



I-70 East

Biological Assessment Addendum

January
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I-70 East Final Environmental Impact Statement

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Appendix

Appendix A. Contact Reports

LIST OF ACRONYMS

BGEPA	Bald and Golden Eagle Protection Act
CDOT	Colorado Department of Transportation
CPW	Colorado Parks and Wildlife
Denver	City and County of Denver
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
IpaC	Information, Planning, and Conservation System
MBTA	Migratory Bird Treaty Act
MLRA	Major Land Resource Area
NRCS	Natural Resources Conservation Service
PACT	Preferred Alternative Collaborative Team
PBA	Programmatic Biological Assessment
PMJM	Preble's meadow jumping mouse
RMA	Rocky Mountain Arsenal National Wildlife Refuge
RTD	Regional Transportation District
SPWRAP	South Platte Water-Related Activities Program
USC	United States Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

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1 PURPOSE OF THIS REPORT

This addendum supports the Biological Assessment prepared in August 2014 for the I-70 East Supplemental Draft EIS. It presents the environmental impacts of the Preferred Alternative (Partial Cover Lowered Alternative with Managed Lanes Option) and compares its effects to those of the No-Action Alternative and Revised Viaduct Alternative, as discussed in the Supplemental Draft EIS. The Partial Cover Lowered Alternative with General-Purpose Lanes Option is discussed only where impacts differ from the Preferred Alternative.

The information contained in the August 2014 Biological Assessment is still pertinent to the No-Action Alternative and the Revised Viaduct Alternative and their associated effects, except where this addendum specifically revises these alternatives. Updated text has been cross-referenced using the page numbers contained within the 2014 Biological Assessment. Where an addendum figure or table updates or adds new data and/or different potential effects to an exhibit contained in the technical report, the figure or table name is followed by “Update to Figure/Table # of the 2014 Technical Report.”

An errata sheet is included in this addendum to show revisions and clarifications to the 2014 Biological Assessment that do not constitute new findings or analysis.

2 ALTERNATIVES UNDER CONSIDERATION

The Final EIS fully evaluates the No-Action Alternative, Revised Viaduct Alternative, and Partial Cover Lowered Alternative for impacts to biological resources in the study area. Descriptions of the No-Action Alternative and Revised Viaduct Alternative are included in the August 2014 Biological Assessment. The Partial Cover Lowered Alternative with Managed Lanes Option is referred to hereinafter as the Preferred Alternative, and is described in the following subsection. A description of the phasing for the Preferred Alternative also is detailed.

2.1 Preferred Alternative

As a result of the comments received on the Supplemental Draft EIS and additional stakeholder outreach and agency coordination, the Partial Cover Lowered Alternative has been refined to include elements of both the Basic and the Modified Connectivity Options of the Partial Cover Lowered Alternative as they were analyzed in the Supplemental Draft EIS. This document includes updated analysis of the refined Partial Cover Lowered Alternative and does not include multiple Connectivity Options.

The Partial Cover Lowered Alternative as it is presented in the Final EIS removes the existing I-70 viaduct between Brighton Boulevard and Colorado Boulevard, lowering the highway below grade in this area. It adds additional lane(s) in each direction from Brighton Boulevard to Tower Road. It also adds capacity from I-25 to Brighton Boulevard by restriping.

This alternative includes a cover over the highway in the vicinity of Clayton Street and Columbine Street. As part of this alternative, 46th Avenue will be located on the north and

south sides of the highway. It will be a two-way street between Josephine Street and Milwaukee Street on both sides of the highway and one way in the other locations. This alternative eliminates the portion of 46th Avenue north of I-70 between Columbine Street and Clayton Street to allow for a seamless connection between Swansea Elementary School and the highway cover. As part of this alternative, access to and from I-70 at the Steele Street/Vasquez Boulevard interchange is maintained.

Lowering I-70 requires capturing offsite surface runoff that currently flows south to north. The offsite drainage system included in this alternative is designed to prevent the lowered section of I-70 from flooding. This storm drain system will be conveyed south of I-70 through Globeville Landing Park and discharge to the South Platte River. Additionally, an onsite drainage system is designed north of I-70 to drain runoff from the highway.

The Preferred Alternative includes an overall approach to design and construction that technically would not preclude construction of a second cover over the highway from west of the Steele Street/Vasquez Boulevard interchange to east of Cook Street. This second cover will not be included as a part of the Preferred Alternative.

The Operational Options of the Partial Cover Lowered Alternative—General-Purpose Lanes and Managed Lanes—remain the same as those analyzed in the Supplemental Draft EIS. They include two scenarios about how the additional capacity with the Build Alternatives will be managed and operated. The General-Purpose Lanes Option will allow all vehicles to use all the lanes on the highway with no restrictions, while the Managed Lanes Option implements operational strategies (such as pricing) for only the additional lanes while keeping the rest as general-purpose lanes. With the Managed Lanes Option, the additional lanes are separated from the general-purpose lanes with a striped buffer and direct connections from the managed lanes to I-225, I-270, and Peña Boulevard are provided.

