

Draft

Biological Technical Report

**Shafter-Wasco Irrigation District and Semitropic Water
Storage District Diltz Intertie and Shafter-Wasco
Irrigation District Diltz Intertie Lateral Piping Projects**

Prepared for:

Shafter-Wasco
Irrigation District

January 2019

Prepared by:



Consulting
Engineers and
Scientists

Draft

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Prepared for:

Shafter-Wasco Irrigation District
P.O. Box 1168
Wasco, CA 93280

Contact:

Dana Munn
General Manager
661.758.5153

Prepared by:

GEI Consultants
2868 Prospect Park Drive, Suite 400
Rancho Cordova, CA 95670

Contact:

Ginger Gillin
Project Manager
503.342.3777

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Table of Contents

Abbreviations and Acronyms	ii
1. Introduction	1
1.1 Background and Project Need	1
1.2 Project Description	3
1.3 Project Construction	4
1.4 Biological Resources Assessment Methods	4
1.4.1 Pre-field Investigation	4
1.4.2 Field Survey.....	4
2. Environmental Setting	7
2.1 Vegetation and Wildlife.....	7
2.2 Special-status Species	7
2.3 Sensitive Habitats.....	15
2.3.1 Critical Habitat	15
2.3.2 Other Habitats Protected under Federal or State Regulations.....	15
2.3.3 Natural Communities of Special Concern	16
3. Potential Impacts	16
2.4 Special-status Wildlife	16
2.4.1 Birds.....	16
2.4.2 Mammals	16
2.5 Other Potential Impacts on Biological Resources	17
4. Recommended Impact Avoidance and Minimization Measures	17
5. References	20

Figures

Figure 1.	Diltz Intertie and Laterals Project Location.....	2
Figure 2.	Diltz Intertie and Laterals Project Overview	5
Figure 3.	California Natural Diversity Database Occurrences of Special-status Plants and Wildlife within 5 Miles of the Project Site.....	9

Tables

Table 1.	Special-status Plants Evaluated for Potential to Occur on the Project Site	11
Table 2.	Special-status Fish and Wildlife Evaluated for Potential to Occur on the Project Site.....	12

Appendices

Appendix A.	Project Detail Mapbook
Appendix B.	Special-status Species Query Results
Appendix C.	Representative Photographs of the Project Site

Abbreviations and Acronyms

BMPs	Best Management Practices
CDFW	California Department of Fish and Wildlife
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	Kern County
CRPR	California Rare Plant Rank
CWA	Clean Water Act
ESA	Endangered Species Act
GEI	GEI Consultants, Inc.
LF	linear feet
project	Diltz Intertie and Lateral Piping Projects
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SWID	Shafter-Wasco Irrigation District
SWSD	Semitropic Water Storage District
USACE	U.S. Army of Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1. Introduction

This biological technical report addresses sensitive biological resources that could be affected by implementing two water delivery projects. Potential for special-status species to occur in the project area and be affected by project implementation is evaluated. In addition, measures are recommended to avoid or minimize potential for impacts on special-status species during construction activities.

1.1 Background and Project Need

The Shafter-Wasco Irrigation District (SWID) is located on the San Joaquin Valley floor in northern Kern County (County). The project area is immediately northwest of Wasco and approximately 20 miles northwest of Bakersfield (**Figure 1**), in the Wasco U.S. Geological Survey (USGS) 7.5-minute quadrangle.

SWID's service area includes approximately 39,000 acres, with approximately 32,600 irrigated acres (84% of the service area). Conjunctive water use is practiced by SWID and its neighboring districts in this region including Semitropic Water Storage District (SWSD). The SWSD service area covers 221,400 acres.

During wet years, when SWID and SWSD are unable to divert and immediately use the entirety of their available water supply, the two districts use out-of-district groundwater recharge facilities to store this water. During drought periods, SWID growers operate groundwater wells to meet irrigation demand.

In recognition of the value of conserving groundwater, SWID has set a goal to achieve a measurable, attainable reduction of its current applied water and groundwater pumping. Two projects have been developed to help meet this objective:

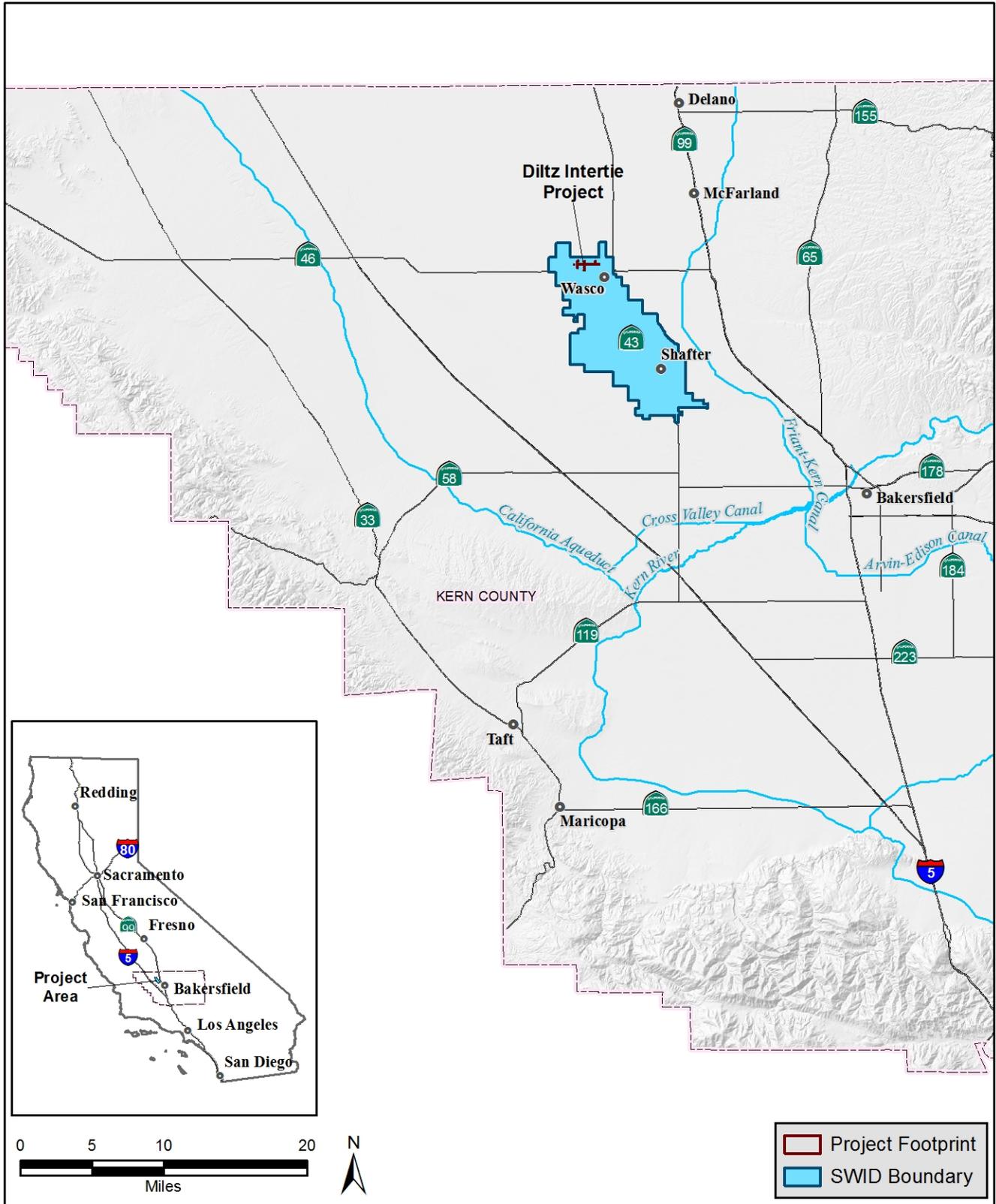
- SWID and SWSD Diltz Intertie Project
- SWID Diltz Intertie Lateral Piping Project

These two projects are referred to collectively as the “project” in this technical report.

The proposed SWSD and SWID Diltz Intertie Project is being led by SWID, in cooperation with SWSD. This project would replace the existing pipeline within SWID's boundary with a higher-capacity, bi-directional pipeline that would connect to the existing Diltz Intertie pipeline previously installed in SWSD. This improvement will allow for the efficient conveyance of surface water supplies to spreading ground facilities, used for groundwater recharge, in SWSD and SWID. The improved main pipeline would increase the capacity of and the existing link between SWSD's Pond Poso Spreading Grounds and SWID's Kimberlina Spreading Grounds. Improving this conveyance connection provides the two districts flexibility to take excess surface supply (when available) and store it via their groundwater recharge facilities for future use. Improvements to SWID's mainline that connects to the existing intertie are necessary to operate the system at a higher capacity.

The proposed SWID Diltz Intertie Lateral Piping Project would replace existing laterals with higher pressure-rated pipe to ensure there are no failures during pressurized pipe operations and provide more efficient operations.

Figure 1. Diltz Intertie and Laterals Project Location



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12Oct2018 RS

Source: Shafter-Wasco Irrigation District 2018, adapted by GEI Consultants, Inc. in 2019

The project is anticipated to provide an additional 3,432 acre-feet per year in surface supply conveyed from the Central Valley Project, the Friant-Kern Canal, and non-Bay-Delta sources including Kern River floodwater, to recharge for later use in irrigation. Improving the conveyance systems provides both districts flexibility to take more surface supply when it is available for groundwater recharge. The captured water would work directly to offset SWSD's reliance on Bay-Delta and groundwater supplies, however both districts will realize an equal portion of the total water savings realized for the groundwater basin.

Installing pressurized laterals is expected to decrease groundwater pumping in SWID by providing growers with pressurized surface water deliveries at an increased frequency. Decreased groundwater pumping in SWID would allow recovery of groundwater elevations, which in turn would reduce groundwater pumping lifts.

SWSD and SWID have applied for federal funding, through the U.S. Bureau of Reclamation, to assist with construction and replacement of the project elements through Funding Opportunities BOR-MP-17-F001 (Diltz pipeline) and BOR-MP-18-0003 (laterals).

1.2 Project Description

The Project involves the installation of a new, main line 7,930 linear feet (LF), 36-inch bi-directional PVC pipe within the County right-of-way (ROW) on the north side of Gromer Avenue. An overview of the proposed pipeline is provided in **Figure 2**, and detailed maps are provided in **Appendix A**. This new pipe will replace the existing reinforced concrete pipe installed in the 1950s. The current system is operationally constrained when the intertie is moving water from SWSD into SWID (from west to east) because the low-head-class pipeline within SWID must be pressurized. Replacing the pipeline will remove this operational constraint, allowing water to be moved west to east (uphill) without disrupting service, and is expected to increase operational capacity from the current 8 to 30 cubic feet per second.

This new pipe will replace the existing reinforced concrete pipe constructed in the 1950's. The existing main line currently runs along the south side of Gromer Avenue, from Western Avenue to Central Avenue, and then makes a slight turn to run along the north side of Gromer Avenue from Central Avenue to North Palm Avenue where it connects to an existing pipeline that is not part of the project analyzed in this document. The current system is operational constrained when the intertie is moving water from SWSD into SWID (from west to east) because the low-head-class pipeline within SWID must be pressurized. The replacement of the pipeline will remove this operational constraint, allowing for water to be moved west to east (uphill) without a disruption in service, and is expected to increase capacity from the current 8 cfs to 30 cfs when operating.

