

May 21, 2013

Biological Resource Report

Interstate 70 Bridge Over Havana Street
Denver, Colorado

Prepared For:

Parsons Transportation Group, Inc.
1700 Broadway Street, Suite 900
Denver, Colorado 80290

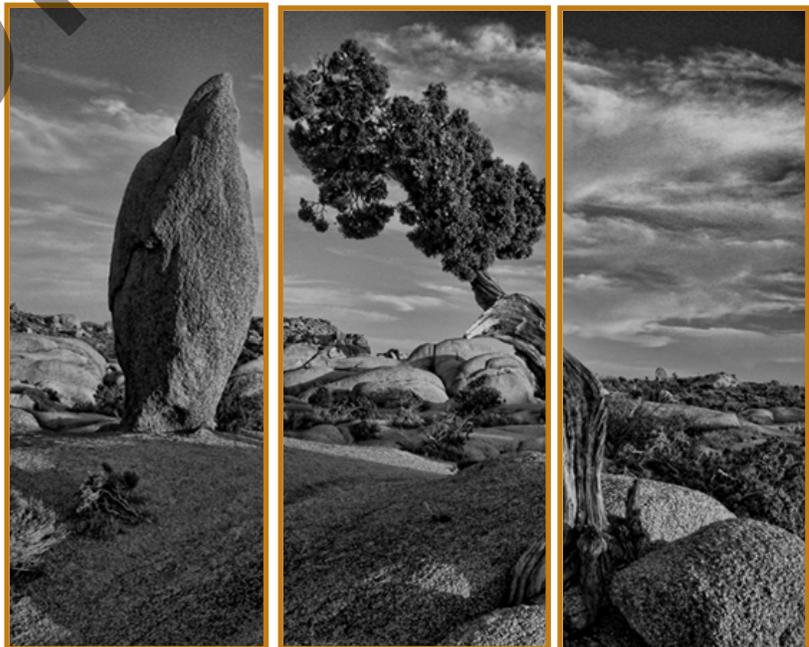
Pinyon Project No.:

I/13-671-01.8002

CDOT Project No.:

FBR 0704-230 (19339)

DRAFT



May 10, 2013

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Prepared by:



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I. Introduction

The Colorado Department of Transportation (CDOT) has retained Parsons Transportation Group, Inc. (Parsons) to assist CDOT in procuring a design-build contract for a project to replace the Interstate 70 (I-70) Bridge over Havana Street, located in Denver, Colorado (Figure 1). This project was originally part of the I-70 East project, and a Draft Environmental Impact Statement (DEIS), the *I-70 East Draft Environmental Impact Statement*, has been completed (CDOT, 2008). The replacement of the I-70 Bridge over Havana Street is being fast-tracked as a design-build project. This project is in part being funded using federal monies through the Funding Advancements for Surface Transportation and Economic Recovery (FASTER) program which are being administered by the Colorado Department of Transportation (CDOT). Because federal money is being used, the project will follow the guidelines outlined by the National Environmental Policy Act (NEPA). For this project, a Categorical Exclusion (Cat Ex) will be completed to document environmental conditions, specifically through completion of CDOT Form #128. This project will also follow standards or requirements outlined in the DEIS. Pinyon Environmental, Inc. (Pinyon) has been contracted by Parsons to complete environmental evaluations to support the Cat Ex, including completion of this Biological Resources Report (report). This report has been prepared to identify existing biological conditions, and to address potential project impacts to biological resources and protected species in accordance with the following federal and state regulations or policies (if applicable):

- **The United States Endangered Species Act (ESA)** - Protects federally-listed plant and animal species with the goal of ensuring their long-term survival. The ESA is administered by the US Fish and Wildlife Service (USFWS).
- **The Colorado Nongame, Endangered, and Threatened Species Conservation Act** - Provides some protection within the state for listed species and establishes the State's intent to protect endangered, threatened, or rare species. The Colorado Parks and Wildlife (CPW) is responsible for listing species.
- **Black-tailed Prairie Dog (*Cynomys ludovicianus*) (Prairie Dog) Protection** - Is based on municipal and agency policies and the most stringent policy for a given area must be followed. In CDOT right of way (ROW), the applicable policies that will be followed are the CDOT Impacted Black-tailed Prairie Dog Policy (CDOT, 2009) and the Black-tailed Prairie Dog Relocation Guidelines (CDOT, 2002).
- **The Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act** - Vegetation clearing, earth-moving, bridge demolition, and other construction activities have the potential to disrupt nesting activity or destroy nests of bird species protected under the MBTA. The USFWS administers these requirements.
- **Noxious Weeds** - In addition to regulations primarily designed to protect fish and wildlife species, regulations are in place to protect habitat from plant species determined to be “noxious”. The Colorado Department of Agriculture (CDOA) Noxious Weed Act of 2003 (CRS 35-5-101; CRS 35-5.5-101; Executive Order (EO) D-006-99), defines and prioritizes management objectives for state-designated noxious weeds.
- **Upland Tree Replacement** – Is based on CDOT requirements that all trees in upland portions of the study area that are not covered by other regulations be replaced at a 1:1 ratio. Replacement trees must be native and not listed as a noxious weed by the CDOA.

- **Waters of the U.S. including Wetlands** - Are regulated under Section 404 of the Clean Water Act by the U.S. Army Corps of Engineers (USACE), and will be addressed under separate cover.
- **Colorado Senate Bill 40 (SB 40)** - Requires that state agencies obtain certification from CPW when the agency plans construction in any stream, stream bank, or tributary. Any portions of the project that could impact an SB 40 jurisdictional stream may require SB 40 Certification, including mitigation measures designed to improve fish and wildlife habitat.