The Partial Cover Lowered Alternative with Managed Lanes Option is identified as the Preferred Alternative for this project. For more details on the Preferred Alternative, refer to Chapter 3, Summary of Project Alternatives, in the Final EIS.

2.2 Phasing of the Preferred Alternative

Revenue sources for the I-70 East project include allocations from various state and local sources, but there remains a gap between the estimated cost of the project and the revenue available to build it. Because of these funding limitations, the project will be constructed in phases over time. Phase 1 is the only defined phase for the project at this time. Future phases have not been determined and will rely on future funding; therefore, any future phases are referred to as Phase 2.

2.3 Phase 1

Phase 1 incorporates portions of the identified Preferred Alternative, the Partial Cover Lowered Alternative with Managed Lanes Option. It includes all construction and mitigation commitments included in the Preferred Alternative from Brighton Boulevard to Chambers Road.

In general, Phase 1 includes the complete reconstruction of I-70 from Brighton Boulevard to I-270 with pavement width for the addition of two tolled express lanes in each direction. Only one lane will be open for use until traffic demand is met to open the second lane. It also includes widening the remaining stretch from I-270 to Chambers Road to accommodate one additional lane in each direction and restriping from I-25 to Brighton Boulevard.

Phase 1 includes the construction of the highway cover between the Clayton Street and Columbine Street bridges and the associated urban landscape area on the cover. It will reconstruct the frontage roads, 46th Avenue North and South between Brighton Boulevard and Colorado Boulevard and Stapleton Drive North and South between Colorado Boulevard and Quebec Street. Phase 1 also includes the drainage requirements from the Preferred Alternative.

Similar to the Preferred Alternative, Phase 1 includes an overall approach to design and construction that technically would not preclude construction of a second cover over the highway from west of the Steele Street/Vasquez Boulevard interchange to east of Cook Street. However, this second cover will not be included as a part of the Preferred Alternative or Phase 1.

2.4 Phase 2

Phase 2 incorporates the remaining improvements needed for the Preferred Alternative. This phase would stripe in an additional tolled-express lane from Brighton Boulevard to Quebec Street—Phase 1 constructed this section of I-70 wide enough to accommodate the additional lane.

From Quebec Street to Chambers Road, I-70 would be widened for an additional tolled express lane in each direction, one going eastbound and one going westbound. From Chambers Road to Tower Road, capacity is increased by widening to accommodate additional tolled express lanes. Three proposed direct connections are planned from the tolled express lanes to I-270, I-225, and Peña Boulevard to accommodate regional and airport traffic. These direct connections result in a shift of eastbound I-70 to create room for the connections.

3 CHANGES TO APPLICABLE LAWS, REGULATIONS, AND GUIDANCE

There have not been any changes to the applicable laws, regulations, or guidance since the 2014 Biological Assessment.

4 CHANGES TO EXISTING CONDITIONS (UPDATE TO SECTION 4 OF THE 2014 BIOLOGICAL ASSESSMENT)

The 2014 Biological Assessment provides a detailed discussion of the existing conditions in the Biological Assessment study area. Staff members from the Sand Creek Regional Greenway

and the Bluff Lake Nature Center were contacted to get updated information about each of the areas.

The Sand Creek Regional Greenway is a trail and nature area that spans 14 miles from the High Line Canal in Aurora to the Platte River Greenway in Commerce City and intersects the project area just east of Quebec Street. The Greenway facilitates the promulgation of urban wildlife. In addition to those listed in the 2014 Biological Assessment, the Greenway also is visited by white-tailed deer (*Odocoileus virginianus*), Wild Turkey (*Meleagris gallopavo*), red fox (*Vulpes vulpes*), and Egrets. Along the Greenway, Bald Eagles can be sighted using the area for wintering and foraging between the months of November and March. There have not been any documented instances of Bald Eagles using the Greenway for nesting (Kramer, 2014).