Additionally, several laterals branching off the main pipeline would be replaced to facilitate the irrigation of 380 acres within SWID (Figure 2). Five separate laterals totaling 7,239 LF will connect to the Diltz Intertie main line, of which 6,597 LF will be 15-inch pipe and 642 LF will be 18-inch pipe. The improved laterals will replace existing lower pressure-rated laterals which are currently inoperable when running water west to east (under current operations, when pumping is required it increases the pressure in the laterals above the current pressure rating). The new laterals will have a pressure rating of 125 psi which exceeds the expected pressures obtained during transfer of water in the Diltz Intertie in either direction.

Construction activities for the Project include excavation of soils to install all buried pipe. The new 36-inch main pipeline would be buried within the Gorman Avenue public ROW on the north side of the

road. The 15- and 18-inch laterals branching off the main line would be buried immediately adjacent to existing lateral pipelines. The existing main pipeline and laterals would be disconnected from the system and abandoned in place. Construction activities would not require the removal of any row or orchard crops.

Trench depths would be 5 feet for pipes 15-18 inches in diameter (laterals) and 6 feet for pipes up to 36 inches in diameter (main line). Trench widths would be 3 feet for pipe sizes 15-18 inches (laterals) and up to 10.5 feet for 36-inch pipes (main line). All trenches will be backfilled with excavated material ensuring all pipelines receive 4-feet of cover. A 10-foot wide permanent easement will allow for maintenance of the main pipeline and laterals by SWID (Figure 2).

1.3 Project Construction

The proposed project would be completed between August 2019 and January 2020. However, actual construction activities will only require 2 months to construct the pipelines, within the longer timeframe.

Construction activities would occur between 7 AM and 5 PM, Monday through Friday, except holidays. Equipment maintenance activities would occur during normal working hours.

Construction vehicles would include a front wheel loader, excavator, backhoe, two water trucks, and three pickup trucks.

Access to the construction area would be confined to existing paved and unpaved roads. The construction corridor/work area for the new main line and laterals would not exceed 50 feet, and all equipment staging and excavation would be contained within the construction corridor along the County road ROW. No fill would be transported to the site, and no off-site disposal would be required.

After the trenches are backfilled, the ground surface would be restored to existing grade.

1.4 Biological Resources Assessment Methods

1.4.1 Pre-field Investigation

Before conducting the field survey, GEI, Consultants, Inc. (GEI) reviewed the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (CDFW 2018) and the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2018). These reviews were centered on the Wasco USGS 7.5-minute quadrangle and included the eight surrounding quadrangles. An official list of Federal threatened and endangered species that could occur in the project area was obtained from the USFWS Information for Planning and Conservation website (USFWS 2018a); the USFWS online map of critical habitat for Federally threatened and endangered species (USFWS 2018b) also was reviewed. Results of the CNDDDB and CNPS Inventory queries and the USFWS list are provided in **Appendix B**.

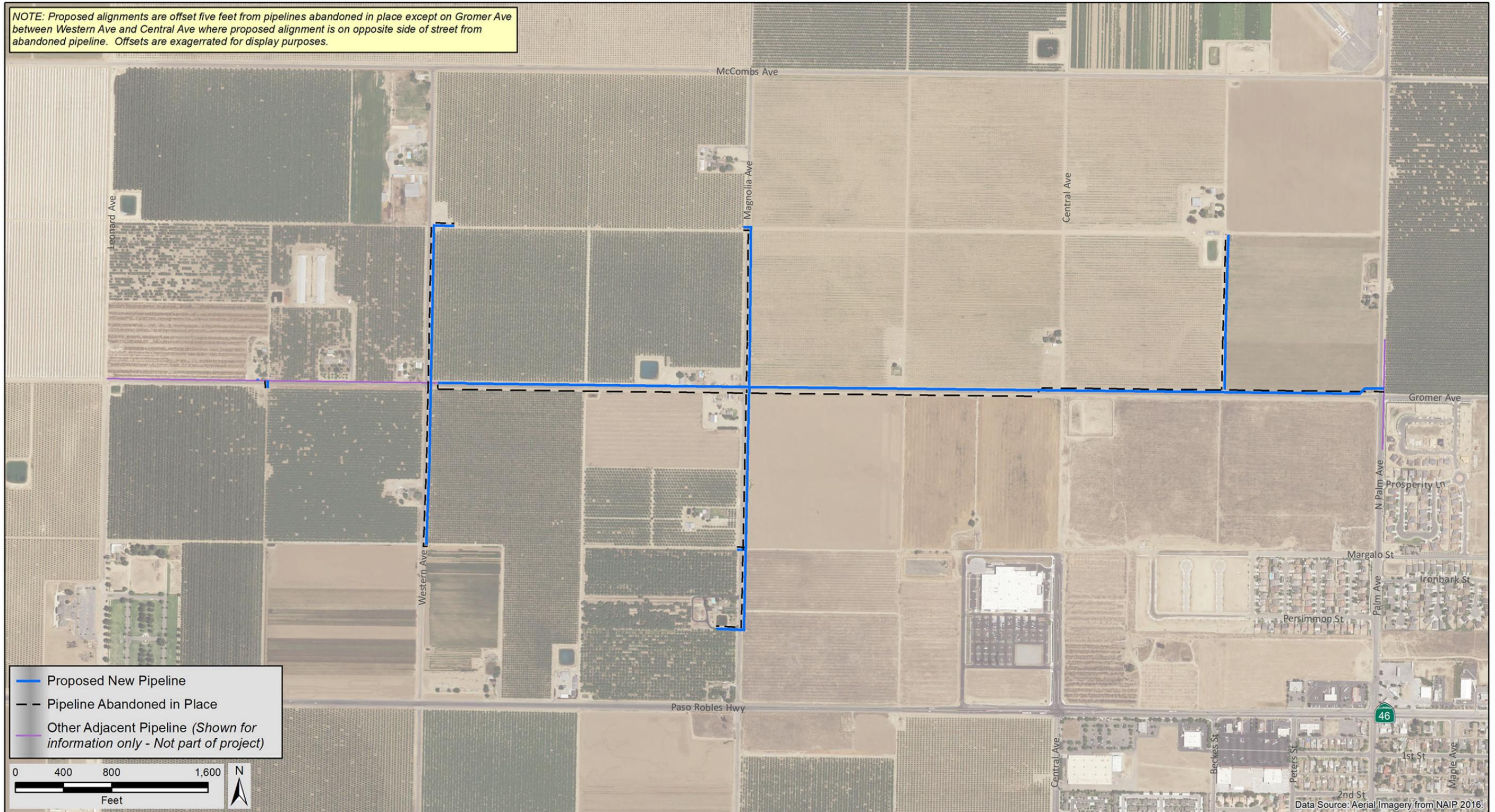
1.4.2 Field Survey

A field survey of the pipeline route was conducted by GEI biologist Anne King on May 14, 2018. The survey focused on evaluating potential for special-status species to occur on or adjacent to the project site and be affected by project activities. The survey area included a 50-foot corridor along the pipeline

route. During the field survey, the high temperature was approximately 80 degrees Fahrenheit, skies were clear, and there was no wind.

Figure 2. Diltz Intertie and Laterals Project Overview

NOTE: Proposed alignments are offset five feet from pipelines abandoned in place except on Gromer Ave between Western Ave and Central Ave where proposed alignment is on opposite side of street from abandoned pipeline. Offsets are exaggerated for display purposes.



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Figure Source: GEI Consultants, Inc. 2018.

Source: Shafter-Wasco Irrigation District 2018, adapted by GEI Consultants, Inc. in 2019

2. Environmental Setting

The project site is located along in the southern San Joaquin Valley and is entirely comprised of agricultural land adjacent to the developed area of the City of Wasco. Topography is generally flat, with an average elevation of approximately 300 feet above mean sea level. Representative photographs of the project site are provided in **Appendix C**.

2.1 Vegetation and Wildlife

No native vegetation assemblages are present on the project site; all lands are actively cultivated or were cultivated in the past and now support primarily nonnative ruderal vegetation. The project site is primarily bordered by almond orchards and grain crop fields. The road shoulders are compacted and generally barren. Nonnative species, including Russian thistle (*Kali tragus*), black mustard (*Brassica nigra*), lambs quarters (*Chenopodium album*), and oat (*Avena* sp.), occur along some field margins and in uncultivated fields in the eastern portion of the project site. Ornamental trees and shrubs occur at several residences adjacent to the pipeline route.

Agricultural and ruderal habitats on the project site support a low diversity of wildlife species that are adapted to these intensely managed and relatively disturbed environments. Because the project site is completely comprised of actively cultivated and ruderal lands and surrounded by similar habitats and human development, only the most mobile species (e.g., birds and mammals with large home ranges) that typically use highly altered habitats are likely to occur on the project site. Wildlife species observed during the field survey included: killdeer (*Charadrius vociferus*), mourning dove (*Zenaida macroura*), barn swallow (*Hirundo rustica*), black phoebe (*Sayornis nigricans*), western kingbird (*Tyrannus verticalis*), northern mockingbird (*Mimus polyglottos*), Brewer's blackbird (*Euphagus cyanocephalus*), European starling (*Sturnus vulgaris*), house finch (*Haemorhous mexicanus*), house sparrow (*Passer domesticus*), western fence lizard (*Sceloporus occidentalis*), and California ground squirrel (*Otospermophilus beecheyi*).

2.2 Special-status Species

Special-status species are plants and animals that fall into any of the following categories:

- species officially listed by the Federal government or the State of California as endangered, threatened, or rare;
- candidate species for Federal or State listing as endangered or threatened;
- species proposed for Federal or State listing as endangered or threatened;
- taxa (i.e., taxonomic categories or groups) that meet the criteria for listing;
- wildlife species identified by CDFW as species of special concern and plant taxa considered by CDFW to be “rare, threatened, or endangered in California;”
- species listed as Fully Protected under the California Fish and Game Code; or
- species afforded protection under local or regional planning documents.

Plant taxa are assigned by CDFW to one of the following six California Rare Plant Ranks (CRPRs):

- CRPR 1A—Plants presumed to be extinct in California;
- CRPR 1B—Plants that are rare, threatened, or endangered in California and elsewhere;
- CRPR 2A—Plants that are presumed extirpated in California, but are more common elsewhere;
- CRPR 2B—Plants that are rare, threatened, or endangered in California but more common elsewhere;
- CRPR 3—Plants about which more information is needed (a review list); or
- CRPR 4—Plants of limited distribution (a watch list).