I.1 Project Location

The proposed project is located at the Interstate 70 (I-70) Bridge over Havana Street in Denver, Colorado. The approximate geographical location of the project is centered at decimal degree coordinates (North American Datum [NAD] 83) latitude 39.775731°, longitude -104.865912°. The project is located in Sections 22 and 23, Township 3 South, Range 67 West, of the 6th Principal Meridian on the United States Geological Survey (USGS) Montbello, Colorado 7.5-Minute Quadrangle. The elevation of the study area is approximately 5,290 feet above mean sea level (msl). The study area gently slopes to the west (USGS, 1994). The nearest water body is Sand Creek, which is located 0.5 miles to the southwest of the study area.

I.2 Project Description

The project consists of replacing Structure E-17-JP, which is the I-70 Bridge over Havana Street. The bridge replacement will improve safety and level of service, and it will be widened to accommodate the new configuration for the I-70 East project. Specifically, the shoulders will be widened, two toll lanes will be added in both the eastbound and westbound directions, and an enhanced concrete barrier will be emplaced.

2. Methods

Pinyon scientists Elly Weber and Scott Fanello performed a field visit on April 12, 2013 to assess the study area for biological resources. The weather during the field visit was partly cloudy, and the temperature was approximately 50° Fahrenheit.

The following activities were completed during the field visit:

- Pinyon personnel visually and physically surveyed the study area by walking the entire study area. During the field visit, a Trimble Geo XT global positioning system (GPS) unit was utilized to record relevant information.
- The study area was evaluated for protected species and their habitat including:
 - Federally-listed threatened and endangered species, as specified by the USFWS Denver County Species Report (USFWS, 2013a) and the online IPaC System (USFWS, 2013b) (Appendix B);
 - State-listed endangered, threatened, and sensitive species, as specified by county on the CPW and Colorado Natural Heritage Program (CNHP) websites;
 - Prairie dogs; and
 - Migratory birds.
- Noxious weeds were mapped, dominant plant species were recorded, and representative photographs were taken. A photographic log is provided in Appendix A.
- Upland trees were identified and recorded.
- Wetlands and Waters of the United States (WUS) were delineated in accordance with the 1987 U.S. Army Corps of Engineers (USACE) "Wetland Delineation Manual" and the 2010 Corps "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) (USACE, 2010)." Results of the wetland delineation are provided under separate cover.
- Potential SB 40 resources, including riparian vegetation if any, were evaluated in the field, and appropriate mapping was conducted.

3. Results

3.1 Habitat Description

3.1.1 Land Use

The project is located in a developed commercial and light industrial area. Businesses or facilities near the study area include a CDOT maintenance yard facility, a gas station, a steel fabrication facility, a solar electronics manufacturing facility, a hotel, a food bank, and a mattress store. Given the presence of the interchange, bridge, and railway spur, it is likely that the natural vegetation, soils, and hydrology have been altered by filling, grading, and improvement activities in the past.

3.1.2 General Habitat and Vegetation Description

Habitat types within the study area included upland grassy/weedy roadside habitat, wetland areas, and landscaped areas. The following describes each of these habitat types:

- Dominant species along portions of the upland habitats included smooth brome (*Bromus inermis*), cheatgrass (*Bromus tectorum*), Idaho fescue (*Festuca idahoensis*), and western wheatgrass (*Pascopyrum smithii*). Common herbaceous species were kochia (*Bassia scoparia*), curly dock (*Rumex crispus*), prickly pear cactus (*Opuntia polyacantha*), Great Plains yucca (*Yucca glauca*), curlycup gumweed (*Grindelia squarrosa*), and alfalfa (*Medicago sativa*). Scattered shrubs and trees in these areas included big sagebrush (*Artemisia tridentata*), Siberian elms (*Ulmus pumila*) and silver maple (*Acer saccharinum*). Several prairie dog colonies of varying sizes were observed in vacant areas and within the interchange throughout the study area (Figure 2).
- Dominant species in the wetland areas included narrowleaf cattail (*Typha angustifolia*), reed canarygrass (*Phalaris arundinacea*), and sandbar willow (*Salix exigua*).
- Landscaped areas primarily associated with the light industrial office parks and other commercial uses were dominated by cultivated trees, shrubs, herbaceous, and grass species.

3.2 Threatened and Endangered Species

3.2.1 Federally-Listed Species

Based on a review of the USFWS Denver County Species Report (USFWS, 2013a) and the online IPaC System (USFWS, 2013b), there are seven federally-listed species with the potential to occur in, or be impacted by, projects in Denver County. The IPaC list has been provided as Appendix B; however, it should be noted that the IPaC list is not an official list issued by the USFWS, and the accuracy of IPaC lists should be verified every 90 days. The results for the federally-listed species with potential to occur in the study area are summarized in Table 3-1.