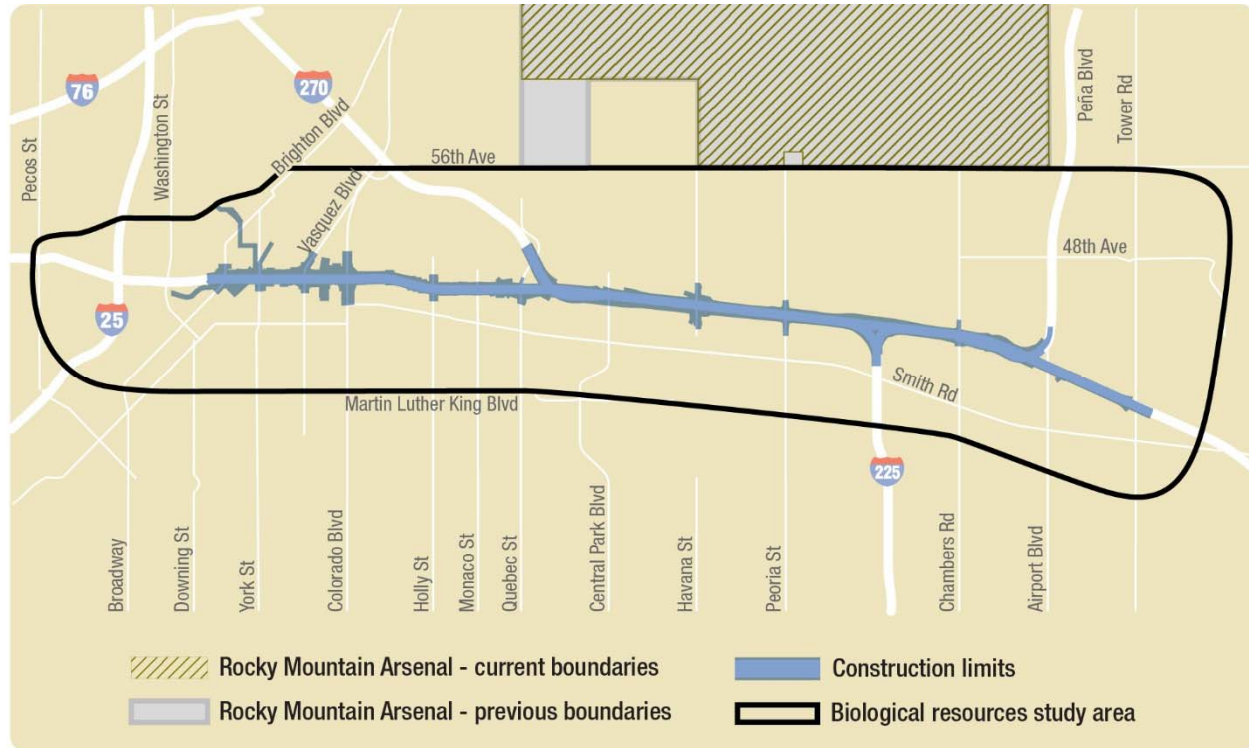
The Bluff Lake Nature Center remains home to urban wildlife listed in the 2014 Biological Assessment, including deer, fox, beaver, reptiles, amphibians, and more. During the most recent consultation, Bluff Lake Nature Center provided a bird list of 158 bird species that have been recorded at or near the Center. The list includes the Ferruginous Hawk, Bald Eagle, and Golden Eagle. Bald and Golden Eagles are known to occupy trees near the Bluff Lake Nature Center during the months between November and March, using the area for wintering and foraging; however, no nesting activity has been documented at the Bluff lake Nature Center (Lamontagne, 2014).

The contact reports for each of the consultations have been attached to this addendum.

Consultation history also was updated as follows:

- Katherine Kramer, the executive director of the Sand Creek Regional Greenway, was contacted by Atkins on October 31, 2014, to discuss the presence of special-status species in the Greenway.
- Jeff Lamontagne, the executive director of the Bluff Lake Nature Center, was contacted by Atkins on November 13, 2014, to discuss the presence of special-status species at the Center.

The boundaries for the Rocky Mountain Arsenal National Wildlife Refuge (Refuge) were modified in this study to reflect the existing Refuge limits. The boundary change is shown in Figure 1.

Figure 1. Rocky Mountain Arsenal National Wildlife Refuge boundary changes

Source: USFWS Geospatial Services

5 EFFECTS ANALYSIS (UPDATE TO SECTION 5 OF THE 2014 BIOLOGICAL ASSESSMENT)

The 2014 Biological Assessment provides a detailed discussion of effects of the No-Action Alternative and the Revised Viaduct Alternative discussed in the Supplemental Draft EIS. The discussion below supplements the previous Biological Assessment and discloses the effects of the phased Preferred Alternative, comparing it with the full build of the Partial Cover Lowered Alternative detailed in the Final EIS, using new text and new or updated exhibits where appropriate.

5.1 Impacts from the Partial Cover Lowered Alternative (Update to Section 5 of the 2014 Biological Assessment)

The following species listed by the USFWS with potential to occur in the project area are discussed in more detail in the 2014 Biological Assessment. The following section focuses on the potential direct and indirect effects and the likelihood for them to occur.