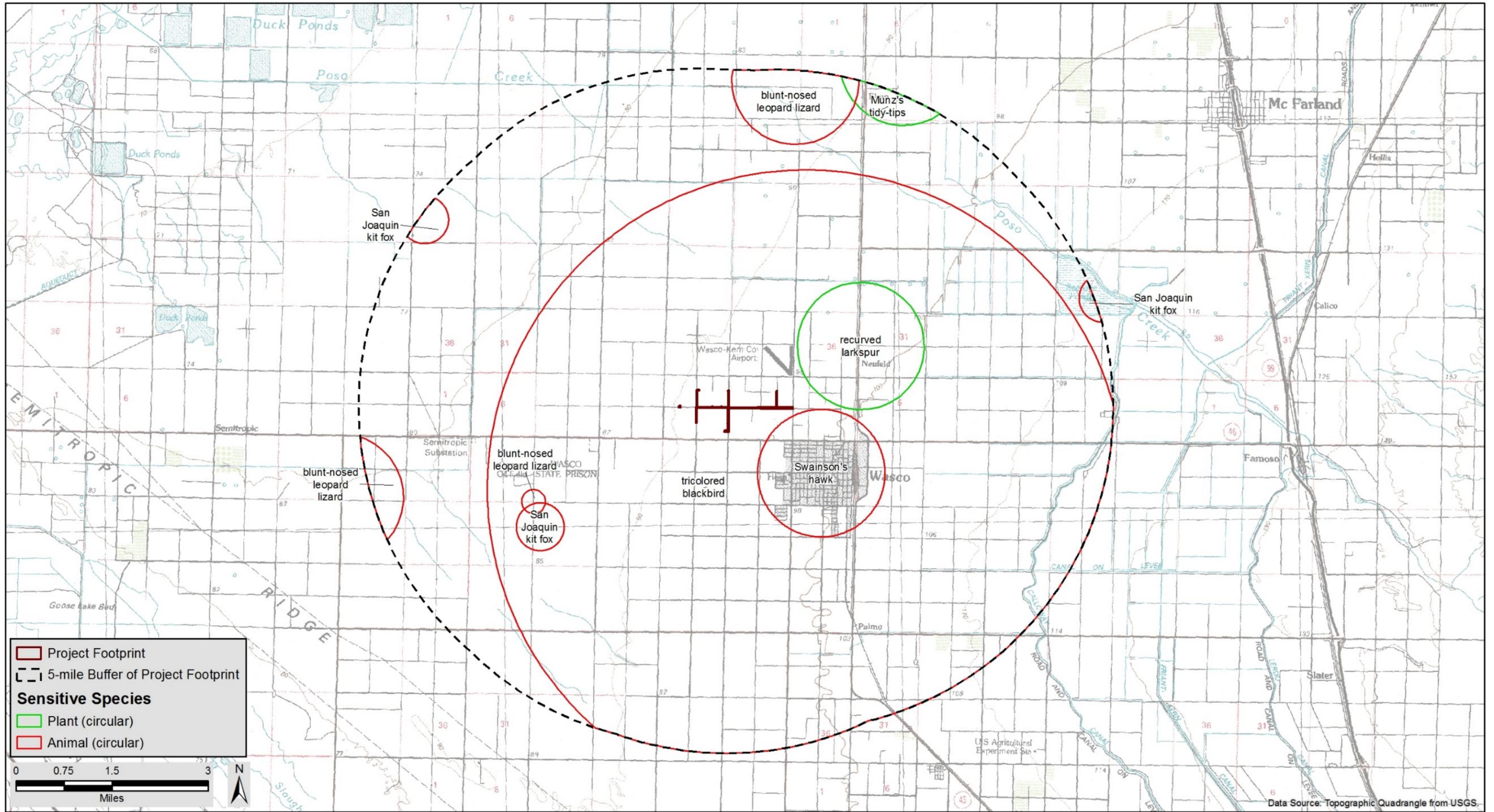
All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all plant taxa inventoried in the CNDDDB, regardless of their legal or protection status. As indicated above, only plant taxa considered by CDFW to be “rare, threatened, or endangered in California” (i.e., CRPR 1B and 2B plants) are considered special-status in this analysis.

Results of the CNDDDB USGS 9-quadrangle searches (*see* Appendix B) yielded occurrences of 34 plants and animals. Only six of these are special-status species that have been documented within 5 miles of the project site, as shown in **Figure 3**. However, most of these occurrences are from grassland, saltbush scrub, and other natural shrub habitats south and west of the agricultural lands on and surrounding the project site. (Note: Not all species tracked in the CNDDDB and included in the search results in Appendix B meet the special-status definition described above.)

Table 1 provides information on each special-status plant that was included in the CNDDDB or CNPS search results (the USFWS species list does not include any plants). Based on observations made during the field survey, habitat for special-status plants is absent from the project site, and none of the species listed in Table 1 were determined to have potential to occur on or adjacent to any portion of the project site.

Table 2 provides information on each special-status animal that was included in the CNDDDB search results, on the USFWS official species list, or was otherwise determined to have potential to occur on or adjacent to the project site. Based on the review of existing documentation and habitat evaluations made during field survey, most of these species have no potential to occur along the pipeline route. Because the project site and adjacent areas do not support natural vegetation (e.g., grassland or scrub) or aquatic habitat, suitable habitat for most of the species considered is absent. Potential for more mobile species that can utilize agricultural habitats to occur on or adjacent to project site is low or very low, because the habitat quality for these species is poor. No special-status wildlife species were observed during the field survey.

Figure 3. California Natural Diversity Database Occurrences of Special-status Plants and Wildlife within 5 Miles of the Project Site



Data Source: Topographic Quadrangle from USGS.
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Source: CDFW 2018, adapted by GEI Consultants, Inc. 2018

Table 1. Special-status Plants Evaluated for Potential to Occur on the Project Site

Species	Blooming Period	Status ¹		Habitat Associations	Potential to Occur on Project Site
		Federal	State		
Heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>	April–October	–	1B.2	Sandy saline or alkaline soils in chenopod scrub and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Earlimart orache <i>Atriplex cordulata</i> var. <i>erecticaulis</i>	August–November	–	1B.2	Valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Lost Hills crownscale <i>Atriplex coronata</i> var. <i>vallicola</i>	April–September	–	1B.2	Alkaline soils in chenopod scrub and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Lesser saltscale <i>Atriplex minuscula</i>	May–October	–	1B.1	Alkaline sandy soils in chenopod scrub, valley and foothill grassland, and playas	None; no suitable habitat is present on or adjacent to the project site.
Subtle orache <i>Atriplex subtilis</i>	June–September	–	1B.1	Alkaline soils in valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
California jewelflower <i>Caulanthus californicus</i>	February–May	E	E/1B.1	Sandy soil in chenopod scrub, pinyon and juniper woodland, and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Slough thistle <i>Cirsium crassicaule</i>	February–May	–	1B.1	Chenopod scrub, riparian scrub, and marshes, swamps, and sloughs	None; no suitable habitat is present on or adjacent to the project site.
Recurved larkspur <i>Delphinium recurvatum</i>	March–June	–	1B.2	Alkaline soils in chenopod scrub, cismontaine woodland, and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Kern mallow <i>Eremalche parryi</i> ssp. <i>kernensis</i>	January–May	E	1B.2	Open sandy and clay soils, often at edge of clearings in chenopod scrub, pinyon and juniper woodland, and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Hoover's eriastrum <i>Eriastrum hooveri</i>	March–May	–	1B.2	Sometimes gravelly areas in chenopod scrub, pinyon and juniper woodland, valley and foothill grassland, alkaline flats	None; no suitable habitat is present on or adjacent to the project site.
Spiny-sepaled button-celery <i>Eryngium spinosepalum</i>	April–June	–	1B.2	Vernal pools in valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Munz's tidy-tips <i>Layia munzii</i>	March–April	–	1B.2	Alkaline clay soils in chenopod scrub and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
San Joaquin woollythreads <i>Monolopia congdonii</i>	February–May	E	1B.2	Sandy soils in chenopod scrub, and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Mason's neststraw <i>Stylocline masonii</i>	March–May	–	1B.1	Sandy soils in chenopod scrub and pinyon and juniper woodland	None; no suitable habitat is present on or adjacent to the project site.

Notes: CNDDB = California Natural Diversity Database; CRPR = California Rare Plant Rank

Table 1. Special-status Plants Evaluated for Potential to Occur on the Project Site

Species	Blooming Period	Status ¹		Habitat Associations	Potential to Occur on Project Site
		Federal	State		
¹ Status Definitions					
<u>Legal Status</u>					
E = Listed as Endangered under the Federal or State Endangered Species Act					
<u>California Rare Plant Ranks</u>					
1B = Plant species considered rare or endangered in California and elsewhere (but not legally protected under the Federal or California Endangered Species Acts).					
<u>California Rare Plant Rank Extensions</u>					
.1 = Seriously endangered in California (greater than 80 percent of occurrences are threatened and/or have a high degree and immediacy of threat).					
.2 = Fairly endangered in California (20 to 80 percent of occurrences are threatened and/or have a moderate degree and immediacy of threat).					
– = no status					
Sources: CDFW 2018; CNPS 2018; USFWS 2018a; GEI Consultants, Inc. field survey observations					

Table 2. Special-status Fish and Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
Fish				
Delta smelt <i>Hypomesus transpacificus</i>	T	E	Semi-anadromous; typically restricted to the Sacramento-San Joaquin River Delta and the lower Sacramento River	None; no suitable habitat is present on or adjacent to the project site, which is outside the range of this species.
Invertebrates				
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T	–	Vernal pools and seasonal wetlands, including a wide range of sizes and depths.	None; no suitable habitat is present on or adjacent to the project site.
Amphibians				
California red-legged frog <i>Rana draytonii</i>	T	SSC	Lowlands and foothill areas, in or near permanent deep water with dense, shrubby or emergent riparian vegetation	None; no suitable habitat is present on or adjacent to the project site, which is outside the current range of this species.
Western spadefoot <i>Spea hammondi</i>	–	SSC	Vernal pools and seasonal wetlands in grasslands and open woodlands	None; no suitable habitat is present on or adjacent to the project site.
Reptiles				
Blunt-nosed leopard lizard <i>Gambelia silus</i>	E	E, FP	Sparsely vegetated and relatively flat grasslands and alkali and desert scrub habitats	None; no suitable habitat is present on or adjacent to the project site; nearest CNDDDB occurrence is a 1974 observation 2.5 miles southwest of the project site; most of this area has since been developed or converted to agricultural production.
Coast horned lizard <i>Phrynosoma blainvillii</i>	–	SSC	Most commonly along sandy washes with scattered low bushes	None; no suitable habitat is present on or adjacent to the project site.
California glossy snake <i>Arizona elegans occidentalis</i>	–	SSC	Wide variety of habitats, including grassland and scrub, often with loose or sandy soils	None; no suitable habitat is present on or adjacent to the project site.

