

# **ORANGE COUNTY SANITATION DISTRICT**

## **Appendix C**

### **BIOLOGICAL RESOURCES LETTERS**

**(Prepared by BonTerra Consulting except where noted)**

**February 3, 2003 – Biological Constraints**

**September 26, 2003 – Results of Survey for Nesting Raptors**

**August 28, 2003 – Spring Botanical Survey**

**August 27, 2003 – Results of Focused Surveys (2 letters)**

**January 27, 2003 – Delineation of Jurisdictional Waters (prepared  
by RBF Consulting)**

**Appendices and Exhibits from the Biological Resources Letters  
can be provided upon request.**



An Environmental Planning/Resource Management Corporation

February 3, 2003



Mr. Alan Ashimine  
RBF Consulting  
14725 Alton Parkway  
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VIA FACSIMILE AND OVERNIGHT  
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Subject: Biological Constraints Survey for the Carbon Canyon Project Site, Orange County, California



Dear Mr. Ashimine:

A biological constraints survey for the Carbon Canyon project site in Orange County (hereafter referred to as the project site) was conducted by Ecologist Amber Oneal on November 13, 2002. The purpose of the survey was to evaluate potential biological constraints to development on the project site. Vegetation mapping was conducted by Ms. Oneal on December 4, 2002.



The project site is located in Carbon Canyon Regional Park near the cities of Brea and Yorba Linda in unincorporated Orange County (Exhibit 1). The project site is generally bound by Carbon Canyon Road (Highway 142) to the north, Rose Drive to the west, and open space within Carbon Canyon Regional Park to the south and east (Exhibit 2). Elevations on the project site range from approximately 420 to 525 feet above mean sea level (msl). Land uses in the vicinity include agriculture, oil drilling, residential development, Carbon Canyon Dam, and open space within Carbon Canyon Park.



The proposed project is the installation of a 21-inch diameter gravity sewer pipeline by the Orange County Sanitation District (OCSD). The purpose of the pipeline would be to service the Olinda Heights development that is under construction as well as future developments. The pipeline would begin near the existing pump station along Carbon Canyon Road and head south 1,500 lateral feet towards the dam. This portion of the pipeline would use standard trenching methods with the pipeline approximately 10 feet deep. Prior to reaching the dam, the pipeline would turn westward and continue for another 1,300 lateral feet. This portion of the pipeline would use micro-tunneling methods with the pipeline reaching 100 feet deep. The remaining 1,700 lateral feet, on Aera Energy property, would head south to its terminal end at Rose Drive where it would connect to an existing OCSD trunk main. This portion of the pipeline would also be installed using standard trenching methods.