Table 3-1 Federally-Listed Threatened and Endangered Species for Denver County and Their Potential to Occur in the Study Area

Common Name	Species	Federal Status	Habitat ¹	Potential for Occurrence in Study Area
Birds				
Least tern	<i>Sternula antillarum</i>	FE	Nests in summer along reservoirs, lakes and rivers with bare sandy shorelines or islands.	None. See discussion below.
Piping plover	<i>Charadrius melodus</i>	FT	Wetlands, lakeshores, and marshes. Nesting habitat is along reservoirs, lakes and rivers with bare sandy/pebbly areas with sparse vegetation.	None. See discussion below.
Whooping crane	<i>Grus americana</i>	FE	Utilizes wetlands, irrigated meadows and reservoir edges as stopovers during migration.	Low. Could occur during migration, although unlikely. See discussion below.
Fish				
Pallid sturgeon	<i>Scaphirhynchus albus</i>	FE	Known population in Mississippi River from Missouri to the Gulf of Mexico.	None. See discussion below.
Mammals				
Preble's meadow jumping mouse	<i>Zapus hudsonicus preblei</i>	FT	Occurs along Front Range of Colorado along permanent or intermittent streams in areas of with herbaceous cover and adequate cover of shrubs and trees.	None. The species is not likely to exist at the study area because it is located within the Denver Block Clearance Zone (USFWS, 2004).
Plants				
Ute ladies'-tresses orchid	<i>Spiranthes diluvialis</i>	FT	Sub-irrigated alluvial soils along streams; open meadows on floodplains including riparian areas.	None. Suitable habitat does not occur in the study area.
Western prairie fringed orchid	<i>Platanthera praeclara</i>	FT	Mesic to wet unplowed tall-grass prairies and meadows.	None. See discussion below.

Common Name	Species	Federal Status	Habitat ¹	Potential for Occurrence in Study Area
<p>Notes: FT = federally listed as threatened FE = federally listed as endangered 1 – Based on a review of distribution maps (dated 2010) from NatureServe Explorer online (NatureServe, 2013) and Colorado Parks and Wildlife, Species Activity Mapping (dated 2012) (CPW, 2012).</p>				

Five species are listed because they occur downstream of the study area along the Platte River and could be impacted by projects that would result in water depletions to its tributary, the South Platte River. These include the interior least tern, pallid sturgeon, piping plover, whooping crane and western prairie fringed orchid. This project has elements that could cause a depletion to the South Platte River basin. In order to address the effects this depletion will have on federally-listed species downstream that depend on the river for their survival, CDOT, as a state agency, is participating in the South Platte Water Related Activities Program (SPWRAP). CDOT is cooperating with the Federal Highway Administration (FHWA) which provides a federal nexus for the project. In response to the need for formal consultation for the water used from the South Platte basin, FHWA has prepared a Programmatic Biological Assessment (PBA) that will estimate total water usage from 2012 until 2019. The PBA addresses the five species noted above. The water used for this project will be reported to the USFWS at the year's end after the completion of the project as per the aforementioned consultation. Effects to species not addressed in the PBA or affected by causes other than water depletions to the South Platte, will have been analyzed separately in this Biological Resources Report (BRR).

3.2.2 State-Listed Species

The CPW lists 74 species of amphibians, birds, fish, mammals, reptiles, and mollusks as endangered, threatened or of special concern within the state of Colorado (CPW, 2013). The majority of these species are not expected to occur in the study area because it is outside of their range or appropriate habitat is not present. According to the CNHP Tracking List, two state-listed sensitive species were identified with the potential to occur within Denver County, as summarized in Table 3-2 below (CNHP, 2013). One of these species, the Preble's meadow jumping mouse (also referred to as the meadow jumping mouse subspecies on the CNHP Tracking List) was already included as federally-listed species.

Table 3-2 State-Listed Threatened and Endangered Species for Denver County and Their Potential to Occur in the Study Area

Common Name	Species	State Status	Habitat ¹	Potential for Occurrence in Study Area
Mammals				
Black-footed Ferret	<i>Mustela nigripes</i>	SE	Occurs in grasslands or shrublands in association with prairie dog colonies.	None. Population has been extirpated in the State of Colorado, with the exception of managed experimental populations.
Preble's Meadow Jumping Mouse	<i>Zapus hudsonius preblei</i>	ST	Occurs along Front Range of Colorado along permanent or intermittent streams in areas of with herbaceous cover and adequate cover of shrubs and trees.	None. The species is not likely to currently exist because the study area is located within the Denver Block Clearance Zone (USFWS, 2004).
Notes: ST = state listed as threatened SE= state listed as endangered 1 – Based on a review of distribution maps (dated 2010) from NatureServe Explorer online (NatureServe, 2013) and Colorado Parks and Wildlife, Species Activity Mapping (dated 2012) (CPW, 2012).				

3.2.3 Sensitive Species

During the reconnaissance survey, active black-tailed prairie dog burrows were noted in large portions of the study area (Figure 2). Colonies were present in the northwest quadrant, in a vacant lot to the north of the northeast end of the ROW, in a smaller area in the southwest quadrant, and inside the cloverleaf interchange in the southeast quadrant within the study area (Figure 2). Impacts to the prairie dog habitats have not been established at this phase of design.

There were two large prairie dog colonies in the northwest quadrant on either side of the railroad spur. The colony north of the spur was 5.29 acres and the burrows were sparsely distributed. The colony south of the spur was 8.67 acres and the burrows were similarly distributed.

The majority of colony in the northeastern quadrant was located in a vacant lot adjacent to the mattress store, but some burrows were located within the ROW of I-70. The entire colony was 6.38 acres, and the burrows were moderately densely distributed.

The two colonies in the southwest quadrant of the study area were smaller. The colony adjacent to the CDOT maintenance facility was 0.33 acres and there were only a handful of burrows in this location. The colony at the northwest corner of Havana Street and East 40th Avenue was 1.30 acres, with a moderate burrow density.

The prairie dog colony in the southeast quadrant of the study area was located inside the cloverleaf interchange. Vegetation in this location was quite sparse. This colony was 2.34 acres and the burrows were moderately dense in distribution.

No other sensitive species were observed.