Table 2. Special-status Fish and Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
Giant gartersnake <i>Thamnophis gigas</i>	T	T	Open water and emergent vegetation in marshes, sloughs, and other aquatic habitats; also requires open upland habitat	None; no suitable habitat is present on or adjacent to the project site, which is outside the current range of this species.
Birds				
Burrowing owl <i>Athene cunicularia</i>	BCC	SSC	Nests and forages in grasslands, agricultural lands, and other open habitats with natural or artificial burrows or friable soils	Very low; uncultivated fields at the east end of the project site provide marginally suitable foraging habitat and potential burrows. However, this area is adjacent to development and likely subject to high disturbance levels. The nearest CNDDDB occurrence is from grassland and scrub habitat at Semitropic Ridge, approximately 10 miles west of the project site.
Swainson's hawk <i>Buteo swainsoni</i>	BCC	T	Nests in riparian forest and scattered trees; forages in grasslands and agricultural fields	Very low; uncultivated fields at the east end of the project site provide a small amount of marginally suitable foraging habitat, but the few large trees in the project vicinity are at rural residences and in residential developments. These trees are unlikely to be used for nesting, and the only nest within 10 miles of the project site that is documented in the CNDDDB is from 1929.
Northern harrier <i>Circus cyaneus</i>	–	SSC	Nests and forages in grasslands, field crops, and marshes; nests on the ground in patches of dense, often tall, vegetation	Very low; uncultivated fields at the east end of the project site provide marginally suitable habitat. However, the species is unlikely to nest on or near the site, because the area is dominated by orchards and development.
White-tailed kite <i>Elanus leucurus</i>	–	FP	Nests in woodlands and isolated trees and forages in grasslands, pasture, and agricultural fields	Very low; uncultivated fields at the east end of the project site provide a small amount of marginally suitable foraging habitat, but the few large trees at rural residences and in residential developments in the project vicinity are unlikely to be used for nesting.
Le Conte's thrasher <i>Toxostoma lecontei</i>	BCC	SSC	Dry, open scrub habitats with dense spiny vegetation	None; no suitable habitat is present on or adjacent to the project site.
Tricolored blackbird <i>Agelaius tricolor</i>	BCC	C	Nests in dense cattails and tules, riparian scrub, grain crops, and other low dense vegetation; forages in grasslands and agricultural fields	Very low; uncultivated fields at the east end of the project site provide marginally suitable habitat. However, the species is unlikely to nest on or near the site, because the area is dominated by orchards and development. The CNDDDB occurrence at Wasco is from 1935, and the nearest recent nest colonies are approximately 7 miles northwest of the project site.
Mammals				
Buena Vista Lake ornate shrew <i>Sorex ornatus relictus</i>	E	SSC	Moist soils in marsh and riparian habitat, with stumps, logs and litter for cover	None; no suitable habitat is present on or adjacent to the project site.

Table 2. Special-status Fish and Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
Tulare grasshopper mouse <i>Onychomys torridus tularensis</i>	–	SSC	Dry, open scrublands	None; no suitable habitat is present on or adjacent to the project site.
Giant kangaroo rat <i>Dipodomys ingens</i>	E	E	Dry grasslands and alkali scrub with sandy loam soils	None; no suitable habitat is present on or adjacent to the project site.
Tipton kangaroo rat <i>Dipodomys nitratooides</i>	E	E	Saltbrush and sink scrub vegetation with soft, friable soils	None; no suitable habitat is present on or adjacent to the project site.
Nelson’s antelope squirrel <i>Ammospermophilus nelsoni</i>	–	T	Grasslands and open shrubland with gullies and washes	None; no suitable habitat is present on or adjacent to the project site.
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	E	T	Primarily grasslands and sparsely vegetated shrublands with loose-textured soils; can also use open agricultural habitats	Very low; habitat on and adjacent to the project site is of poor quality, and there are no CNDDDB occurrences within 10 miles in the past 25 years.
American badger <i>Taxidea taxus</i>	–	SSC	Dry, open areas in various habitats with friable soils and uncultivated ground	None; no suitable habitat is present on or adjacent to the project site.
Western mastiff bat <i>Eumops perotis californicus</i>	–	SSC	Various open, semi-arid to arid habitats; roosts in cliff crevices, high buildings, tunnels, and trees	Very low; individuals could occasionally forage in the vicinity, but potential roosting habitat is very limited.

Notes: CNDDDB = California Natural Diversity Database

¹ Status Definitions

- E = Listed as Endangered under the Federal or State Endangered Species Act
- T = Listed as Threatened under the Federal or State Endangered Species Act
- C = Candidate for listing as Threatened or Endangered under the State Endangered Species Act
- BCC= Federal Bird of Conservation Concern
- FP = Fully Protected under the California Fish and Game Code
- SSC= California Species of Special Concern

Sources: CDFW 2018; CNPS 2018; USFWS 2018a; GEI Consultants, Inc. field survey observations

Five special-status bird species have very low potential to occur on or adjacent to the project site: burrowing owl, Swainson’s hawk, northern harrier, white-tailed kite, and tricolored blackbird. No suitable nesting habitat for tricolored blackbird or northern harrier is currently present on or adjacent to the project site. However, if grain crops or extensive areas of tall ruderal vegetation (e.g., in fallow fields) are present during project activities, there is some potential for these species to nest in such habitat. Large ornamental trees at several rural residences and agricultural facilities on or near the project site provide marginally suitable nest sites for Swainson’s hawk and white-tailed kite (as well as common raptor species). Kern County is at the south end of the Swainson’s hawk breeding range, and the species occurs sparsely in this region; no nesting pairs were detected in Kern County during the California Department of Fish and Game 2005 inventory (CDFG 2007). The CNDDDB includes only 20 presumed extant active Swainson’s hawk nests or nesting pairs documented since 1990 in Kern County, and none of these is within 10 miles of the project site. Based on the scarcity of Swainson’s hawks in the region and the very small number of potential nest trees, potential for this species to nest on or near the project site is low, but cannot entirely be ruled out. Similarly, few potential nest sites for white-tailed kite are present, and potential for kites to nest on or near the project site is low. Potentially suitable habitat for burrowing owl is currently limited to margins of grain fields and fallow fields adjacent to the eastern portion of the project site. During the May 2018 field survey, a large ground squirrel colony was

observed in the fallow field south of Gromer Avenue and west of North Palm Avenue; this area has the highest potential to support burrowing owls.

CNDDDB occurrences of western mastiff bat (California Species of Special Concern) in the southern San Joaquin Valley are generally from the valley floor margins, adjacent to hills that likely provide suitable natural roost sites. Because the nearest known occurrences are approximately 15 miles from the project site, there is no suitable natural roosting habitat within at least 10 miles, and the project vicinity provides poor artificial roost sites, these bats have very low potential to occur on or adjacent to the project site. The CNDDDB includes several San Joaquin kit fox (federally listed as Endangered and state-listed as Threatened) occurrences in the general project region, most of which were from areas of natural habitat to the west and south and from along Poso Creek to the east. None of the CNDDDB occurrences within 10 miles of the project site are from the past 25 years, and most are much older. Although kit foxes occur in a variety of habitats, including row crops and orchards, they prefer natural open habitats with loose-textured soils, and dens typically occur in open areas with grass or scattered brush (USFWS 1998, 2010). According to habitat suitability modeling conducted over the range of San Joaquin kit fox, no medium or high suitability habitat is present on the project site, and no extensive areas of such habitat are present within at least 5 miles (Cypher et al. 2013). No potential kit fox dens were observed during the field survey. Based on the current habitat conditions and observations made during the field surveys, potential for kit fox to occur on or near the project site is very low, and kit fox dens are extremely unlikely to be present. However, because the project site is between two satellite areas, there is potential for foraging or transient individuals to occasionally pass through the site.

2.3 Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through the California Environmental Quality Act, the Federal Endangered Species Act (ESA), Section 1602 of the California Fish and Game Code, Section 404 of the Federal Clean Water Act (CWA), and the Porter-Cologne Water Quality Control Act. Sensitive habitats may be of special concern for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat for special-status species.

2.3.1 Critical Habitat

Critical habitat is a geographic area containing features determined to be essential to the conservation of a species listed as threatened or endangered under the ESA. No designated or proposed critical habitat is present on or adjacent to the project site.

2.3.2 Other Habitats Protected under Federal or State Regulations

Under Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) regulates discharge of dredged or fill material into aquatic features that qualify as waters of the United States; wetlands that support hydrophytic vegetation, hydric soil types, and wetland hydrology may also qualify for USACE jurisdiction under Section 404 of the CWA. Under Section 401 of the CWA, the Central Valley Regional Water Quality Control Board (RWQCB) regulates discharge of dredged or fill material into waters of the United States that drain to the Central Valley, to ensure such activities do not violate State or Federal water quality standards; the Central Valley RWQCB also regulates waters of the State, in compliance with the Porter-Cologne Act. In addition, all diversions, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife

resources is subject to the regulatory approval of CDFW pursuant to Section 1602 of the California Fish and Game Code.

No aquatic habitat that qualifies for regulation under Section 401 or 404 of the CWA or Section 1602 of the California Fish and Game Code is present on the project site.

2.3.3 Natural Communities of Special Concern

CDFW maintains a list of terrestrial natural communities that are native to California, the List of Vegetation Alliances and Associations (CDFG 2010). Within that list, CDFW identifies and ranks natural communities of special concern considered to be highly imperiled. The project site does not support any natural communities of special concern.

3. Potential Impacts

Implementing the project would temporarily disturb the margins of existing paved roads, orchards, and active and fallow agricultural fields. Pipeline installation would primarily be limited to barren ground, and no natural habitat would be affected by any project activities. In addition, no orchard trees would be removed.

The impact discussions below focus on resources determined to have potential to be affected by implementing the project. Therefore, special-status species that do not have potential to occur on or near the project site (i.e., because suitable habitat is absent or the project site is outside the species' current range) are not addressed in these discussions.

2.4 Special-status Wildlife

2.4.1 Birds

Five special-status birds have very low potential to occur on the project site (*see* Table 2). All these species are known or likely to occur in the general region, but habitat on and adjacent to the project site is only marginally suitable for them. The project site and/or immediately adjacent areas currently provide marginal nesting habitat for burrowing owl, Swainson's hawk and white-tailed kite. Suitable nesting habitat for northern harrier and tricolored blackbird could also be present during project implementation, depending on crop types and habitat conditions at the time. Because the project site is subject to regular disturbance from agricultural activities, road traffic, and nearby residential areas, and project disturbance would be similar in intensity to agricultural activities, potential for project activities to result in nest failure or burrow abandonment is low. However, if occupied burrows are present along the pipeline corridor, they could be directly destroyed and burrowing owls could be injured or killed. In addition, if active nests are present in or very close to pipeline corridors, project activities could result nest abandonment, reduced care of eggs or young, or premature fledging. Depending on the species and number of individuals that are affected, burrow destruction or nest failure could be considered a substantial adverse effect.

2.4.2 Mammals

San Joaquin kit fox and western mastiff bat are the only special-status mammals with potential to occur on the project site (*see* Table 2). Foraging activities of mastiff bats that may use the project site are

unlikely to be disturbed by construction activities. Because this species typically roosts in small colonies (Pierson and Rainey 1998), relatively few individuals could be affected in the very unlikely event structures adjacent to the project site are used as roosting habitat. Potential disturbance of small numbers of roosting bats would not be considered a substantial adverse effect.

Based on current habitat conditions and observations made during the field surveys, potential for San Joaquin kit fox to den on or adjacent to the project site is low. However, if a den becomes established or transient individuals are present during project implementation, the den could be abandoned or kit foxes could be injured or killed if they become trapped in pipes or trenches. Disturbance of an occupied den or injury or death of a San Joaquin kit fox would be considered a substantial adverse effect.

2.5 Other Potential Impacts on Biological Resources

The project site is part of a much larger extent of agricultural and developed lands and does not serve as a corridor or other primary route for wildlife movement. The project site also is not known or anticipated to serve as a nursery site for any wildlife species. Therefore, implementing the proposed project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

The project site is within the area anticipated to be covered by the Kern County Valley Floor Habitat Conservation Plan. A draft of the plan was issued more than 10 years ago (Kern County Planning Department 2006), but a final plan has not been released. The project site is within an extensive area of “White Zone,” which is of lower conservation concern and not identified for acquisition of preserve areas. Therefore, implementing the proposed project would not conflict with any provisions, guidelines, goals, or objectives related to biological resources anticipated to be included in a potential final and adopted version of this plan.