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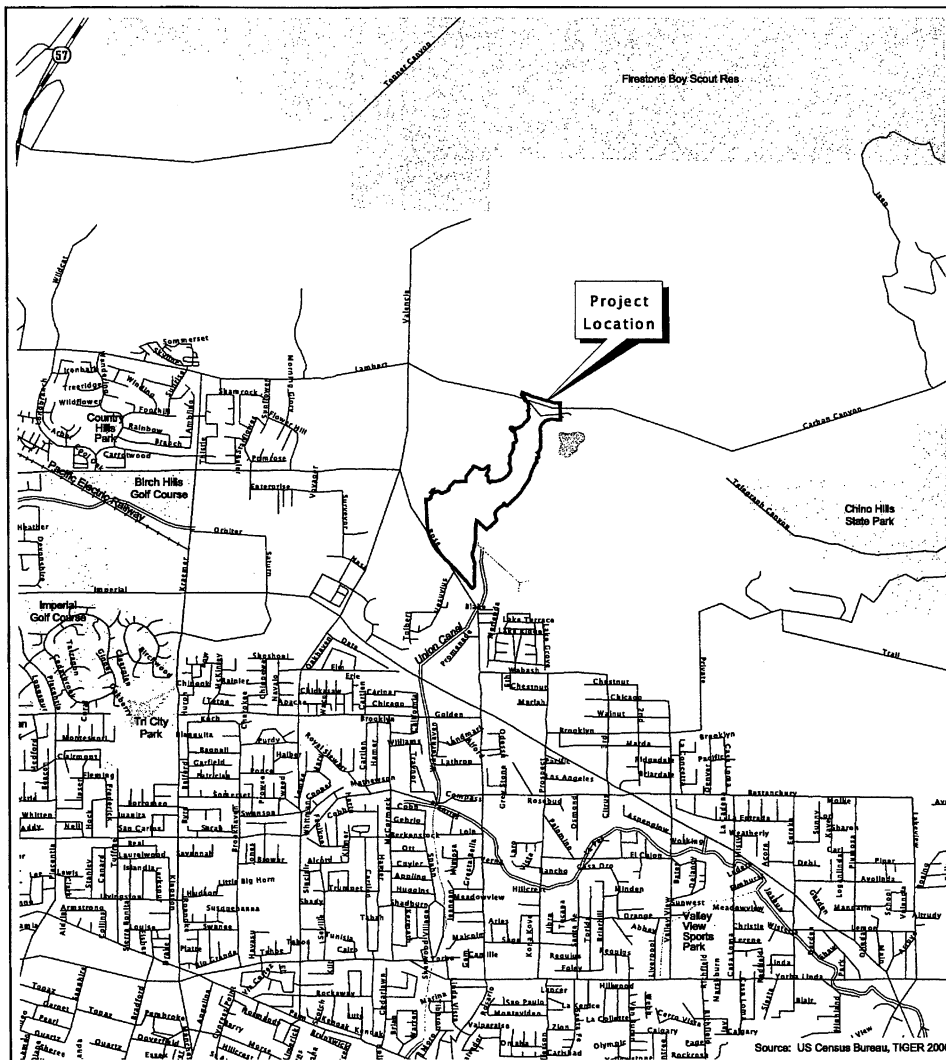
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**SURVEY METHODS**

BonTerra Consulting conducted a search of available literature to identify special status plants, wildlife, and habitats known to occur in the vicinity of the project site. The California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California (CNPS 2002) and a compendia of special status species published by the U.S. Fish and Wildlife Service (USFWS) and California Department

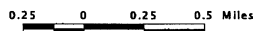




Source: US Census Bureau, TIGER 2000.

**Local Vicinity**

Carbon Canyon



**Exhibit 2**

**Bonterra**  
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of Fish and Game (CDFG) were reviewed. In addition, CDFG's California Natural Diversity Database (CNDDDB) was reviewed prior to the site visit (CDFG 2002).

The biological constraints survey was conducted to describe the vegetation and evaluate the potential of habitats to support special status plant and wildlife species on the project site. All plant and wildlife species observed were recorded in field notes. Plant species were identified in the field or collected for future identification. Plants were identified using keys in Hickman (1993), Munz (1974), and Abrams (1923, 1960). Taxonomy follows Hickman (1993) and current scientific data (e.g., scientific journals) for scientific and common names. The Sunset Western Garden Book (Brenzel 1995) was used for ornamental species that were not included in the references listed above. Vegetation mapping follows the Orange County GIS guidelines (Gray and Bramlet 1992), with a few site specific modifications.

All wildlife species detected during the course of the surveys were documented in field notes. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic sign, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows Fisher and Case (1997) for amphibians and reptiles, American Ornithologists Union (1998) for birds, and Jones *et. al* (1992) for mammals.

## **SURVEY RESULTS**

### **Vegetation**

The project site is comprised of a combination of native and non-native vegetation types and the unvegetated disturbed/developed mapping unit. Many of the native areas have scattered ornamentals, however, they would still be considered high quality habitats. Note that the area mapped extends beyond the impact area to include resources that may be indirectly impacted by the project. Vegetation types are discussed briefly below and shown on Exhibit 3.