3.3 Migratory Birds

The project could potentially impact migratory bird species. There are a few large trees within the study area, but no nests were observed during the field visit. Grassy upland areas along the ROW and within the interchange and scattered small trees in the study area could also be used as nest sites. These habitats are within the nesting raptor buffer area for many species (CPW, 2008). No nesting swallows were observed during the field visit. However, nesting swallows could potentially be present during construction activities under the project bridge. Prairie dog colonies are present in the study area, which provides habitat for burrowing owls (*Athene cunicularia*).

3.4 Noxious Weeds

Weeds present within the study area are typical of Colorado Front Range roadsides and developed areas (Figure 2). Six species of weeds on the CDOA Noxious Weed List were observed in the study area (CDOA, 2012). The CDOA classifies the plant species it identifies as noxious weeds into three categories, List A, List B, and List C. List A species are designated by the Commissioner of the CDOA for eradication. List B species are those species that are managed to stop continued spread. List C species are weed species that are not required to be managed by local jurisdictions, but are monitored to provide additional education and research. The CDOA also has another list, called the Watch List. Watch List Species are weed species that have been determined to pose a potential threat to agricultural productivity and environmental values of the lands of the state, and is intended to serve for advisory and educational purposes only. Table 3-3 presents the common name, scientific name, state weed list, and percent cover in the areas where the weeds occurred. Figure 2 presents the distribution of these species.

Table 3-3 Noxious Weeds Identified in the Study Area

Common Name	Scientific Name	State Weed List	US Department of Agriculture Code	Percent Cover
Canada thistle	<i>Cirsium arvense</i>	B	CIAR4	1
Common mullein	<i>Verbascum thapsus</i>	C	VETH	2
Cheatgrass	<i>Bromus tectorum</i>	C	BRTE	25
Hoary cress	<i>Cardaria draba</i>	B	CADR	25
Musk thistle	<i>Carduus nutans</i>	B	CANU4	1
Redstem filaree	<i>Erodium cicutarium</i>	C	ERCI6	1

3.5 Upland Trees

Trees present in the upland areas included Siberian elm and silver maple. CDOT requires that all upland trees removed be replaced at a 1:1 ratio with native tree species, typically plains cottonwood or narrowleaf cottonwood (*Populus angustifolia*), depending on the location.

3.6 Wetlands and Waters of the United States

There were six wetland areas identified in the study area. Wetland 1, Wetland 2, Wetland 3, and Wetland 4 were delineated by Pinyon, and Wetland Wet280-04 and Wetland Wet280-05 were delineated as part of the DEIS (CDOT, 2013) (Pinyon, 2013). Based on the current stage of the design, no impacts to wetlands are anticipated.

The only hydrologic feature within the study area is a concrete-lined canal located in the north part of the study area (Figure 2). This canal is a blue-line feature on the USGS 7.5 minute quadrangle, and is unnamed (USGS, 1994). It flows on the west side of Havana Street and takes a 90-degree turn under the road towards the east. This feature is not likely a WUS because it flows north into Havana Ponds, which do not appear to have an outlet to a recognized WUS.

3.7 Senate Bill 40

This section presents information on existing conditions and regulatory requirements for SB 40; however, as design of the project is not final, impacts could not be finalized. SB 40 certification documentation (if required), including methodology, results, impact evaluation and mitigation will be completed under separate cover.

3.7.1 Senate Bill 40 Jurisdiction Criteria

Colorado SB 40 (33-5-101-107, CRS 1973 as amended) requires any agency of the state to obtain wildlife certification from the CPW when the agency plans construction in "...any stream or its bank or tributaries..." Although SB 40 emphasizes the protection of fishing waters, it acknowledges the need to protect and preserve all fish and wildlife resources associated with streams in Colorado. CDOT and CPW have a Memorandum of Agreement (CDOW and CDOT, 2003) to clarify when SB 40 certification is required and to describe the procedures to be followed by CDOT in securing this certification.

Streams that meet one or more of the following criteria fall under the jurisdiction of SB 40:

1. All perennial streams represented by solid blue lines on United States Geological Service (USGS) 7.5' Quadrangle maps;
2. Segments of ephemeral and intermittent streams providing live water beneficial to fish and wildlife;
3. Segments of streams at which 25 percent or more of the vegetation is comprised of riparian vegetation such as cottonwood, willow, alder, sedges, or other plants dependent on groundwater (such segments shall be within 300 feet upstream or downstream of the project and the 300-foot distance shall be measured along the length of the stream); and
4. Segments of streams having wetlands present within 600 feet upstream and downstream of the project (the 600-foot distance shall be measured along the length of the stream).

The un-named concrete-lined agricultural ditch in the far northern portion of the study area meets the first criterion (Figure 2).

3.7.2 **Senate Bill 40 Application Criteria**

If streams meet one or more of the four jurisdiction criteria (described above in Section 3.7.1), then the project-related impacts to Jurisdictional SB 40 streams must be assessed. Ten criteria are used to evaluate the need for a Formal SB 40 Certification. If a project meets one or more of these 10 application criteria, then an SB 40 Application must be submitted to the CPW. The CPW then reviews the project and issues a Formal SB 40 Certification.

Formal SB 40 Certification is required for projects that meet one or more of the following criteria. The results of the project follow each of the criteria. Where a threshold has been exceeded, the discussion is **bolded**:

1. If stream-associated wetland acreage to be permanently filled at a single location is greater than 0.25 acre, or if more than 0.5 acre of riparian area is to be permanently impacted;

No permanent wetland or riparian impacts are expected.