5.1.1 Ute ladies'-tresses orchid and Colorado butterfly plant

The most promising habitat for Ute ladies'-tresses orchids (*Spiranthes diluvialis*) and Colorado butterfly plant (*Gaura neomexicana* ssp. *Coloradensis*) in the project area continues to be within riparian and wetland habitats along Sand Creek. The Partial Cover Lowered Alternative will range in direct, permanent impacts, due to bridge widening, of an estimated

0.628 acre to 0.804 acre (total project riparian impacts of 1.025 acres to 1.298 acres) to riparian habitat, depending on the General-Purpose Lanes Option or the Managed Lanes Option. Additionally, impacts to wetland habitat will range from 0.098 acre to 0.104 acre (total project wetland impacts of 4.352 acres to 4.442 acres) at Sand Creek. Overall, the likelihood for Ute ladies'-tresses orchids or Colorado butterfly plant to occur along Sand Creek, or any part of the project area, is low; therefore, the probability of direct or indirect impact also is low. Due to the general lack of suitable habitat and its likely absence from the project area, no cumulative effects to either species are anticipated.

Because potentially suitable habitat for the Ute ladies'-tresses orchid and the Colorado butterfly plant does exist in the project area, but no sightings of either plant have been reported for Denver or Adams Counties, they have not been observed in the project area, and habitat quality in the project area has been previously degraded, the determination for the I-70 East project is that it ***“may affect, but is not likely to adversely affect”*** either of these species. This determination remains valid from the 2014 Supplemental Draft EIS.

5.1.2 Bald Eagle

The impacts to Bald Eagle (*Haliaeetus leucocephalus*) wintering range for all alternatives are estimated to be 21.8 acres. Figure 2 shows the wintering range for Bald Eagles extending south from the Rocky Mountain Arsenal National Wildlife Refuge through the project construction limits to Sand Creek. There is one known nesting location on the Refuge, existing approximately 1.5 miles north of the project study area (CPW Public SAM Data, 2014).

Bald Eagles typically are observed near water, such as reservoirs and large rivers. During the breeding season, they nest in large cottonwood trees and in winter often communally roost in large trees. They eat fish, waterfowl, muskrats, squirrels, rabbits, prairie dogs, and often eat carrion and road-killed animals (CPW, 2015). Black-tailed prairie dog towns are known to occur along the I-70 East corridor; however, no formal surveying has been completed. Impacts to black-tailed prairie dogs could potentially reduce prey base for Bald Eagles. Prairie dog towns located within the study area exist in close proximity to I-70, causing them to be of marginal to value to Bald Eagles and likely avoided by the raptors.

If Bald Eagles are present during project implementation, they should not be agitated or bothered to the degree that causes or is likely to cause, based on the best scientific information available:

1. Injury to an eagle (injury is defined as a wound or other physical harm, including a loss of biological fitness significant enough to pose a discernible risk to an eagle's survival or productivity)
2. A decrease in eagle productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior
3. Nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior

Based on the existing built-up urban environment, lack of breeding and roosting areas in the immediate project area, the location and poor quality of foraging habitat that would be

impacted, and the fact that I-70 East is an existing roadway facility, it is determined that implementation of the proposed project **would not result in “taking” of Bald Eagles**, as described in the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). The determination and rationale for Bald Eagles in the 2014 Biological Assessment remains valid.

Figure 2. Designated Bald Eagle winter range (Update to Figure 5 of the 2014 Biological Assessment)



Source: CPW Public SAM Data, 2014

5.2 Impacts of the Preferred Alternative by Phase

5.2.1 Phase 1

Phase 1 does not consist of any improvements to the bridge spanning Sand Creek, but will widen the roadway east of Quebec to account for shoulder widening and restriping. Impacts during this phase are to areas that are already primarily disturbed or impermeable.

During Phase 1, the project will have 3.1 acres of permanent, direct impacts to the Bald Eagle winter range. Much of the area is already impacted by the existing I-70 corridor, making it of marginal value to Bald Eagles. However, along I-70, impacts to black-tailed prairie dog towns are anticipated, which could potentially cause a slight decrease to the raptors' prey base in the area.

Impacts to riparian areas will be minimal compared to Phase 2. Total permanent impacts for Phase 1 will be 0.363 acre and temporary impacts will total 0.152 acre. The probability of the Ute-ladies' tresses orchid and the Colorado butterfly plant existing in these areas are low.

Effect determinations to the listed plants are discussed in section 6.1. Riparian impacts for Phase 1 are summarized in Table 1.

Table 1. Impacts to riparian areas by the Preferred Alternative, Phase 1

Waterbody	Feature ID	Preferred Alternative (acres)	
		Permanent	Temporary
South Platte River Riparian	Rip_N_Culv_03	0.014	0.011
	Rip-S_Culv	0.048	0.012
Sand Creek Riparian	Rip278-06	0.063	0.028
	Rip278-07	0.002	0.006
	Rip278-08	0.052	0.032
Other	Rip279-01	0.185	0.063
Riparian Impact Total		0.363	0.152

Note: Impacts were calculated based on conceptual design and are subject to change.