#### **Coastal Sage Scrub**

The following vegetation types are included in coastal sage scrub: sagebrush scrub, sagebrush scrub with rocky outcroppings, disturbed sagebrush scrub, southern cactus scrub, and southern cactus scrub/Mexican elderberry woodland. Coastal sage scrub occurred primarily on the hill above the access road. It also occurred in the area near the end of the proposed microtunnel, and in small patches near the dam. The coastal sage scrub vegetation type is dominated by California sagebrush (*Artemisia californica*). Other species occurring at lower densities include California buckwheat (*Eriogonum fasciculatum*) and coastal goldenbush (*Isocoma menziesii*). Native needlegrass (*Nasella* sp.) was the dominant understory species within most of the sagebrush scrub. The area of coastal sage scrub north of the end of the proposed microtunnel also included patches of coastal prickly-pear cactus (*Opuntia littoralis*) and scattered Mexican elderberry (*Sambucus mexicana*). Disturbed coastal sage scrub has a lower density of sage scrub species with an annual grass (*Avena* spp. and *Bromus* spp.) understory.

#### **Chaparral**

The following vegetation types are included in the chaparral vegetation type: sumac chaparral, sumac chaparral/Mexican elderberry woodland, sumac chaparral/Mexican elderberry woodland/ornamental, sumac chaparral/Mexican elderberry woodland/ornamental/annual grassland, sumac chaparral/ornamental, and sumac savannah/ornamental. Laurel sumac (*Malosma laurina*) and



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Mexican elderberry occur scattered throughout the project site. In some areas they occur in dense patches to form a woodland, while in other areas they are scattered at lower densities among annual grassland. In some areas they occur in monotypic stands of either Mexican elderberry or laurel sumac, and in some areas these species occur within a stand. In some areas, ornamentals such as Peruvian pepper (*Schinus molle*) and gum (*Eucalyptus* sp.) trees, also occur within a stand. The understory of this vegetation type is typically comprised of annual grasses or leaf litter.

#### **Annual Grassland**

The annual grassland vegetation type is dominated by annual grass species including wild oat and brome species. Other species occurring within the annual grassland include shortpod mustard (*Hirschfeldia incana*) and castor bean (*Ricinus communis*). Annual grass in the area west of the dam and appears to be mowed regularly, while the annual grass along the rest of the access road is not regularly mowed.

#### **Riparian**

The only riparian vegetation type on the project site is an extensive willow riparian forest that is very high quality. The mature woodland is comprised primarily of willows (*Salix* spp.), with some scattered non-native ornamental species such as Peruvian pepper, gum, and giant reed (*Arundo donax*). The presence of these ornamental species does not lower the quality of this vegetation type.

#### **Agricultural Fields**

The irrigated row and field crops are located west of the dam, near the end of the microtunnel. They consist of regular disced fields that are planted with row crops, including Christmas trees (*Pinus* sp.). At the time of the survey, most of the fields had been recently disced.

#### **Disturbed/Developed**

The disturbed/developed mapping unit is primarily dirt and paved roads and other developed areas such as parking lots and the dam. Other areas that are comprised of mostly bare ground are also included in this mapping unit.

#### **Ornamental**

The ornamental vegetation type includes non-native vegetation typically planted for ornamental purposes. In the northern portion of the project site, the park is landscaped with turf grass species and scattered ornamental trees approximately 30 to 40 feet tall. These trees include Peruvian pepper, jacaranda (*Jacaranda mimosifolia*), gum, London plane (*Platanus acerifolia*), and native western sycamore (*Platanus racemosa*). Along the access road, ornamental trees occur individually or in small stands that may include native shrubs or trees, such as Mexican elderberry and laurel sumac. Larger stands of ornamentals form woodlands with an understory primarily of leaf litter. One of these woodlands is a monotypic stand of Peruvian pepper trees, while another is comprised of a mix of species including Peruvian pepper, Brazilian pepper (*Schinus terebinthifolius*), gum, and Pampas grass (*Cortaderia* sp.).

