the existing Indiana Street transportation corridor on the Refuge's eastern boundary shall be made available by easement or sale for the sole purpose of transportation improvements. The Rocky Flats Act includes a process for completing this process. The Service must receive applications from any county, city, or political subdivision of the State of Colorado and such applications must be carried out so as to minimize adverse effects on the management of Rocky Flats as a NWR. The transportation improvements must also be included in the transportation plan of the metropolitan planning organization designated for the Denver metropolitan area under 49 U.S.C. 5303.

Purpose for Action

The Service has received applications for acquisition of the 300 foot corridor for transportation purposes that meet the stipulations described in the Rocky Flats Act, and is preparing to dispose of this land as required by law. Parties who wish to use this approximately 100 acre parcel for transportation improvements have proposed exchanging that land for other property in the southwest corner of the Refuge.

This Land Protection Plan (LPP) provides a description of the potential expansion of the Rocky Flats NWR through a land exchange, as outlined in the proposed action of the Environmental Assessment (EA) in the first part of this volume. The Service developed the draft LPP during the planning process to provide a general understanding of the proposed expansion to other government agencies, non-governmental organizations, and the interested public.

Need for Action

In exchange for the property which the Service is obligated to dispose of under the Rocky Flats Act, the Service has the opportunity to protect an important wildlife corridor and rare habitat on the western side of the refuge. This land, hereafter referred to as Section 16, comprises 617 acres and is described in detail in Chapter 3 of the Rocky Flats EA in this volume, but a brief description of the conservation value of this property is included in the Project Description below.

[13] §3174(e) of the Rocky Flats National Wildlife Refuge Act of 2001 (Public Law 107-107, 115 Stat. 1382)

Planning Context

The planning for Rocky Flats NWR began in 2001 with the passage of the Rocky Flats Act, though Rocky Flats did not come into Service stewardship until 2007 following EPA certification of the cleanup of the former DOE Rocky Flats Environmental Technology Site. A thorough Comprehensive Conservation Plan (CCP) was drafted for the then-future Refuge in 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 (USFWS 2004). This EIS included an analysis of the impacts of potential transportation improvements along Indiana Street in the 300-foot-wide transportation corridor. However, submitted proposals for the transfer of that land have included the possibility for exchanging that land for the section 16 property. The exchange of these lands and the expansion of the Refuge's administrative boundary to include section 16 constitute Federal actions subject to review under the National Environmental Policy Act (NEPA). Planning for a NEPA review began in June of 2011. Public scoping comments regarding the Rocky Flats NWR land exchange proposals and boundary expansion were accepted from July 8 through 29, 2011, and an open-house style public meeting was held on July 15. The resulting draft EA is included in this volume. A public meeting on the draft EA will be held on October 13, 2011.

Habitat Protection Alternatives

No Action

The property on section 16 would remain in the stewardship of the Colorado State Land Board as a school trust property.