5.2.2 Phase 2

The impacts associated with Phase 2 will include construction of on/off ramps and road widening to add additional general-purpose lanes and managed lanes. Impacts to Sand Creek will take place in Phase 2 in the form of shading of vegetation and cut/fill for the placement of bridge piers in riparian areas, wetlands, and open water. The impacts to these areas near Sand Creek are expected to be minimal.

Phase 2 will impact 18.8 acres to Bald Eagle winter range over the existing I-70 and on/off ramps. The area is degraded area and is of marginal value to the Bald Eagle, similar to Phase 1. Phase 2 will have additional impacts to black-tailed prairie dog towns beyond those described for Phase 1.

The majority of the work near Sand Creek will be completed in Phase 2. During this phase of construction, total impacts to riparian areas will be 0.934 acres of permanent impacts and 0.223 acres of temporary impacts. The Ute-ladies' tresses orchid and the Colorado butterfly plant are known to occur in riparian and wetland habitats, but are not likely to exist within the project area due to degradation. Effect determinations are discussed in Section 6.1. Phase 2 riparian impacts are summarized in Table 2.

Table 2. Impacts to riparian areas by the Preferred Alternative, Phase 2

Waterbody	Feature ID	Preferred Alternative (acres)	
		Permanent	Temporary
Sand Creek Riparian	Rip278-04	—	0.001
	Rip278-06	0.192	0.026
	Rip278-07	0.013	—
	Rip278-08	0.129	—
	Rip278-09	0.353	0.055
Other	Rip279-01	0.069	0.063
	Rip281-01	0.178	0.077
Riparian Impact Total		0.934	0.223

Note: Impacts were calculated based on conceptual design and are subject to change.

5.3 Comparison of Impacts of the Partial Cover Lowered Alternative with the Other Alternatives

5.3.1 No-Action Alternative

Due to the urbanized nature of the study area between Brighton Boulevard and Colorado Boulevard, replacement of the existing viaduct and construction of an offsite drainage system north of I-70 is expected to have negligible impacts to roadside vegetation. East of Colorado Boulevard, the No-Action Alternative consists of standard maintenance practices and also is expected to have negligible vegetation impacts. No wetland areas are expected to be impacted; however, there will be minimal impacts to riparian areas during the construction of an offsite drainage outfall to the South Platte River on the north side of I-70. This alternative would not impact Bald Eagle winter range or black-tailed prairie dog towns in the study area.

5.3.2 Build Alternatives

Similar to the No-Action Alternative, the western end of the corridor (Brighton Boulevard to I-270) is more urbanized, so both Build Alternatives are expected to have negligible impacts to vegetation in this area. From I-270 to Tower Road, roadway widening will directly impact roadside vegetation. Impacts to roadside vegetation are expected to be greater under the Managed Lanes Option compared to the General-Purpose Lanes Option because the overall footprint is wider on the eastern portion of the project.

Riparian areas will be affected by construction of the Build Alternatives, as shown in Table 3. The Build Alternatives also will impact wetland areas and are discussed in more detail in Section 5.15, Wetlands and Other Waters of the U.S, in the Final EIS. Total permanent impacts to riparian areas range from 0.977 acre to 1.298 acres depending on the Build Alternative and associated options. The difference in impacts between the Build Alternatives is a result of the offsite drainage system south of I-70, which will be constructed as part of the Partial Cover Lowered Alternative and result in an additional 0.048 acre of permanent impact and 0.012 acre of temporary impact to riparian habitat along the South Platte River.

Table 3. Projected impacts to riparian areas caused by the Build Alternatives

Alternative	Riparian Impacts (acres)	
	Permanent	Temporary
No-Action Alternative	0.014	0.011
Build Alternatives, General-Purpose Lanes Option		
Revised Viaduct Alternative	0.977	0.222
Partial Cover Lowered Alternative	1.025	0.234
Build Alternatives, Managed Lanes Option		
Revised Viaduct Alternative	1.249	0.241
Partial Cover Lowered Alternative	1.298	0.253

Note: Impacts were calculated based on conceptual design and are subject to change.

The majority of the permanent impacts to riparian areas occurs along Sand Creek and will be caused by on/off ramps over Sand Creek and roadway widening. An additional 0.272 acre of permanent impact will occur to Sand Creek riparian areas with the Managed Lanes Option. Temporary riparian impacts in the Sand Creek area will be an additional 0.020 acre for the Managed Lanes Option than each of the General-Purpose Lanes options. Permanent impacts will occur from the addition of new bridge piers, as well as through direct shading of vegetation near Sand Creek. Direct fill-related impacts from bridge piers are minimal within Sand Creek. Permanent fill-related impacts from bridge piers will total roughly 0.001 acre of waters of the U.S., including wetlands and 0.002 acre of riparian areas.