2. If wetland acreage to be temporarily filled at a single location is greater than 0.5 acre or if more than 1.0 acre of riparian area is temporarily impacted.

No temporary wetland or riparian impacts are anticipated.

3. If a project, such as highway corridor widening, results in any combination of temporary and permanent fill in stream-associated wetlands that is greater than 1.0 acre, or if the project results in more than 2.0 acres of combined temporary and permanent impacts to riparian areas.

There are no temporary or permanent fill to in-stream associated wetlands anticipated.

4. If state or federally listed threatened, endangered, proposed, or candidate species may be impacted by a project, if Colorado state-listed species or state species of special concern may be impacted, or if the habitat of such species may be impacted.

No impacts to federally- or state-listed species, or their habitat, will be impacted by this project.

5. If Gold Medal fisheries or designated native fish and wild trout management waters may be impacted by a project. Information and updates on these special waters can be obtained from CDOW (now CPW).

The unnamed ditch is not a Gold Medal fishery or a designated fish habitat.

6. If a project on a fishing water would adversely affect a fish spawning area by obstructing fish movement or by substantially increasing siltation during the incubation period.

There is no potential to impact fish spawning areas because such areas do not exist in the unnamed ditch.

7. If any permanent stream re-alignment is associated with a project.

No channel realignment is anticipated as part of this project.

8. If projects involve new stream crossings.

No new crossings are proposed.

9. If projects involve replacement of existing structures over streams if the impacts extend 100 feet or more upstream and downstream of the project as measured along the length of the stream.

Impacts are not expected to extend beyond this threshold.

10. If any project or series of related projects result in bank stabilization or stream encroachment greater than 500 feet of stream length.

Stream encroachment is not expected as part of this project.

None of the application criteria have been exceeded as part of this project; therefore, a Formal SB 40 Certification will not be required for this project.

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4. Conclusions and Recommendations

Pinyon has completed this Biological Resources Report for the I-70 Bridge over Havana Street, in Denver, Colorado. The study area was assessed for the presence of biological resources, including, federally- and state-listed threatened, endangered, and sensitive species, migratory birds, noxious weeds, upland trees, wetlands, and SB 40 resources. Conclusions and recommendations are summarized in the sections below.

4.1 Threatened and Endangered Species

4.1.1 Federally-Listed Species

The project area was assessed for the seven federally listed threatened and endangered species with the potential to occur in, or be impacted by, projects in Denver County. The project is located in a highly urbanized area that lacks critical habitat for the seven previously mentioned federally listed threatened and endangered species with a potential to occur Denver County; therefore, the project would have **no effect** on these seven species.

As discussed in Section 3.3.1.1 of this report, CDOT, as a state agency, is participating in the SPWRAP. The proposed project is not expected to alter the flow of water to the South Platte River, although some water usage may occur as a result of construction of the project. However, any depletion would be mitigated through CDOT's participation in the SPWRAP. Therefore, as mitigation would be completed through participation in the SPWRAP, the project would **not likely adversely affect** the five down-stream species.

4.1.2 State-Listed Species

The study area was assessed for the two state-listed species with the potential to occur in, or be impacted by, projects in Denver County. Pinyon has concluded that the proposed project would have **no effect** on these species.

4.1.3 Sensitive Species

Black-tailed prairie dogs were present throughout the study area (Figure 2). CDOT's Prairie Dog Policy is intended to protect black-tailed prairie dogs. On December 2, 2009, the USFWS determined that the black-tailed prairie does not warrant protection under the Endangered Species Act. In October of that same year, the State of Colorado designated the black-tailed prairie dog a Species of Concern. The following guidelines should be applied to all CDOT activities that affect black-tailed prairie dogs:

- a. CDOT projects will be designed and constructed to avoid and minimize impacts to prairie dog colonies greater than two acres in area;
- b. If a colony is less than two acres, but has the potential to expand into areas that are currently inactive (i.e., not constrained), the available and accessible habitat will be the determining size of the area to be considered;
- c. In order to foster a heightened sense of CDOT's ecological stewardship by the public, projects involving towns less than two acres in area will be designed and constructed to avoid and minimize impacts, which may include the relocation of prairie dogs, so long as doing so will not

- increase the impacts to other resources (e.g. wetlands, historical properties, environmental justice issues, archeological sites, etc.) and is not cost prohibitive;
- d. The area of prairie dog towns that will be affected by a project will be calculated before construction begins;
 - e. Relocation efforts for prairie dog towns greater than two acres shall be conducted in accordance with CRS 35-7-203, as well as any other applicable laws or regulations;
 - f. If a relocation site cannot be located for towns larger than two acres, the prairie dogs will be captured and donated to raptor rehabilitation facilities, or turned over to the USFWS for the black-footed ferret reintroduction program; and
 - g. Coordination with the applicable CPW District Wildlife Manager will be initiated before any manipulation of prairie dogs or their colonies begins.

4.2 Migratory Birds

No raptor nests were observed in or around the study area, but suitable habitat does occur in the study area. There is also low potential for raptors to occur near the study area during migration or in the winter.

Burrowing owl surveys should be completed prior to construction activities in areas where prairie dog colonies were noted. Surveys should be conducted in accordance with the CPW Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls (CPW, 2008b) and the MBTA guidance discussed below.