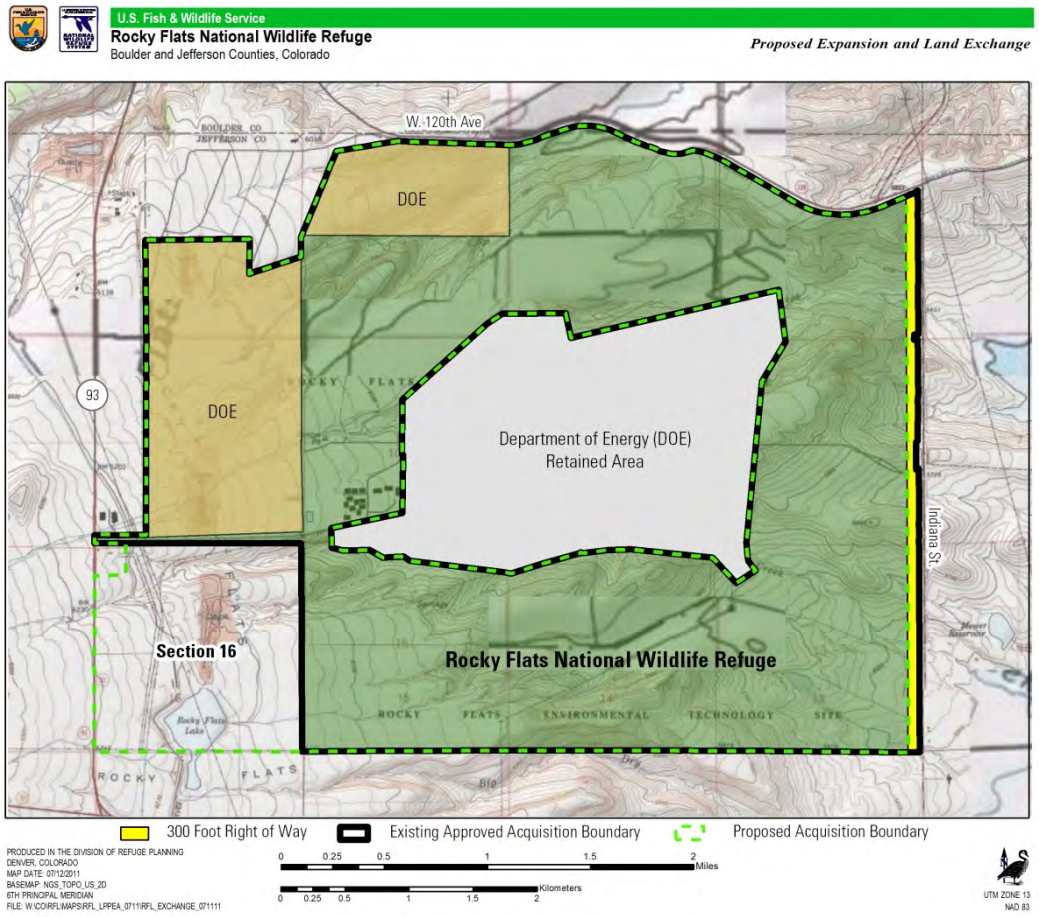
Expansion of Rocky Flats NWR to include Section 16 (Proposed Action)

The administrative boundary of Rocky Flats NWR would be expanded to include 617 acres of section 16. The Refuge would be able to consider a full range of alternatives, including a proposal to exchange the transportation corridor for that land as well as mineral rights on adjacent properties that are already within the approved acquisition boundary which would then become part of the refuge, resulting in a net gain of over 1,000 acres of refuge land. If the land exchange does not happen as proposed, the Service could consider the use of LWCF funding to purchase fee title property or conservation easements in section 16.

Project Description and Proposed Action

The Service proposes to expand the acquisition boundary of Rocky Flats NWR to accommodate the potential acquisition of 617 acres of land and mineral rights in section 16. This project would support a number of the initiatives and recommendations of the America's Great Outdoors report (CEQ et al. 2011). The nature of Rocky Flats NWR as an urban refuge in a large metropolitan area suggests that, if necessary, the use of LWCF funds to acquire section 16 would be appropriate per Recommendation 5.2, "Focus a portion of Federal LWCF funds on projects that achieve AGO goals related to …urban parks and community green spaces", and that the acquisition would be in keeping with the intent of chapter 6, "Establish Great Urban Parks and Community Green Spaces." By permanently protecting a corridor 1-mile wide connecting the refuge to existing public open space, the acquisition of section 16 would fulfill Recommendation 8.2 "Manage Federal lands and waters to increase their resilience to climate change,"

and Recommendation 8.3 “Manage Federal lands and waters to create and protect critical wildlife corridors and maintain landscape connectivity with other public and private stakeholders.”