Indirect, permanent impacts at Sand Creek will result from interception of precipitation and shading, both of which affect vegetation growth. Temporary, construction-related impacts (such as site disturbance) to riparian areas from the No-Action Alternative and the Build Alternatives are similar. A comparison of impacts between the project alternatives is provided in Table 4.

Table 4. Comparison of impacts from the Partial Cover Lowered Alternative with the other alternatives

Alternative/Option	Impacts to Wildlife Habitat ¹	Impacts to Riparian Areas	Impacts to Bald Eagle Winter Range
No-Action Alternative	3.5 acres of permanent, direct impact to wildlife habitat	0.014 acre of permanent and 0.011 acre of temporary impacts to riparian areas	No direct impacts
Revised Viaduct Alternative, General-Purpose Lanes Option	313.9 acres of permanent, direct impacts to wildlife habitat	0.977 acres of permanent and 0.222 acre of temporary impacts to riparian areas	21.8 acres

Table 4. Comparison of impacts from the Partial Cover Lowered Alternative with the other alternatives

Alternative/Option	Impacts to Wildlife Habitat ¹	Impacts to Riparian Areas	Impacts to Bald Eagle Winter Range
Revised Viaduct Alternative, Managed Lanes Option	365.2 acres of permanent, direct impacts to wildlife habitat	1.249 acres of permanent and 0.241 acre of temporary impacts to riparian areas	21.8 acres
Partial Cover Lowered Alternative, General-Purpose Lanes Option	317.0 acres of permanent, direct impact to wildlife habitat	1.025 acre of permanent and 0.234 acre of temporary impacts to riparian areas	21.8 acres
Partial Cover Lowered Alternative, Managed Lanes Option	368.3 acres of permanent, direct impact to wildlife habitat	Additional 1.298 acres of permanent impacts and 0.253 acre of temporary impacts to riparian areas	21.8 acres

Note: Total impact calculations do not account for overlapping wildlife areas.

6 MITIGATION

There are no direct effects anticipated to hooved and other large mammals, water birds, or fish within the study area due to the project alternatives, so no mitigation is currently planned for these resources. Two small vertebrates—a reptile (garter snake) and an amphibian (northern leopard frog)—may be directly impacted; however, mitigation for impacts to riparian areas will offset potential impacts to these species. Impacts to riparian areas will be mitigated in accordance with Senate Bill 40, limited to the area necessary for construction, and replaced upon completion, per the Guidelines for Senate Bill 40 Wildlife Certification Developed and Agreed Upon by Colorado Parks and Wildlife and the Colorado Department of Transportation (April 1, 2013).

Mitigation measures are outlined to prevent or minimize potential indirect effects to migrating birds, Bald Eagles, prairie dogs, and Burrowing Owls. Mitigation for effects to black-tailed prairie dogs will be conducted in accordance with the CDOT Impacted Black-Tailed Prairie Dog Policy (2005).

- In the case of prairie dog colonies less than two acres, CDOT will avoid and minimize effects to the greatest extent possible. This includes relocating prairie dogs, as long as the relocation will not affect other resources—such as wetlands or historic properties—and is not cost prohibitive. Relocation of colonies larger than two acres will be conducted in accordance with CRS 35-7-203. If an adequate site cannot be located for colonies larger than two acres, the prairie dogs will be captured and donated to a raptor rehabilitation facility or black-footed ferret reintroduction program. CDOT will not, at any time, authorize any earth-moving activities that result in the burying of living prairie dogs. If necessary, CDOT will coordinate with

CPW to facilitate the humane killing of prairie dogs within a town less than two acres in size. On January 15, 2009, the Impacted Black-Tailed Prairie Dog Policy was amended, eliminating the requirement to notify and receive approval from the Food and Drug Administration (FDA) prior to the relocation of prairie dogs (CDOT, 2009). However, CDOT will still coordinate with CPW before the manipulation of prairie dogs or their colonies.

- If construction in prairie dog colonies occurs during Burrowing Owl nesting season (February 1 to August 31), a survey following CPW protocols will be conducted no more than 30 days prior to construction. If a nesting pair is discovered, no construction activity will occur within 150 feet of the nest, between March 15 and October 31.

Mitigation for Bald Eagles and all migratory birds will be conducted in accordance with the Migratory Bird Treaty Act of 1918. Measures will be taken to ensure that effects are minimized.