The MBTA protects migratory birds, their nests, and their eggs (except for pigeons and starlings). In Colorado, most nesting and rearing activities occur between April 1 and August 31, but raptors may nest as early as February 15. These dates are guidelines and nesting birds are protected at all times. Pre-construction surveys for nesting birds should be completed prior to construction if construction begins during these dates by a wildlife biologist with a minimum of three years' experience conducting migratory bird surveys. No construction activities may occur within 50 feet of an active nest and orange construction fencing should be installed around active nests to protect them until the nest fails or the young fledge. The following conditions apply to construction activities:

- Tree trimming or removal activities should be completed between September 1 and February 14. If these activities will occur between February 15 and August 31, then a pre-construction survey for nesting birds must be completed. Pre-construction surveys for nesting birds are valid for five days. If work is not completed within this time, a new survey is required.
- Clearing and grubbing of vegetation that may disturb ground nesting birds should be completed between September 1 and March 31. If these activities will occur between April 1 and August 31, vegetation shall be removed or trimmed to a height of six inches or less prior to April 1. Once vegetation has been removed or trimmed, appropriate measures (i.e. repeated mowing/trimming) shall be implemented to assure vegetation does not grow more than six inches. Any vegetated areas that are not regularly mowed must be surveyed for nesting birds prior to construction between April 1 and August 31. Pre-construction surveys must be completed by a qualified wildlife biologist.

Pre-construction surveys for nesting birds are valid for five days. If work is not completed within this time, a new survey is required.

- If construction occurs between February 15 and August 31, a pre-construction survey for nesting raptors must be completed within a half-mile buffer of the study area. If any nesting raptors occur within the buffer area, then CPW "Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors" guidelines should be followed. The CPW may reduce the buffer requirements based on field conditions and type of work being done, but must be consulted for approval prior to construction within the recommended buffer zone of an active nest. In addition, a survey should be conducted to confirm the absence of nesting swallows on the bridge prior to any reconstruction activities.

4.3 Noxious Weeds

There are weeds in the study area, but these are not greater than 50% coverage and not covering large areas. Therefore, a noxious weed management plan is not recommended. However, during construction, the project is required to minimize the spread of noxious weeds according to the revised Sections 207, 212, and 217 of the CDOT Standard Specifications, and for implementing the standard CDOT Best Management Practices. The CDOT has Best Management Practices designed to prevent the spread of noxious weeds, which are:

- Soil disturbance will be minimized to the extent possible;
- Staging of equipment will not be permitted in weed-infested areas;
- Weed management efforts will be coordinated with local jurisdictional agencies and adjacent landowners to the extent possible;
- Application of herbicides immediately adjacent to active prairie dog colonies (if present) will not be permitted;
- Herbicide may be used immediately adjacent to wetlands and/or water bodies only if the label indicates that its use is appropriate for such areas;
- Noxious weeds observed in and near the construction area will be treated with herbicides or mechanically removed prior to the start of construction to minimize spread;
- All disturbed soil will be re-seeded with a certified weed-free seed mix within seven days of completion of work during the growing season;
- Weed-free is defined and regulated by the Weed Free Forage Act, Title 35, Article 27.5, CRS;
- Fertilizer will not be used in seeded areas because it can enhance the growth of noxious weeds at the expense of desired vegetation;
- "A" horizon soil material currently supporting noxious weed cover of more than 10% should not be used as topsoil during re-vegetation;
- Topsoil will not be imported due to the potential for spread of noxious weeds;

- All areas treated for noxious weeds during construction will be monitored and re-treated, if necessary, to prevent re-establishment of noxious weeds; and
- Any compost used will be weed-free.

4.4 Upland Trees

Any trees removed in the upland areas must be replaced on a 1:1 ratio with native trees, plains cottonwood or narrowleaf cottonwood.

4.5 Wetlands

Wetlands occur in the study area in six areas, and are discussed under a separate cover.

4.6 Senate Bill 40

None of the SB 40 application criteria have been exceeded as part of this project; therefore, a Formal SB 40 Certification will not be required for this project.

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5. References

- CDOA, 2013. "Colorado Noxious Species Weed List", http://www.colorado.gov/cs/Satellite/ag_Conservation/CBON/1251618874438, website accessed May 2013.
- CDOT, 2008. "I-70 East Draft Environmental Impact Statement," Colorado Department of Transportation, November 2008.
- CNHP, 2013. "CNHP Conservation Status Handbook (Tracking List), <http://www.cnhp.colostate.edu/download/list.asp>, data updated August 29, 2012; website accessed May 2013.
- CDOT, 2002. "Black-tailed Prairie Dog Relocation Guidelines," Colorado Department of Transportation, January 2002.
- CDOT, 2007. "Position Statement: Prairie Dog Eradication at the Request of Adjacent Landowners," Colorado Department of Transportation, March 2007.
- CDOT, 2009. "Impacted Black-Tailed Prairie Dog Policy," Colorado Department of Transportation, January, 2009.
- CPW, 2008a. "Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors", Colorado Parks and Wildlife, Revised February 2008.
- CPW, 2008b. "Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls", Colorado Parks and Wildlife, Revised February 2008.
- CPW, 2013. "Threatened & Endangered List", <http://wildlife.state.co.us/WildlifeSpecies/SpeciesOfConcern/ThreatenedEndangeredListPages/ListOfThreatenedAndEndangeredSpecies.aspx>, Colorado Parks and Wildlife, website accessed May 2013.
- CPW, 2012. "CPW Species Activity Data Shapefile Download; last modified October 24, 2012", <http://www.arcgis.com/home/search.html?q=Colorado%20Parks%20and%20Wildlife&t=groups>.
- NatureServe, 2013. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>, website accessed May 2013.
- NDIS, 2013. The National Diversity Information Source, <http://ndis.nrel.colostate.edu/>, Website accessed May 2013.
- USACE, 2010. "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)," United States Army Corps of Engineers, March 2010.
- USDA, 2013. "Plant Database," plants.usda.gov, United States Department of Agriculture, Natural Resources Conservation Service, website accessed May 2013.