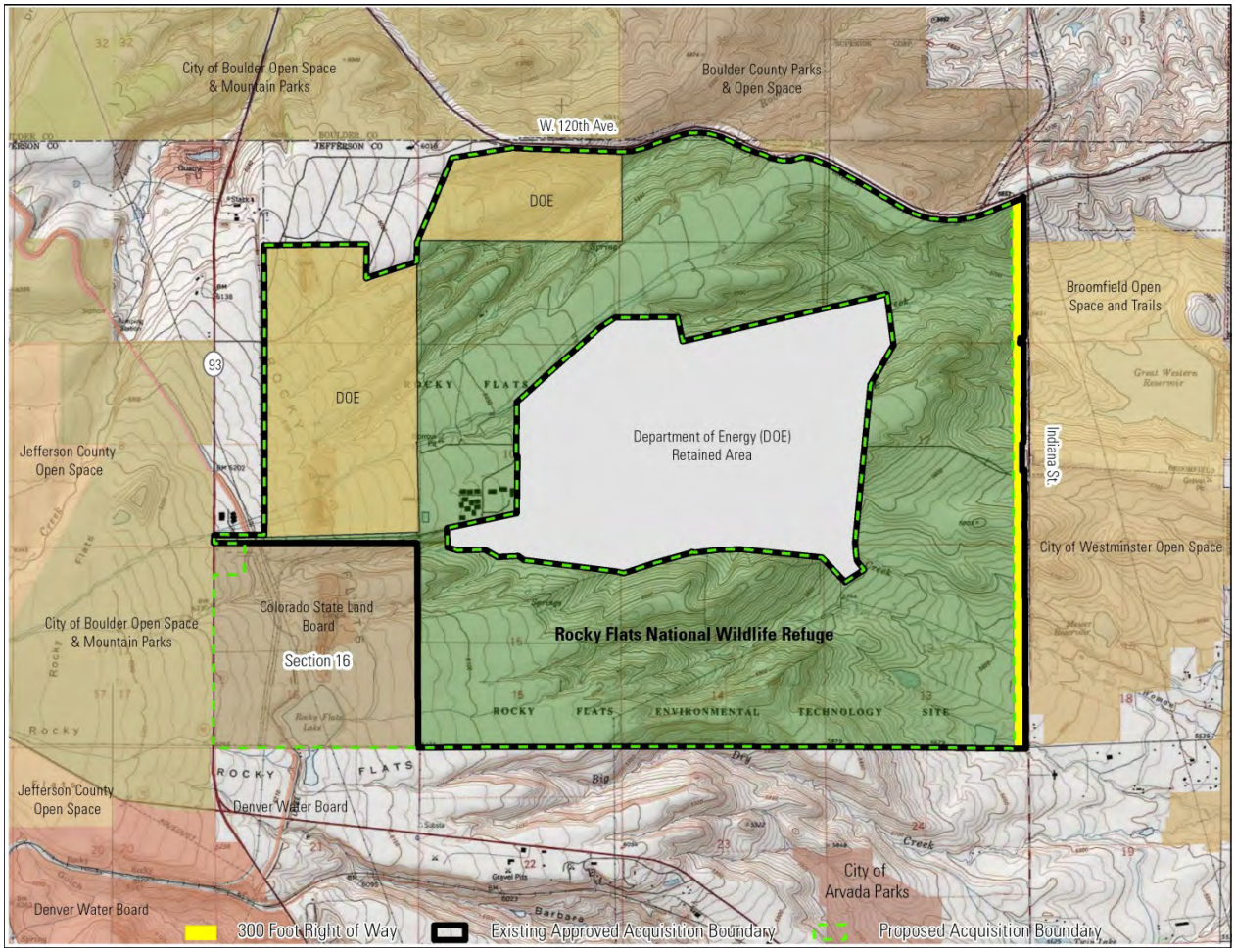


The following biological and socioeconomic standards apply to the proposed acquisition of section 16.

Conserves a Priority Conservation Target

The land cover of the proposed acquisition is quite diverse, but it is dominated by xeric tallgrass prairie, a globally rare plant community that the CNHP has designated as imperiled in the State. It is believed to be a relict of a much broader past distribution when it was contiguous with more mesic tallgrass prairies hundreds of miles east in the Midwest of the U.S. One particular sub-community of xeric tallgrass prairie, the Rocky Flats Bluestem Grassland, is particularly well represented on the site (ESCO 2002). This community has an unusual combination of species from eastern tallgrass prairies, western shortgrass prairies, and plants more commonly found at higher elevations in the Rocky Mountains. It is also noteworthy in its apparent resistance to invasion by exotic plants (Buckner and Odasz in review). The site also contains areas of ponderosa pine/Gambel oak woodland, wetlands, and a riparian corridor, providing a remarkable range of wildlife habitat (USFWS 2004).