A low diversity of common birds that use agricultural habitats could nest on or adjacent to the project site. Because the pipeline would primarily be installed within existing barren corridors, there is minimal potential for the project to result in direct destruction of active nests. Implementing recommended impact avoidance and minimization measures described below would avoid direct loss of active bird nests. If active nests are present on or very near the project site, pipeline installation could result in nest abandonment, reduced care of eggs or young, or premature fledging. However, potential indirect loss of active nests of common species would not substantially reduce their abundance or cause any species to drop below self-sustaining levels.

4. Recommended Impact Avoidance and Minimization Measures

The best management practices (BMPs) described below are recommended to avoid or minimize impacts on special-status wildlife and other biological resources that are protected under State and Federal laws and regulations.

- **BMP-1:** An Environmental Awareness Program will be presented to all project personnel working in the field before project activities begin. The program will be presented by a qualified biologist with knowledge of special-status wildlife that could occur on the project site. The program will address each species biology and habitat needs; status of each species and their regulatory protections; and measures required to reduce impacts to the species during project construction and penalties for non-compliance.
- **BMP-2:** Project activities will only occur during the day (from 30 minutes prior to sunrise and 30 minutes following sunset).
- **BMP-3:** Hazardous materials, fuels, lubricants, and solvents that spill accidentally during project-related activities will be cleaned up and removed from the project site as soon as possible, according to applicable federal, state and local regulations.
- **BMP-4:** To prevent wildlife entrapment during construction, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered with plywood or similar material at the end of each work day. If the trenches cannot be closed, one or more escape ramps of no more than a 45-degree slope will be constructed of earthen fill or created with wooden planks. All covered or uncovered excavations will be inspected at the beginning, middle, and end of each day. Before trenches are filled, they will be inspected for trapped animals. If a trapped or injured animal is discovered, project activities will stop, and escape ramps or structures will be installed immediately to allow the animal(s) to escape.
- **BMP-5:** All construction pipes, culverts, or similar structures with a diameter of 4 inches or more that are stored at a construction site for one or more overnight periods will be thoroughly inspected for wildlife before the pipe is buried, capped, or otherwise used or moved in any way. Pipes laid in trenches overnight will be capped. If an animal is discovered inside a pipe, the pipe will not be moved, and the animal will be allowed to leave on its own.
- **BMP-6:** All food-related trash items such as wrappers, cans, bottles or food scraps generated during project activities will be disposed of in closed containers and removed daily from the project site. No deliberate feeding of wildlife will be allowed.
- **BMP-7:** No domestic pets associated with project personnel will be permitted on the project site.

Implementing the following measures, consistent with the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011), would further avoid and/or minimize potential impacts on San Joaquin kit fox.

- **SJKF-1:** A qualified biologist will conduct a pre-construction San Joaquin kit fox survey of staging areas, canal crossings, and portions of the pipeline route that are not in active agricultural cultivation, if any. The survey will be conducted no more than 30 days before project activities begin. If burrows large enough to provide dens for San Joaquin kit fox are found, exclusion zones will be established before project activities begin, in accordance with the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox* (USFWS 2011).
- **SJKF-2:** The District will designate a project representative as the contact for any employee or contractor who finds a dead, injured, or entrapped San Joaquin kit fox. If a San Joaquin kit fox is

found dead, injured, or entrapped on the project site, the District contact will be notified immediately.

- **SJKF-3:** All sightings of San Joaquin kit fox will be reported immediately to USFWS and a record of the sightings will be submitted to the CNDDDB.

Implementing the following measures, consistent with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), would avoid destruction of occupied burrowing owl burrows.

- **BUOW-1:** A qualified biologist will assess burrowing owl habitat suitability in the area subject to direct impact and adjacent areas within 500 feet.
- **BUOW-2:** If suitable habitat or sign of burrowing owl presence is observed, a take avoidance survey will be conducted within 14 days before project activities begin.
- **BUOW-3:** If any occupied burrows are observed, protective buffers will be established and implemented. A qualified biologist will monitor the occupied burrows during project activities to confirm effectiveness of the buffers. The size of the buffer will depend on type and intensity of project disturbance, presence of visual buffers, and other variables that could affect susceptibility of the owls to disturbance.
- **BUOW-4:** If it is not feasible to implement a buffer of adequate size and it is determined, in consultation with CDFW, that passive exclusion of owls from the project site is an appropriate means of minimizing impacts, an exclusion and relocation plan will be developed and implemented in coordination with CDFW. However, passive exclusion cannot be conducted during the breeding season (February 1–August 31), unless a qualified biologist verifies through noninvasive means that either (1) the birds have not begun egg laying or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Implementing the following measures would avoid loss of active Swainson's Hawk nests:

- **SWHA-1:** A qualified biologist will conduct surveys of potential Swainson's hawk nesting trees within 0.25 mile of the project site. To the extent practicable, depending on timing of project initiation, surveys will be conducted in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). At a minimum, a survey will be conducted within 14 days before project activities begin near suitable nest trees during the nesting season (April–August).
- **SWHA-2:** If an active nest is observed, a protective buffer will be established and implemented until the nest is no longer active. A qualified biologist will monitor the nest during project activities to confirm effectiveness of the buffer. The size of the buffer will depend on type and intensity of project disturbance, presence of visual buffers, and other variables that could affect susceptibility of the nest to disturbance.

Implementing the following measures would minimize potential for loss of active nests of other birds:

- **NEST-1:** A qualified biologist will conduct surveys of suitable nesting habitat that would be directly disturbed by project activities and suitable nesting habitat for tricolored blackbird, white-tailed kite, northern harrier, and common raptors, if present within 500 feet of project activities. Surveys will be

conducted within 14 days before project activities begin near suitable nesting habitat during the nesting season (February-August).

- **NEST-2:** If any active nests are documented in the area that would be directly disturbed by project activities or active nests of special-status species are documented within 500 feet, protective buffers will be established and implemented until the nests are no longer active. A qualified biologist will monitor the nests during project activities to confirm effectiveness of the buffers. The size of the buffers will depend on type and intensity of project disturbance, presence of visual buffers, and other variables that could affect susceptibility of the nest to disturbance.

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CNPS. *See* California Native Plant Society.

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USFWS. *See* U.S. Fish and Wildlife Service.

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Appendix A. Project Detail Mapbook

[Mapbook will be inserted in PDF file]

Appendix B. Special-status Species Query Results

[CNDDDB, CNPS, and IPaC lists will be inserted in PDF file]

**Appendix C. Representative Photographs of the
Project Site**



Facing south, from Gromer Avenue, at new tie-in area between Leonard Avenue and Western Avenue.



Facing east at new pipeline route along south side of Gromer Avenue, between Leonard and Western Avenues.



Facing south at existing pipeline route along Western Avenue, from north end of alignment.



Facing southeast at existing tie-in area east of Magnolia Avenue, at south end of alignment.



Facing east at new pipeline route along south side of Gromer Avenue, between Western and Magnolia Avenues.



Facing east at new pipeline route along south side of Gromer Avenue, between Magnolia and Central Avenues.



Facing south at existing pipeline route along Magnolia Avenue, from north end of alignment.



Facing north at existing pipeline route along Magnolia Avenue, from south end of alignment.



Facing north at existing pipeline route north of Gromer Avenue, between Central and North Palm Avenues.



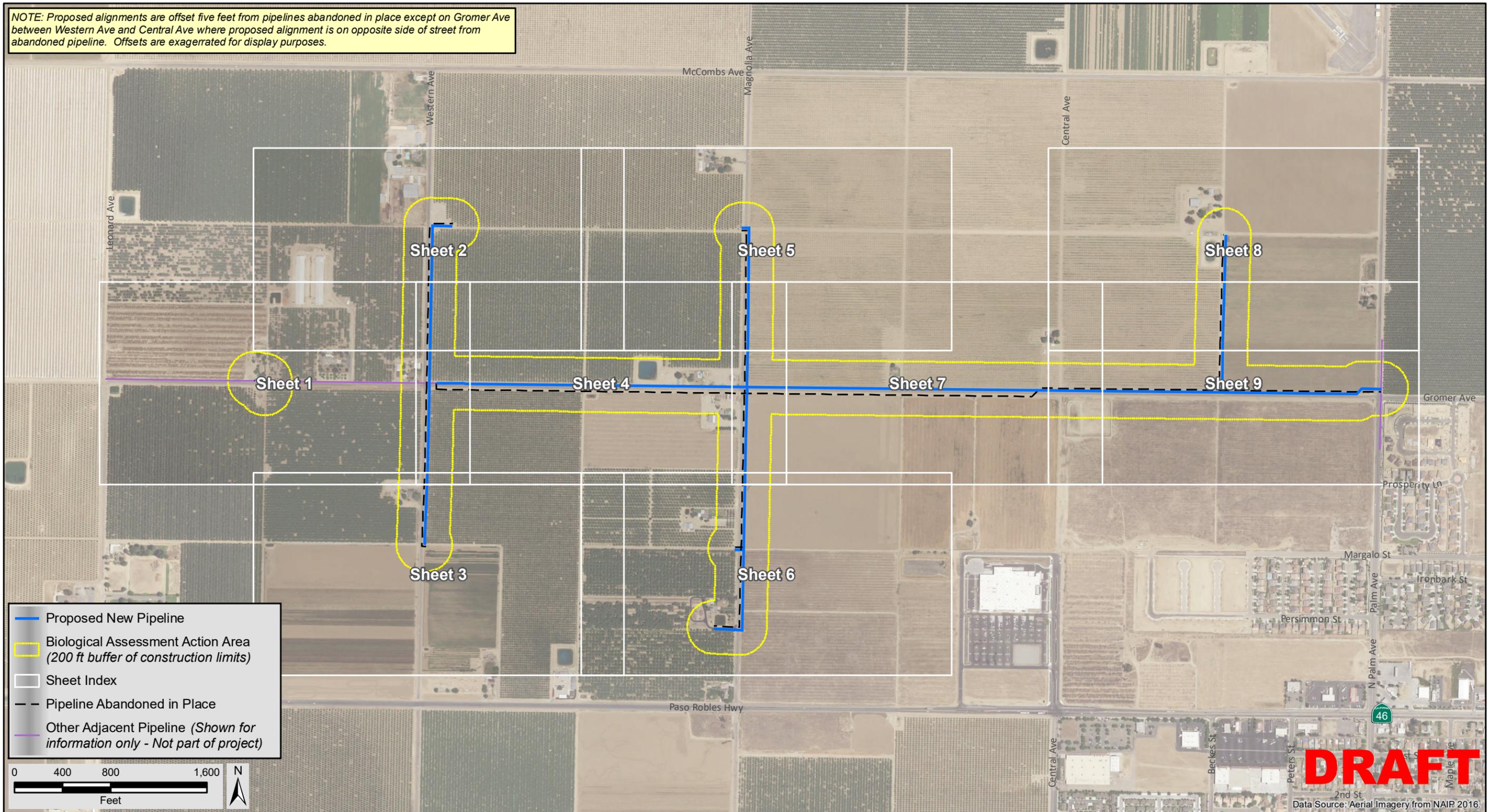
Facing east at new pipeline route along south side of Gromer Avenue, between Central and North Palm Avenues.