USFWS, 2004. "Denver Metropolitan Area Block Clearance Zone Letter", U.S. Fish and Wildlife Service, May 13, 2004.

USFWS, 2013a. "U.S Fish and Wildlife Service Species Report - Denver County, Colorado" <http://www.fws.gov/endangered/> United States Fish and Wildlife Service, website accessed May 2013.

USFWS, 2013b. "IPaC- Information, Planning and Conservation System" <http://ecos.fws.gov/ipac/>, United States Fish and Wildlife Service, website accessed May 2013.

USGS, 1994. "7.5-Minute Topographic Map, Montbello, Colorado," United States Geological Survey, 1994.

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Figures

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Legend

USGS 7.5' Topographic Map
Montbello, CO 1965 (Revised 1994)



Study Area Boundary



PROJECT LOCATION

*I-70 Bridge Over Havana Street
Denver, Colorado*

Site Location: Sections 22 and 23, Township 3S, Range 67W, 6th Principal Meridian

Drawn By: TJD

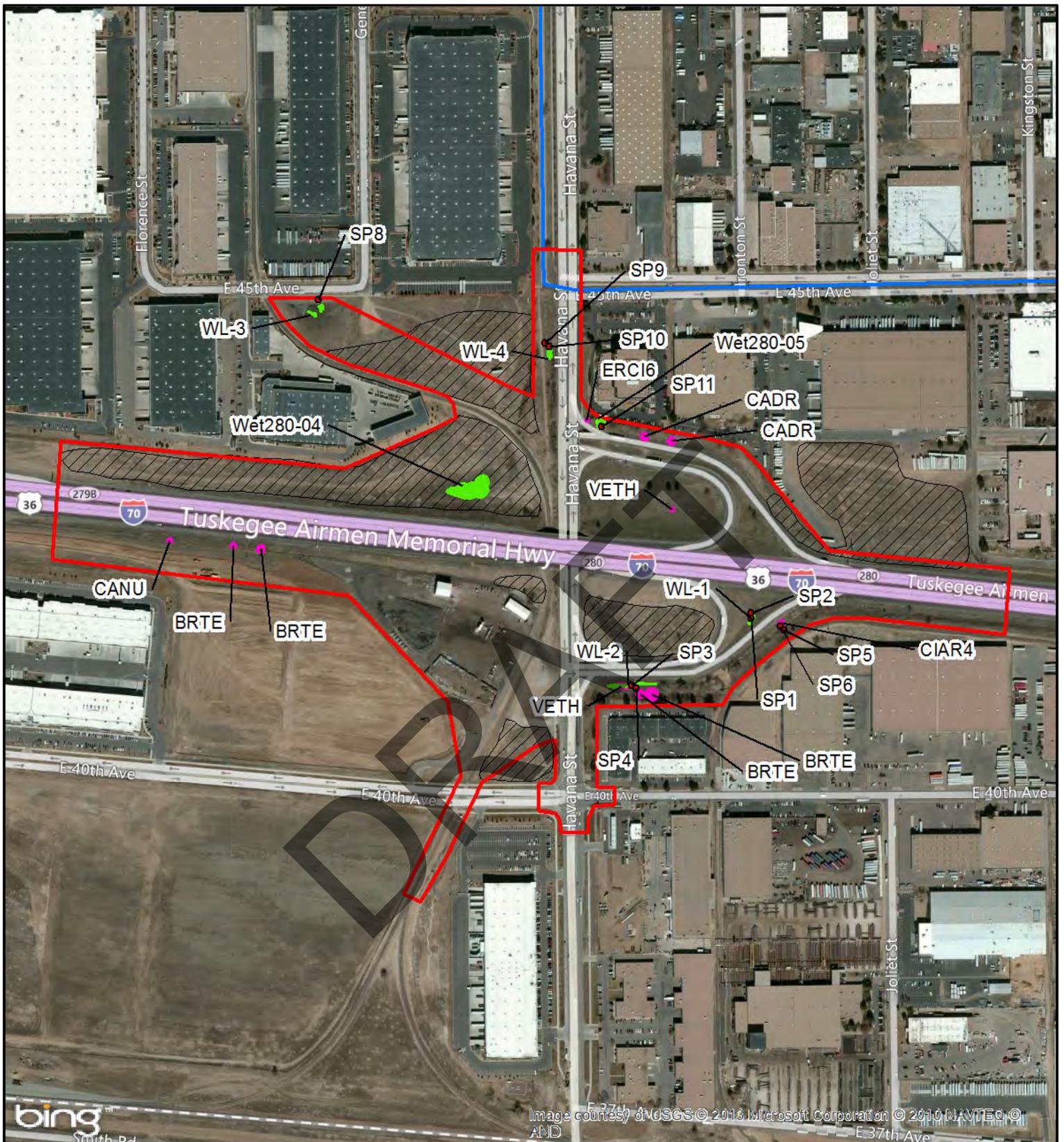
Figure 1

...2013\11367101 I-70 Bridge Over Havana\Figures\ArcMap\MXD\Figure 1 - Project Location.mxd

Job No: 1/13-671-01

Reviewed By: EMW

Revision: 5/21/2013



Legend

- Sampling Point
- Unnamed Canal
- Noxious Weeds
- Wetland
- Prairie Dogs
- Study Limits

Notes:
See Table 3-3 (EOM) for Noxious Weed definitions.