The riparian corridor along Woman Creek in the northern portion of section 16 contains known habitat for the Preble's meadow jumping mouse, a Federally threatened species (Federal Register 1998). This habitat is contiguous with existing designated critical habitat on the adjacent Refuge.



Provides Habitat Connections

The proposed acquisition is not specifically described in the current CCP for Rocky Flats NWR, but its potential and value is mentioned:

> *… the Service may pursue habitat-protection partnerships, conservation easements and/or acquisition of lands west of the Refuge. The protection of grassland habitat that buffers the Refuge's western boundary (east of Highway 93) is important for the health of ungulate populations that migrate from the foothills down to the prairie… degradation of this habitat may deter wildlife from migrating to the Refuge and threaten existing ungulate populations that reside and/or calve within the Refuge (USFWS 2005).*

Rocky Flats NWR is currently bordered by an extensive network of protected public open space. However, at present it is not contiguous with any of the open space to the west. The acquisition of land in

section 16 would connect the refuge to these western parks, and thus provide a corridor from the Refuge to the Front Range.

Promotes Biological Integrity and Diversity

Besides containing unusual and rare habitat, Rocky Flats has high plant species richness, with over 600 species of plants having been recorded in the tallgrass and mixed grass prairie and other habitats on the adjacent Refuge. The acquisition of this parcel would safeguard a large portion of this unique species assemblage that remains outside of permanently protected areas. Invasive plant species constitute an ongoing problem in the region, including on the Rocky Flats NWR (Inspector General 2011). Currently, the western portions of the refuge and the section 16 have fewer invasive weeds (Buckner and Odasz in review; M. Dixon personal observation); however, this is unlikely to remain the case without active management, and certainly not if the site is disturbed by further mining. Conservation of section 16 will allow that land to be managed so that it continues to be a healthy ecosystem, and also provide an important native vegetation seed source for reseeding other parts of the Refuge which require more intensive invasive weed control.

Anticipates or Responds to Climate Change

As mentioned above, the land in the proposed acquisition would connect the Refuge to a broad network of existing open space at the base of the Front Range of the Rocky Mountains. One of the primary ecological concerns of climate change is the potential for a loss of diversity due to an absence of suitable intermediate habitat between populations with genotypes that are adapted to specific environmental conditions and the land that will have those conditions under future climate regimes (Loss et al. 2011). This acquisition would protect a path for colonization of the refuge by new species, and ecotypes of existing species, that are adapted to future climatic conditions.

Provides Adequate Water

Rocky Flats Lake, a reservoir on the property, is privately owned and would remain so under the proposed acquisition. section 16 is also crossed by a diversion canal owned by the City of Denver. However, these manmade water sources, as well as marshes formed by seepage from Rocky Flats Lake, do provide year round water resources for resident wildlife in an otherwise arid landscape.

Working Landscapes

The proposed expansion is surrounded by public open space, some of which is grazed by cattle, and section 16 itself currently has an active grazing lease. There would likely be continued rotational grazing on the property as a prairie management strategy.

Urban Refuges

Rocky Flats NWR is managed under Rocky Mountain Arsenal NWR, which also oversees Two Ponds NWR. All three are within the Denver-Aurora-Broomfield, CO Metropolitan Statistical Area. Rocky Flats NWR is also a 10 minute drive from the Boulder, CO Metropolitan Statistical Area. This network of urban refuges provides environmental education and interpretation of natural resources to local school groups and the broader urban population. It also provides invaluable opportunities for wildlife-dependent

recreation such as photography, bird watching, hiking, and fishing. While the Rocky Flats NWR is not currently open to the public because of a lack of appropriations for that purpose, the Rocky Flats CCP states that it will provide for these same recreation and educational opportunities (USFWS 2005a).