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Appendix A. Project Detail Mapbook

**Diltz Intertie Mainline and Laterals Piping Projects
Overview**

NOTE: Proposed alignments are offset five feet from pipelines abandoned in place except on Gromer Ave between Western Ave and Central Ave where proposed alignment is on opposite side of street from abandoned pipeline. Offsets are exaggerated for display purposes.



- Proposed New Pipeline
- Biological Assessment Action Area (200 ft buffer of construction limits)
- Sheet Index
- Pipeline Abandoned in Place
- Other Adjacent Pipeline (Shown for information only - Not part of project)



DRAFT

Data Source: Aerial Imagery from NAIP 2016.

Diltz Intertie Mainline and Laterals Piping Projects
(1 of 9)

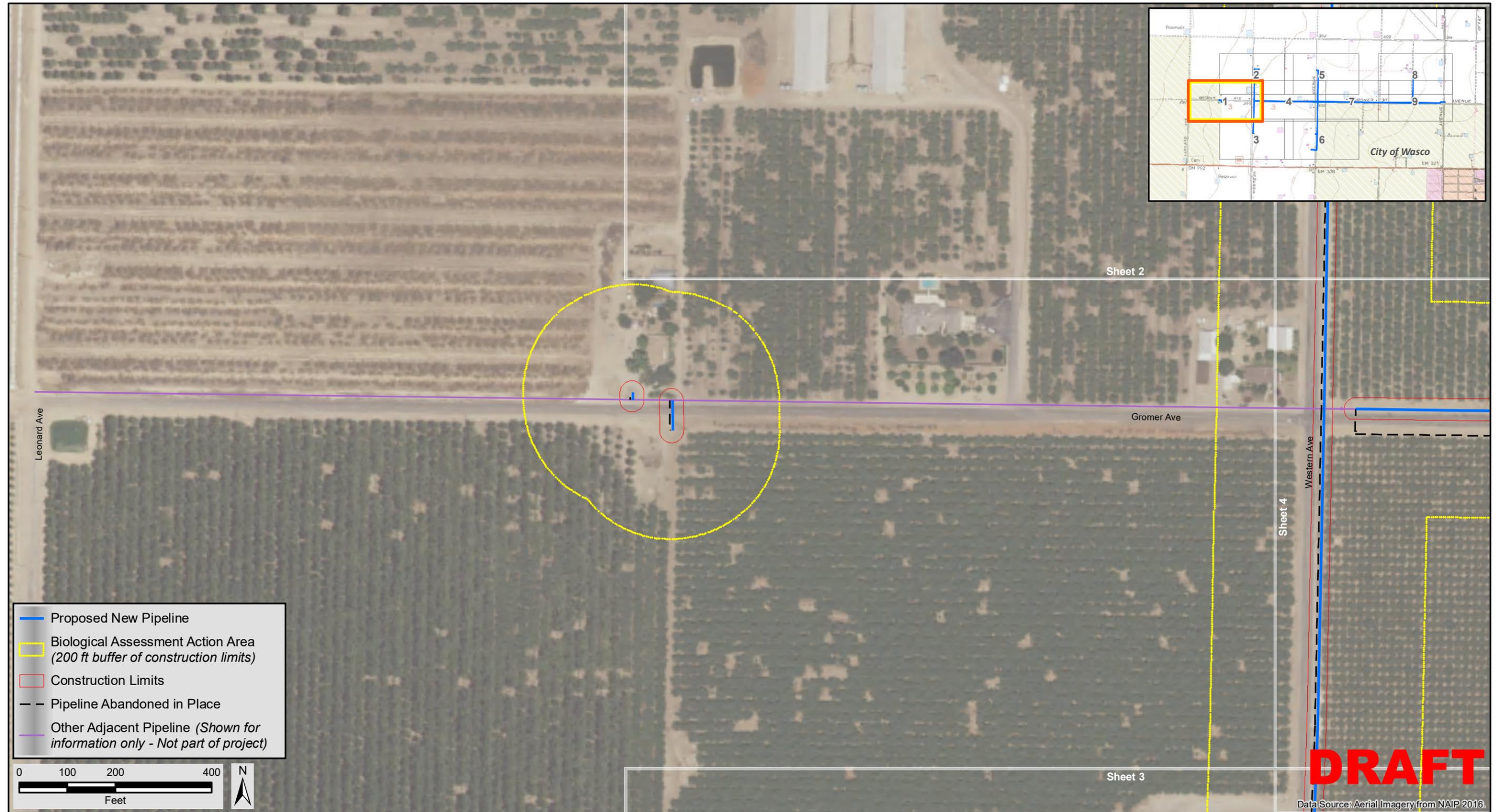
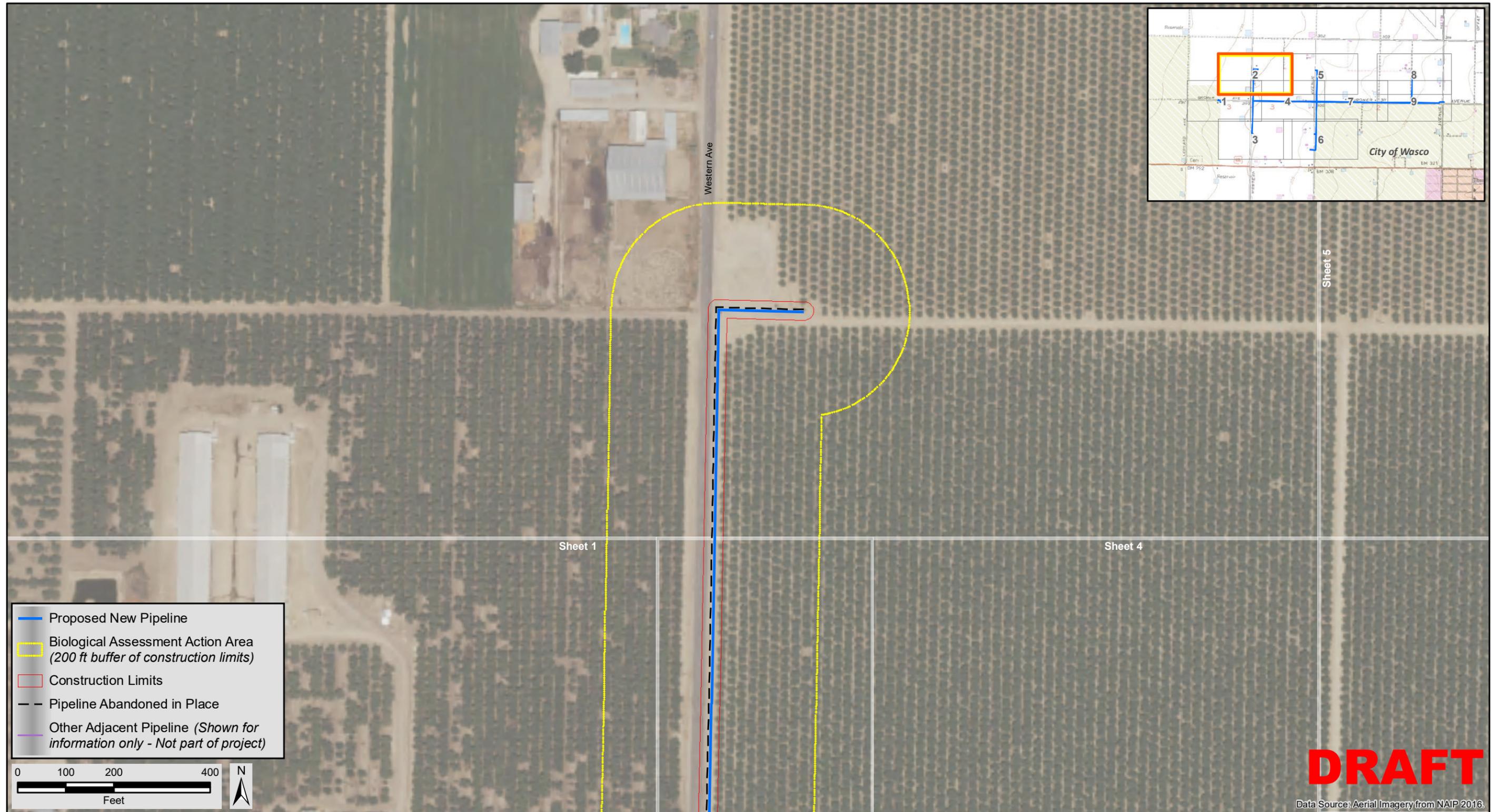


Figure Source: GEI Consultants, Inc. 2018.

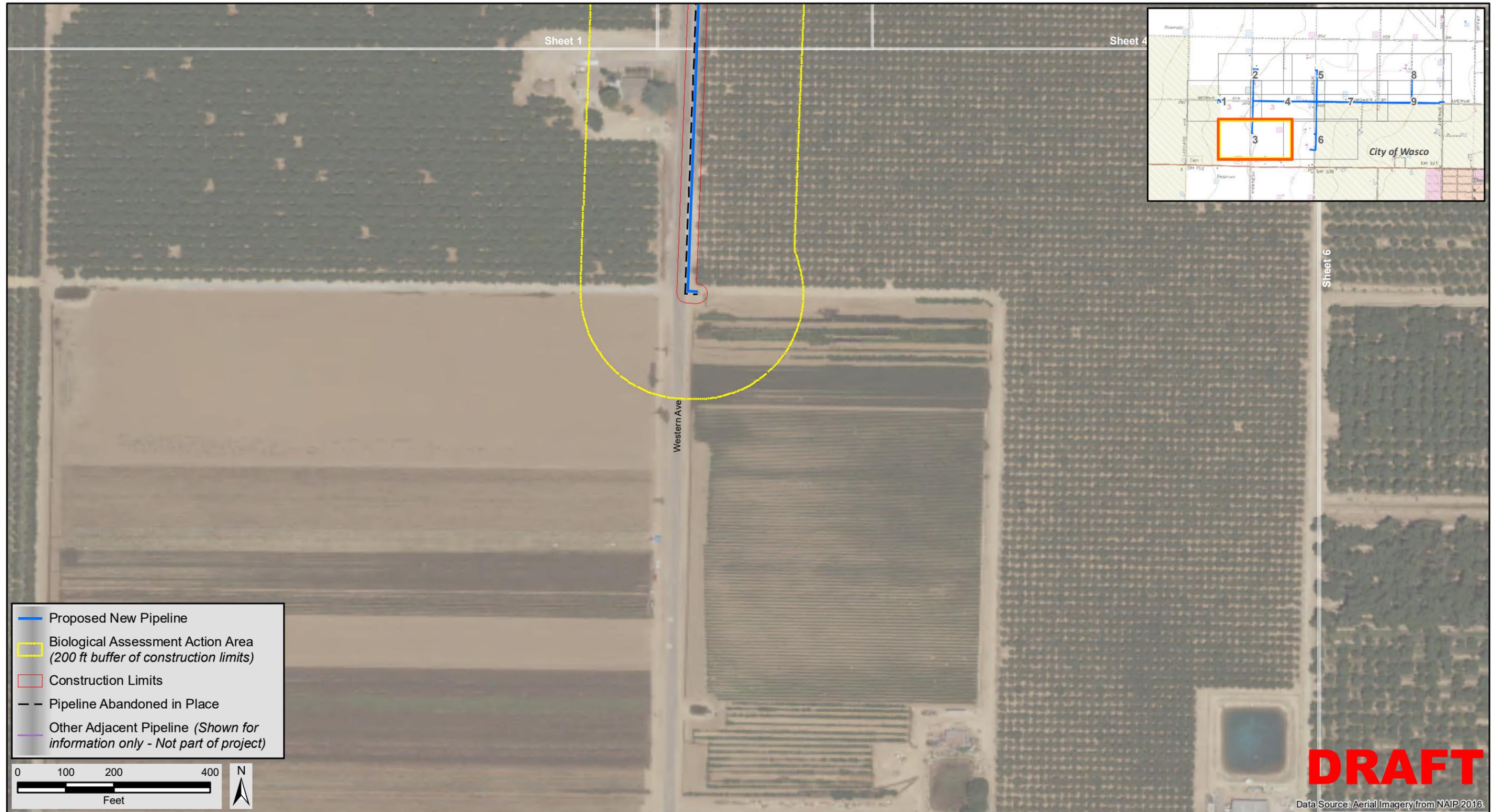
Diltz Intertie Mainline and Laterals Piping Projects
(2 of 9)



DRAFT

Data Source: Aerial Imagery from NAIP 2016.