The following mitigation measures for the protection of migratory birds also will be adhered to (see CDOT Standard Specifications, Section 240):

- A qualified wildlife biologist will be retained for the project.
- Vegetation removal or trimming activities will be timed to avoid the migratory bird-breeding season, which begins on April 1 and runs to August 31.
- All areas scheduled for clearing and grubbing, and within 50 feet of such areas, between April 1 and August 31, will first be surveyed for active migratory bird nests within seven days of the work being performed. The contractor's wildlife biologist also will survey for active migratory bird nests within 50 feet outside construction limits.
- CPW must be contacted if any nests must be moved or are inadvertently destroyed.
- The contractor will avoid all active migratory bird nests. The contractor will avoid the area within 50 feet of the active nests or the area within the distance recommended by the biologist until all nests within that area have become inactive.
- On structures, the contractor will remove existing nests after August 31 and prior to April 1.
- During the time that the birds are trying to build or occupy their nests, between April 1 and August 31, the contractor will monitor the structures at least once every three days for any nesting activity.
- If the birds have started to build any nests, they will be removed before the nest is completed. Water will not be used to remove the nests if nests are located within 50 feet of any surface waters.
- The taking of a migratory bird will be reported to the engineer. The contractor will be responsible for all penalties levied by the USFWS for the taking of a migratory bird.

To manage and minimize the proliferation of noxious weeds and preserve existing vegetation within the study area, the following measures will be taken:

- An Integrated Noxious Weeds Management Plan will be prepared and implemented prior to construction activities.
- Monitoring of disturbed sites will be required during the construction periods to identify and treat any noxious weed invasion.
- Contractor's vehicles and equipment will be inspected before they are used for construction to ensure that they are free of soil and debris capable of transporting noxious weeds, seeds, or roots.
- Equipment will be cleaned prior to entering the construction site to prevent the spread of noxious weeds by wind, water, or accidental transport on construction vehicles.
- Topsoil will consist of loose, friable loam free of subsoil, refuse, stumps, roots, rocks, brush, noxious weed seed, and reproductive vegetative plant parts, such as, but not limited to, knapweed, purple loosestrife, Canadian thistle, heavy clay, hard clods, toxic substances, or other material that will be detrimental to its use on the project.
- Disturbed areas will be reclaimed in phases throughout construction with native grasses and forbs.
- In accordance with the Colorado Weed Free Forage Crop Certification Act, mulches or straw bales used for erosion control purposes will be certified weed free.
- All seed mixes, soil, and nursery material used for reclamation will be free of noxious weed seeds, roots, and rhizomes.
- No fertilizer will be used onsite.
- Herbicides will be applied by use of wicks or sponges and spot spraying to avoid off-target injury.
- Broadcast herbicide spraying will only be approved through written consent of the engineer.
- In compliance with Senate Bill 40, each riparian tree removed during construction will be replaced at a 1:1 ratio. All riparian shrubs removed during construction will be replaced at a 1:1 square foot ratio.

Botanical surveys of riparian and wetland habitat in projected impact areas at Sand Creek will be conducted by a qualified biologist during the appropriate summer months (when the plants are blooming) prior to construction initiation for the Ute ladies'-tresses orchid and the Colorado butterfly plant. If either species is identified, formal consultation will be completed with the USFWS prior to construction.

6.1 Mitigation Commitments for the Preferred Alternative by Phase

Mitigation measures for the Phase 1 project will include all mitigation identified for the Preferred Alternative.

7 BIOLOGICAL ASSESSMENT ERRATA

The following table shows revisions and clarifications to Attachment L, 2014 Biological Assessment of the I-70 East Supplemental Draft EIS that do not constitute new findings or analysis:

Page	Section	Current Text	Corrected Text/Clarification
2	1.3 Report Overview Table 1	Table 1	<p>Mexican Spotted Owl added to Table 1:</p> <p>Birds</p> <p>Species: Mexican Spotted Owl (<i>Strix occidentalis</i>)</p> <p>Federal Status: Threatened</p>
3	1.3.1 Block clearance zones	<p>Block clearance zones for four species are located in the project area. Block clearance zones are areas in which the USFWS has determined—through analysis of species survey data and occurrence information—there is a very low probability of the species occurring and from which the species is likely extirpated. Within the project area, block clearance zones exist for the black-footed ferret (<i>Mustela nigripes</i>), Colorado butterfly plant, Preble’s meadow jumping mouse, and Ute ladies’-tresses orchid (see Appendix A). The block clearance for the black-footed ferret covers the entire eastern portion of Colorado. The block clearance for the Colorado butterfly plant and the Ute ladies’-tresses orchid covers the area immediately adjacent to the South Platte River. The block clearance for the mouse covers the Denver metropolitan area, with an exception of the Rocky Mountain Arsenal National Wildlife Refuge (USFWS, 2012c).</p> <p>Because the block clearances for the black-footed ferret and Preble’s meadow mouse cover the entire project area, these species are not considered further in this document.</p>	<p>The following species of concern have been block cleared in the Denver Metro area, which includes the entire project area:</p> <ul style="list-style-type: none"> • Black-Footed Ferret • Preble’s Meadow Jumping Mouse <p>Because the block clearances for these species cover the entire project area, these species were not considered further in the Biological Assessment and were given a determination of effect of “No effect.” These species have not been included in Section 5.13, Biological Resources, of the Final EIS.</p> <p>The following species have block clearances in a portion of the project area:</p> <ul style="list-style-type: none"> • Colorado butterfly plant • Ute ladies’-tresses orchid <p>Although there have been no documented occurrences, suitable habitat occurs along Sand Creek. These species have been included in Chapter 5.13, Biological Resources, of the Final EIS for further evaluation. The determination of effect for both species is “May affect, not likely to adversely affect.”</p>