Public Use

As mentioned above, Rocky Flats NWR has been closed to the public since its establishment in 2001 due to a lack of appropriations. However, upon the availability of funding, a comprehensive network of trails and interpretive facilities will be constructed, as described in the Rocky Flats NWR CCP (USFWS 2005a).

Special Considerations

The property in the proposed expansion has little potential for special designations because of past land use practices on the site and its presence in an urban area.

There are preexisting but potentially non-compatible activities on the site; namely, there is a surface mineral (gravel) lease on the site that is currently owned by a private entity which is paying advance mining royalties to the State of Colorado to maintain their lease. However, under the terms of a proposed land exchange and donation scheme, that mineral lease would be extinguished and the mineral rights would be conveyed to the United States via exchange.

As part of one of the land exchange proposals, the mineral interests in properties within the current approved acquisition boundary that are currently administered by the Department of Energy (DOE) would be transferred to the United States. Those properties could then be transferred to the refuge as well, in accordance with the following:

> *... the Service will not accept transfer of administrative jurisdiction from DOE for lands subject to the mining of gravel and other aggregate material at Rocky Flats until the United States owns the mineral rights of the land to be transferred to the Service, or until the mined lands have been reclaimed to a mixed prairie grassland community* (USFWS 2004).

Public Attitude, Involvement, and Potential Partners

Because of its Cold War heritage and publicly stated uncertainty by local non-governmental organizations about the thoroughness of the resulting cleanup, there is some public ambivalence about Rocky Flats. Additionally, based upon initial scoping comments for the current NEPA review, there are very strongly held opinions about the potential purpose of the transportation corridor that the Service is required to make available under the Rocky Flats Act. However, nearly all of these comments support the expansion of the Refuge to include section 16.

Because of the unusual nature of this acquisition, the Service does not need to seek partners to assist with the acquisition of this property. However, a coalition of local governments is providing the additional money beyond the value of the transportation corridor purchase portion of Section 16 and its mineral lease, as well as mineral rights on adjacent properties under the stewardship of DOE which would then

become part of the Refuge. The Colorado State Land Board, which owns section 16, is working closely with the Service on this project.

In addition, we are reaching out to local governments and non-governmental organizations to ensure that they are engaged in the planning process for this proposed addition.

Consequences of No Action

As described above, the Service will divest the 300-foot-wide transportation corridor (~100 acres) as required by law. If no action is taken under this proposal, the generated revenue would be returned to the U.S. Treasury and there would be only negative conservation consequences and a net loss for the Refuge. The property on section 16 would remain in the stewardship of the Colorado State Land Board as a school trust property. The State Land Board is charged with using school trust lands to generate revenue for public education, and they often lease mineral rights on these properties toward that end. There is currently a private but inactive surface mineral lease on the property which would likely be exploited if the property is not placed in a formal protected status. There is also an oil lease in the northwest corner of section 16; further energy exploration on the property is possible. Also, at least one municipality in the region has expressed interest in annexing that parcel for development. The lack of alternative areas for development in the northwestern Denver metropolitan area suggests that the threat of development of this land will continue to grow.

Coordination and Consultation

The Service has discussed the potential expansion and land exchange with local and regional conservation organizations and NGOs, and worked closely with other Federal (Department of Energy, U.S. Environmental Protection Agency), State (Colorado State Land Board, Department of Fish, Wildlife, and Parks, and Colorado Department of Public Health and the Environment), and local (City of Arvada, City and County of Boulder, City and County of Broomfield, City of Golden, City of Westminster, Jefferson County, Town of Superior) governments. Tribal governments with aboriginal interest in the Rocky Flats area (Cheyenne and Arapaho of Oklahoma, Northern Arapaho, Northern Cheyenne, Shoshone-Bannock, and Eastern Shoshone) were invited to comment and/or formal consult with the Service.

The Service coordinated internally in developing this EA. Field and regional Service staff conducted the analysis and prepared this document (see section 5.4 of this volume, List of Preparers and Reviewers).

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