Diltz Intertie Mainline and Laterals Piping Projects
(3 of 9)

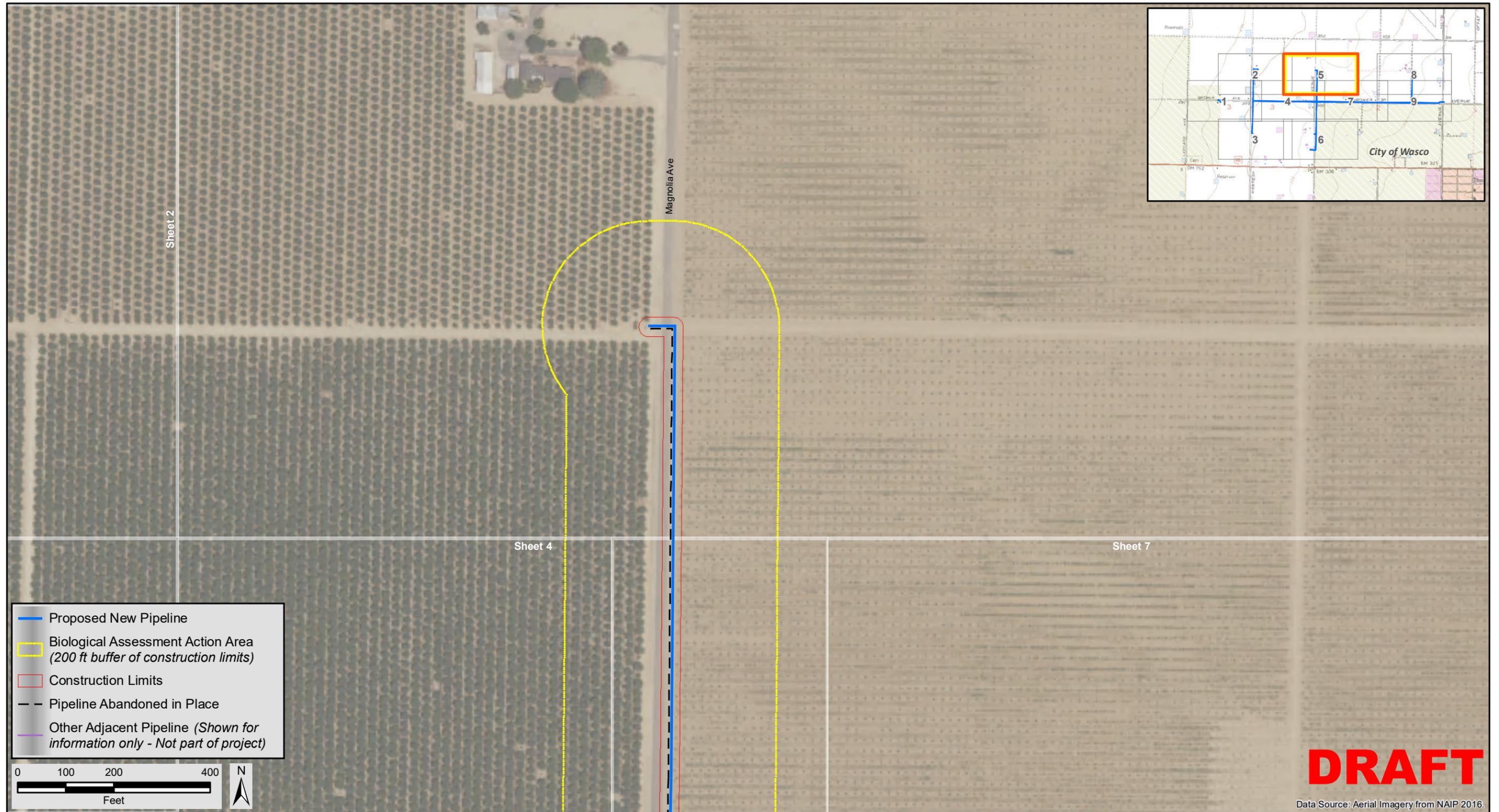


Diltz Intertie Mainline and Laterals Piping Projects
(4 of 9)



Figure Source: GEI Consultants, Inc. 2018.

Diltz Intertie Mainline and Laterals Piping Projects
(5 of 9)



DRAFT

Data Source: Aerial Imagery from NAIP 2016.

Diltz Intertie Mainline and Laterals Piping Projects
(6 of 9)

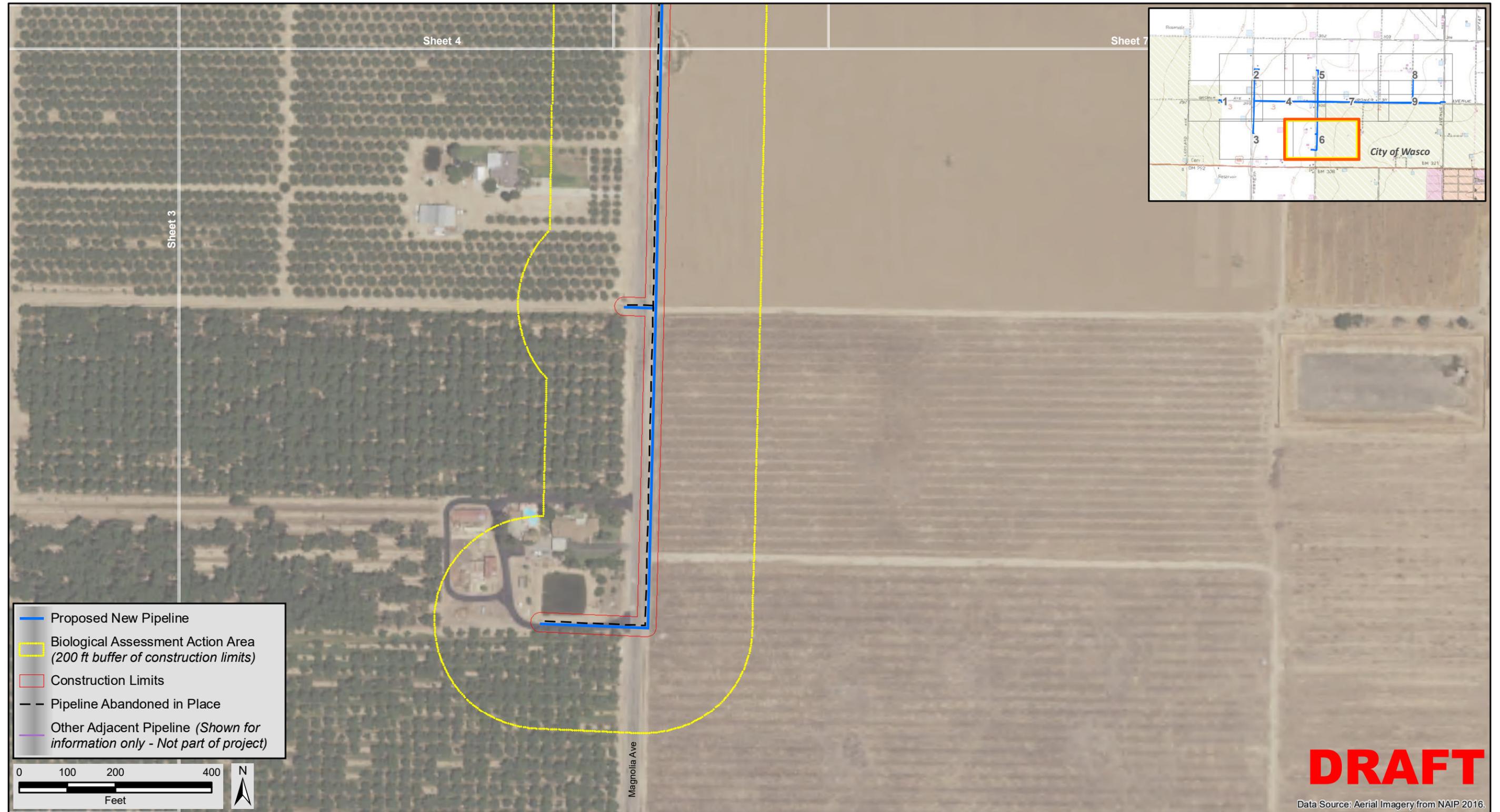


Figure Source: GEI Consultants, Inc. 2018.

DRAFT

Data Source: Aerial Imagery from NAIP 2016.

Diltz Intertie Mainline and Laterals Piping Projects
(7 of 9)



Figure Source: GEI Consultants, Inc. 2018.