#### **Wildlife Habitat**

The project site provides high quality habitat for wildlife species. Common reptiles observed on the project site included the western fence lizard (*Sceloporus occidentalis*) and western rattlesnake

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(*Crotalus viridis*). Other reptile species expected to occur on the project site include the side blotted lizard (*Uta stansburiana*), southern alligator lizard (*Elgaria multicarinata*), and gopher snake (*Pituophis catenifer*). Common amphibian species expected to occur on the site include the western toad (*Bufo boreas*), California treefrog (*Hyla cadaverina*) and Pacific treefrog (*Hyla regilla*).

Common bird species observed during the survey included California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), Nuttall's woodpecker (*Picoides nuttalli*), northern flicker (*Colaptes auratus*), western scrub-jay (*Aphelocoma californica*), black phoebe (*Sayornis nigricans*), Cassin's kingbird (*Tyrannus vociferans*), bush-tit (*Psaltriparus minimus*), wren-tit (*Chamaea fasciata*), northern mockingbird (*Mimus polyglottos*), yellow-rumped warbler (*Dendroica coronata*), spotted towhee (*Pipilo maculatus*), California towhee (*Pipilo crissalis*), white-crowned sparrow (*Zonotrichia leucophrys*), and house finch (*Carpodacus mexicanus*). Raptors observed on the project site included the red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and American kestrel (*Falco sparverius*).

Mammal species or evidence of their presence observed on the project site included the coyote (*Canis latrans*) and cottontail (*Sylvilagus audubonii*). Other species expected to occur include the Virginia opossum (*Didelphis virginianus*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), house mouse (*Mus musculus*), deer mouse (*Peromyscus maniculatus*), common raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and bobcat (*Lynx rufus*). Several bat species are also expected to forage on the project site, such as the California myotis (*Myotis californicus*), western pipistrelle (*Pipistrellus hesperus*), big brown bat (*Eptesicus fuscus*), and pallid bat (*Antrozous pallidus*).

#### **Special Status Habitats**

Drainages, which may include wetlands and "waters of the United States," are protected under Section 404 of the Clean Water Act and are under the jurisdiction of the U.S. Army Corps of Engineers (ACOE). "Waters of the United States" include navigable coastal and inland waters, lakes, rivers, and streams and their tributaries, interstate waters and their tributaries, wetlands adjacent to such waters, intermittent streams, and other waters that could affect interstate commerce. In addition, if drainages onsite meet the criteria established by Section 1600 of the California Fish and Game Code, a Streambed Alteration Agreement may be required by CDFG prior to any modification of the bed, bank, or channel of streambeds on the project site. The area identified as willow riparian forest will likely meet the criteria.

#### **Special Status Plant and Wildlife Species**

Plants or animals may be considered to have "special status" due to declining populations, vulnerability to habitat change, or restricted distributions. Certain special status species have been listed as Threatened or Endangered under state and/or federal Endangered Species Acts (ESA).

#### **Plant Species**

Twenty-seven special status plant species are known to occur in the project region. Nine of these species are not expected to occur on the project site due to lack of suitable habitat. One species that is observable year-round was not observed on the project site. One species, the southern California black walnut (*Juglans californica* var. *californica*), was observed in low numbers scattered in annual grassland. The remaining 16 special status plant species have potential or low potential to occur in the riparian, coastal sage scrub, chaparral, and annual grassland on the project site. These species include the Coulter's saltbush (*Atriplex coulteri*), Catalina mariposa lily (*Calochortus catalinae*), Plummer's mariposa lily (*Calochortus plummerae*), intermediate mariposa lily



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(*Calochortus weedii* var. *intermedius*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), small-flowered morning-glory (*Convolvulus simulans*), many-stemmed dudleya (*Dudleya multicaulis*), Palmer's grapplinghook (*Harpagonella palmeri*), graceful tarplant (*Holocarpa virgata* ssp. *elongata*), vernal barley (*Hordeum intercedens*), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), small-flowered microseris (*Microseris douglasii* var. *platycarpha*), golden-rayed pentachaeta (*Pentachaeta aurea*), chaparral rein orchid (*Piperia cooperii*), Fish's milkwort (*Polygala cornuta* var. *fishiae*), and rayless ragwort (*Senecio aphanactis*). Spring botanical surveys would be required to determine the presence or absence of these species.