STUDY AREA

*I-70 Bridge Over Havana Street
Denver, Colorado*

Site Location: Sections 22 and 23, Township 3S, Range 67W, 6th Principal Meridian		Drawn By: TJD	Figure 2
...2013\11367101 I-70 Bridge Over Havana\Figures\ArcMap\MXD\Figure 2 - Study Area.mxd		Reviewed By: EMW	Revision: 5/21/2013
Job No: 1/13-671-01			

Appendix A Photographic Log

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1. Facing West,
View of
Eastbound I-70
On-Ramp Right-
Of-Way (ROW)
from Havana
Street.



2. Facing East,
View of ROW of
Eastbound
I-70 with Small
Ditch.



3. Facing Southwest, View of Sampling Point-1 (SP-1) in Wetland 1 (WL-1).



4. Facing Southwest, Overall View of WL-1. Note Mowed Wetland Vegetation.



5. Facing West,
View of SP-2,
Upland
Sampling Point
Adjacent to
SP-1.



lower case "l" here

6. Facing West,
View of Black-
Tailed Prairie
Dog (*Cynomys*
ludovicianus)
(Prairie Dog)
Colony in
Southeast
Quadrant of
Study Area.



7. Facing West,
View of
Railroad Tracks
and Small
Prairie Dog
Colony in
Southwest
Quadrant of
Study Area.



8. Facing North,
View of
Interstate 70
(I-70) Bridge
Over Havana
Street.



9. Facing West,
View of ROW
Along
Eastbound I-70.



10. Facing
Southwest, View
of Railroad
Tracks in
Southwest Arm
of Study Area.



11. Facing
West, View of
SP-3 in WL-2.



12. Facing
West, View of
SP-4, Upland Pit
Adjacent to
SP-3.



13. Facing West, View of WL-2 with Wetland Flagging.



14. Facing South, View of SP-5 in Roadside Ditch. Wetland Vegetation Present, But Lacked Hydric Soils.



15. Facing West, View of WL-3 in Stormwater Basin.



16. Facing Southeast, View of Partially-Vegetated Northwest Quadrant of Study Area.



17. Facing East,
View of
Railroad Spur in
Mid-Ground and
I-70 Bridge Over
Havana Street in
Background.



18. Facing East,
View of Prairie
Dog Colony in
ROW of
Westbound I-70
West of Havana
Street.



19. Facing East,
View of Area
Within
Cloverleaf
Interchange in
Northeast
Quadrant of
Study Area.



20. Facing
Southeast, View
of WL-4 in
Ditch West of
Havana Street,
North of I-70.



21. Facing East,
View of SP-9 in
WL-4.



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Appendix B USFWS Information, Planning, and Conservation (IPaC) System List

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U.S. Fish and Wildlife Service

Natural Resources of Concern

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

COLORADO ECOLOGICAL SERVICES FIELD OFFICE
DENVER FEDERAL CENTER
P.O. BOX 25486
DENVER, CO 80225
(303) 236-4773
<http://www.fws.gov/coloradoES>
<http://www.fws.gov/platterriver>

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Project Counties:

Denver, CO

Project Type:

Transportation

Endangered Species Act Species List ([USFWS Endangered Species Program](#)).

There are a total of 7 threatened, endangered, or candidate species, and/or designated critical habitat on your species list. 5 of which will be affected only under certain conditions. Species on this list are the species that may be affected by your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Please contact the designated FWS office if you have questions.

Species that may be affected by your project:

Flowering Plants	Status	Species Profile	Contact
Ute ladies'-tresses (<i>Spiranthes diluvialis</i>)	Threatened	species info	Colorado Ecological Services Field Office
Mammals			



Natural Resources of Concern

Preble's meadow jumping mouse (<i>Zapus hudsonius ssp. preblei</i>) Population: U.S.A. (CO, WY)	Threatened	species info	Colorado Ecological Services Field Office
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Species that may be affected by your project, but only under certain conditions:

Birds				
Least tern (<i>Sterna antillarum</i>) Population: interior pop.	Threatened	species info	condition info	Colorado Ecological Services Field Office
Piping Plover (<i>Charadrius melodus</i>) Population: except Great Lakes watershed	Threatened	species info	condition info	Colorado Ecological Services Field Office
Whooping crane (<i>Grus americana</i>) Population: except where EXPN	Threatened	species info	condition info	Colorado Ecological Services Field Office
Fishes				
Pallid sturgeon (<i>Scaphirhynchus albus</i>) Population: Entire	Threatened	species info	condition info	Colorado Ecological Services Field Office
Flowering Plants				
Western Prairie Fringed Orchid (<i>Platanthera praeclara</i>)	Threatened	species info	condition info	Colorado Ecological Services Field Office

***FWS National Wildlife Refuges* ([USFWS National Wildlife Refuges Program](#)).**

There are 1 refuges in your refuge list

Rocky Mountain Arsenal National Wildlife Refuge (303) 289-0232 BUILDING 111 COMMERCE CITY, CO80022	refuge profile
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***FWS Migratory Birds* ([USFWS Migratory Bird Program](#)).**

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird Treaty Act (16 U.S.C. 703). Bald eagles and golden eagles receive additional protection under the



U.S. Fish and Wildlife Service

Natural Resources of Concern

[Bald and Golden Eagle Protection Act](#) (16 U.S.C. 668). The Service's [Birds of Conservation Concern \(2008\)](#) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

NWI Wetlands ([USFWS National Wetlands Inventory](#)).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

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