Page	Section	Current Text	Corrected Text/Clarification
13	5.4 Conclusion and determination Table 3	Table 3	Mexican Spotted Owl added to Table 3. Birds Species: Mexican Spotted Owl (<i>Strix occidentalis</i>) Federal Status: Threatened Determination of Effects: No effect Basis for Determination: Suitable habitat is not present within the project area.

8 REFERENCES

Bluff Lake Nature Center (2014). Lamontagne personal communication. (Contact report provided in Appendix B).

Colorado Parks and Wildlife and Colorado Department of Transportation (2013). *Guidelines for Senate Bill 40 Wildlife Certification*. Retrieved from: <https://www.codot.gov/programs/environmental/wildlife/guidelines/sb-40-wildlife-cert-guidelines-june-2013>

Colorado Parks and Wildlife (2014). Public species activity mapping data. Retrieved December 4, 2014, from: <http://www.arcgis.com/home/search.html?q=Colorado%20Parks%20and%20Wildlife&t=groups>

Colorado Parks and Wildlife (2015). Species profiles: Retrieved February 2015 from: <http://cpw.state.co.us/learn/Pages/SpeciesProfiles.aspx>.

Rocky Mountain Arsenal National Wildlife Refuge (2014). Kramer personal communication. (Contact report provided in Appendix B).

U.S. Fish and Wildlife Service (USFWS) Geospatial Services (2014). Retrieved November 19, 2014, from: <http://www.fws.gov/GIS/data/CadastralDB/index.htm>

**Attachment L – Appendix A.
Contact Reports**

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Contact Report

Author: Lukas Schroeder **Date/Time:** 11/13/2014

Subject: Bluff Lake Nature Center Special Status Species and Wildlife

Person(s) Contacted:		Type of Contact:
Name/Title: Jeff Lamontagne/Executive Director		Phone
Company: Bluff Lake Nature Center		Email
Address:		Telephone
E-mail: jlamontagne@blufflake.org		
Phone #: (303) 517-6368		Other

Report

I contacted Mr. Lamontagne to obtain updated information concerning special status species and other general wildlife at the Bluff Lake Nature Center. He informed me that bald eagles and golden eagles have been sighted near the center and that neither species use the location as a nesting place. Bald Eagles can be sighted near the center from November through March at the location.

In addition, he also said that many of the other general species that were mentioned for the Sand Creek Regional Greenway make the Bluff Lake Nature area their home, with the exception of the wild turkey. However, he has seen wild turkey very near to the property.

The Bluff Lake Nature Center has a native shortgrass prairie that Mr. Lamontagne said was expanding slightly and appears to be getting healthier and healthier.

Actions/Recommendations

Item	Date Completed
Received an updated bird list with 158 different species listed.	N/A

Contact Report

Author: Lukas Schroeder **Date/Time:** 10/31/2014 9:45AM
Subject: Sand Creek Regional Greenway Special Status Species and Wildlife

Person(s) Contacted:	Type of Contact:
Name/Title: Kate Kramer/Executive Director	In Person
Company: Sand Creek Regional Greeway Partnership	
Address: 7350 E. 29th Ave., Devner, CO 80238	Telephone
E-mail:	Other
Phone #: (303) 468-3263	

Report

I contacted Ms. Kramer to obtain updated information concerning special status species and other general wildlife at the Sand Creek Regional Greenway. She informed me that bald eagles winter at the greenway, especially near Morrison Nature Center on Star K Ranch and Bluff Lake Nature Area. Bald Eagles can be sighted from November through March at these locations. She also mentioned that there was a Bald Eagle nest sighted near Buckley Air Force Base, which is just south east of the project areas eastern limit. The nest has since blown down.

In addition, she was also aware that there may be Golden Eagles near Bluff Lake Nature Center. Ms. Kramer recommended I contact the Nature Center to receive verification since they are onsite every day. Other general species that Ms. Kramer had knowledge of that made Sand Creek Regional Greenway their home, in addition to those that were mentioned in the previous coordination, are egrets, red fox, and wild turkey.

Actions/Recommendations

Item	Date Completed
Contact Bluff Lake Nature Center abuot Golden Eagles	