Diltz Intertie Mainline and Laterals Piping Projects
(8 of 9)

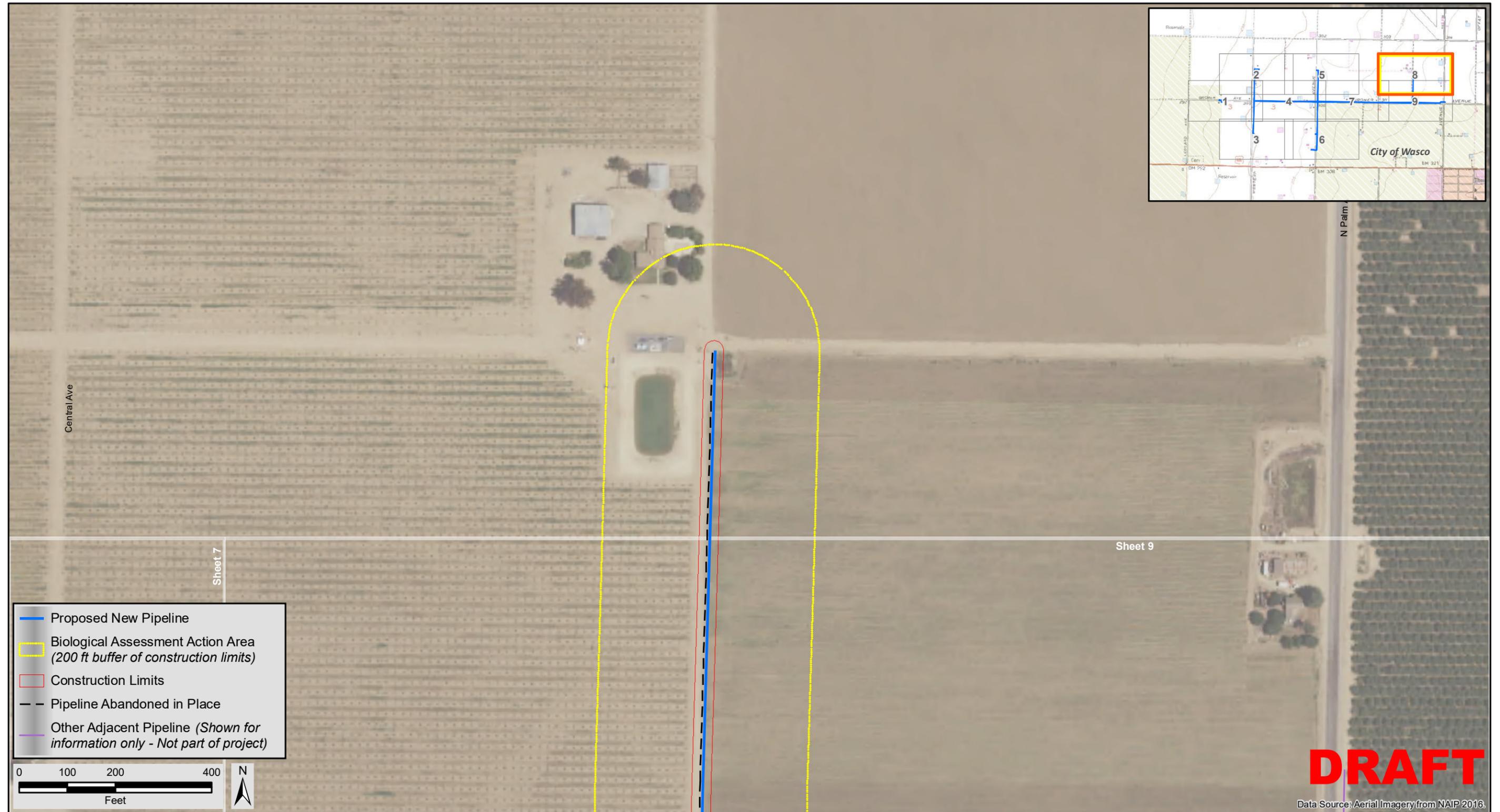


Figure Source: GEI Consultants, Inc. 2018.

Diltz Intertie Mainline and Laterals Piping Projects
(9 of 9)



Figure Source: GEI Consultants, Inc. 2018.

Appendix B. Special-status Species Query Results



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Wasco (3511953) OR Wasco NW (3511964) OR Wasco SW (3511954) OR Pond (3511963) OR McFarland (3511962) OR Famoso (3511952) OR Buttonwillow (3511944) OR Rosedale (3511942) OR Rio Bravo (3511943)) AND Taxonomic Group (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Atriplex cordulata</i> var. <i>erecticaulis</i> Earlimart orache	PDCHE042V0	None	None	G3T1	S1	1B.2
<i>Atriplex coronata</i> var. <i>vallicola</i> Lost Hills crownscale	PDCHE04250	None	None	G4T2	S2	1B.2
<i>Atriplex minuscula</i> lesser saltscale	PDCHE042M0	None	None	G2	S2	1B.1
<i>Atriplex subtilis</i> subtle orache	PDCHE042T0	None	None	G1	S1	1B.2
<i>Caulanthus californicus</i> California jewelflower	PDBRA31010	Endangered	Endangered	G1	S1	1B.1
<i>Cirsium crassicaule</i> slough thistle	PDAST2E0U0	None	None	G1	S1	1B.1
<i>Delphinium recurvatum</i> recurved larkspur	PDRAN0B1J0	None	None	G2?	S2?	1B.2
<i>Eremalche parryi</i> ssp. <i>kernensis</i> Kern mallow	PDMAL0C031	Endangered	None	G3G4T3	S3	1B.2
<i>Eriastrum hooveri</i> Hoover's eriastrum	PDPLM03070	Delisted	None	G3	S3	4.2
<i>Eryngium spinosepalum</i> spiny-sepaled button-celery	PDAPI0Z0Y0	None	None	G2	S2	1B.2
<i>Layia munzii</i> Munz's tidy-tips	PDAST5N0B0	None	None	G2	S2	1B.2
<i>Monolopia congdonii</i> San Joaquin woollythreads	PDASTA8010	Endangered	None	G2	S2	1B.2
<i>Stylocline masonii</i> Mason's neststraw	PDAST8Y080	None	None	G1	S1	1B.1

Record Count: 13

Inventory of Rare and Endangered Plants

Plant List

15 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads [3511964](#), [3511963](#), [3511962](#), [3511954](#), [3511953](#), [3511952](#), [3511944](#) [3511943](#) and [3511942](#);

 [Modify Search Criteria](#)
 [Export to Excel](#)
 [Modify Columns](#)
 [Modify Sort](#)
 [Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Atriplex cordulata var. cordulata	heartscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G3T2
Atriplex cordulata var. erecticaulis	Earlimart orache	Chenopodiaceae	annual herb	Aug-Sep(Nov)	1B.2	S1	G3T1
Atriplex coronata var. coronata	crownscale	Chenopodiaceae	annual herb	Mar-Oct	4.2	S3	G4T3
Atriplex coronata var. vallicola	Lost Hills crownscale	Chenopodiaceae	annual herb	Apr-Sep	1B.2	S2	G4T2
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	1B.1	S2	G2
Atriplex subtilis	subtle orache	Chenopodiaceae	annual herb	Jun, Aug, Sep(Oct)	1B.2	S1	G1
Caulanthus californicus	California jewelflower	Brassicaceae	annual herb	Feb-May	1B.1	S1	G1
Cirsium crassicaule	slough thistle	Asteraceae	annual / perennial herb	May-Aug	1B.1	S1	G1
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	1B.2	S2?	G2?
Eremalche parryi ssp. kernensis	Kern mallow	Malvaceae	annual herb	Jan, Mar, Apr, May(Feb)	1B.2	S2	G3G4T2
Eriastrum hooveri	Hoover's eriastrum	Polemoniaceae	annual herb	Mar-Jul	4.2	S3	G3

Eryngium spinosepalum	spiny-sepaled button-celery	Apiaceae	annual / perennial herb	Apr-Jun	1B.2	S2	G2
Layia munzii	Munz's tidy-tips	Asteraceae	annual herb	Mar-Apr	1B.2	S2	G2
Monolopia congdonii	San Joaquin woollythreads	Asteraceae	annual herb	Feb-May	1B.2	S2	G2
Stylocline masonii	Mason's neststraw	Asteraceae	annual herb	Mar-May	1B.1	S1	G1

Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 03 May 2018].

Search the Inventory

Simple Search
Advanced Search
Glossary

Information

About the Inventory
About the Rare Plant Program
CNPS Home Page
About CNPS
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Contributors

The Calflora Database
The California Lichen Society
California Natural Diversity Database
The Jepson Flora Project
The Consortium of California Herbaria
CalPhotos

Questions and Comments

rareplants@cnps.org



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria:

Quad (Wasco (3511953) OR Wasco NW (3511964) OR Wasco SW (3511954) OR Pond (3511963) OR McFarland (3511962) OR Famoso (3511952) OR Buttonwillow (3511944) OR Rosedale (3511942) OR Rio Bravo (3511943))
AND Taxonomic Group (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
<i>Ammospermophilus nelsoni</i> Nelson's antelope squirrel	AMAFB04040	None	Threatened	G2	S2S3	
<i>Arizona elegans occidentalis</i> California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Bombus crotchii</i> Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<i>Dipodomys nitratoides nitratoides</i> Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	G3T1T2	S1S2	
<i>Eremophila alpestris actia</i> California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
<i>Eumops perotis californicus</i> western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
<i>Gambelia sila</i> blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	G1	S1	FP
<i>Onychomys torridus tularensis</i> Tulare grasshopper mouse	AMAFF06021	None	None	G5T1T2	S1S2	SSC
<i>Perognathus inornatus</i> San Joaquin Pocket Mouse	AMAFD01060	None	None	G2G3	S2S3	
<i>Phrynosoma blainvillii</i> coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
<i>Sorex ornatus relictus</i> Buena Vista Lake ornate shrew	AMABA01102	Endangered	None	G5T1	S1	SSC
<i>Spea hammondi</i> western spadefoot	AAABF02020	None	None	G3	S3	SSC
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Thamnophis gigas</i> giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
<i>Toxostoma lecontei</i> Le Conte's thrasher	ABPBK06100	None	None	G4	S3	SSC
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S2	

Record Count: 19



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:

May 06, 2018

Consultation Code: 08ESMF00-2018-SLI-2029

Event Code: 08ESMF00-2018-E-05939

Project Name: Diltz Intertie Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2018-SLI-2029

Event Code: 08ESMF00-2018-E-05939

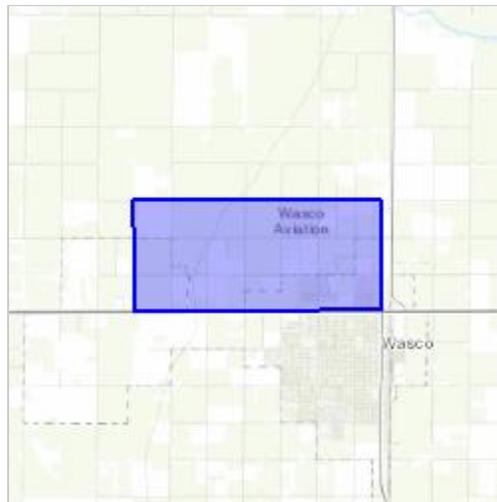
Project Name: Diltz Intertie Project

Project Type: WATER SUPPLY / DELIVERY

Project Description: Pipeline installation for groundwater recharge project in northern Kern County.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/35.612454692817344N119.36374247516957W>



Counties: Kern, CA

Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Buena Vista Lake Ornate Shrew <i>Sorex ornatus relictus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1610	Endangered
Giant Kangaroo Rat <i>Dipodomys ingens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6051	Endangered
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered
Tipton Kangaroo Rat <i>Dipodomys nitratoides nitratoides</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7247 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/40/office/11420.pdf	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard <i>Gambelia silus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/625	Endangered
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

**Appendix C. Representative Photographs of the
Project Site**



Facing south, from Gromer Avenue, at new tie-in area between Leonard Avenue and Western Avenue.



Facing east at new pipeline route along south side of Gromer Avenue, between Leonard and Western Avenues.



Facing south at existing pipeline route along Western Avenue, from north end of alignment.



Facing southeast at existing tie-in area east of Magnolia Avenue, at south end of alignment.



Facing east at new pipeline route along south side of Gromer Avenue, between Western and Magnolia Avenues.



Facing east at new pipeline route along south side of Gromer Avenue, between Magnolia and Central Avenues.



Facing south at existing pipeline route along Magnolia Avenue, from north end of alignment.



Facing north at existing pipeline route along Magnolia Avenue, from south end of alignment.



Facing north at existing pipeline route north of Gromer Avenue, between Central and North Palm Avenues.



Facing east at new pipeline route along south side of Gromer Avenue, between Central and North Palm Avenues.

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