These 16 special status plants are not considered constraints because none of these species are state- or federally-listed as Threatened or Endangered. This means that no federal or state permits would be required to impact these species, if present. Six of the species with potential to occur are on the CNPS List 1B or 2 species, which indicates that they are considered rare, threatened, or endangered within California by the CNPS. These species are the Coulter's saltbush, Plummer's mariposa lily, intermediate mariposa lily, smooth tarplant, many-stemmed dudleya, and Robinson's pepper-grass. Impacts on these species may be considered significant by the Lead Agency if they are present within the impact footprint of the project, and if the size and status of the population warrant a finding of significance under CEQA. Mitigation for significant impacts may include avoidance, relocation with monitoring, or purchase of offsite habitat areas containing this species to complement existing open space areas. Impacts on CNPS List 3 and 4 species are typically considered less than significant and do not require mitigation.

#### Wildlife Species

Several special status wildlife species are known to occur in the region, however, only Threatened or Endangered species typically present constraints to development. Six federally- or state-listed Threatened or Endangered species are known to occur in the project region. The Santa Ana sucker (*Catostomus santaanae*) is not expected to occur on the project site due to lack of suitable habitat. The Swainson's hawk (*Buteo swainsoni*) may forage as an uncommon migrant, but does not nest in southern California. The state Endangered Species Act lists only nesting Swainson's hawks. The remaining four species are discussed below.

#### Coastal California Gnatcatcher

The coastal California gnatcatcher (*Poliophtila californica californica*) is listed as federally Threatened and a California Species of Special Concern. The coastal sage scrub habitat has potential to support this species. The presence of this species on or adjacent to the project site would present a significant project constraint. Therefore, a focused coastal California gnatcatcher survey, conducted by a federally-permitted biologist, is recommended to determine the presence or absence of this species prior to development of this site. Coastal California gnatcatcher surveys can be conducted year-round; however, three fewer surveys are required during the breeding season, and surveys can be conducted over a shorter time period.

On October 24, 2000, the USFWS published a final rule to designate 513,650 acres of land as critical habitat for the coastal California gnatcatcher. These lands encompass portions of Los Angeles, San Bernardino, Orange, Riverside, and San Diego counties in California. Critical habitat refers to specific geographic areas that are essential for the conservation of a Threatened or Endangered species and that may require special management considerations. These areas do not necessarily have to be occupied by the species at the time of designation. A critical habitat designation does not set up a preserve or refuge and only applies to situations where federal funding or a federal permit is involved. A Section 7 consultation with USFWS is required for any federal action (i.e., issuance of an ACOE permit) that is likely to result in the adverse modification

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or destruction of critical habitat. The project site is not located within areas designated as critical habitat of the USFWS final rule.

#### Southwestern Willow Flycatcher

The southwestern willow flycatcher (*Empidonax traillii extimus*) is listed as federally and state Endangered. The willow riparian forest has potential to support this species. The presence of this species on or adjacent to the project site would present a significant project constraint. Therefore, a focused southwestern willow flycatcher survey, conducted by a federally-permitted biologist, is recommended to determine the presence or absence of this species prior to development of this site. Because this species is a migrant, these surveys can only be conducted during the breeding season (May 15 to July 17 according to the USFWS protocol).

On July 22, 1997, USFWS published the final critical habitat designation for this species. Approximately 99.8 river miles in Kern, Riverside, San Bernardino, and San Diego counties were designated for the southwestern willow flycatcher. The project site is not located within the designated critical habitat area for this species.

#### Least Bell's Vireo

The least Bell's vireo (*Vireo bellii pusillus*) is listed as federally and state Endangered. The willow riparian forest has potential to support this species. The presence of this species on or adjacent to the project site would present a significant project constraint. Therefore, a focused least Bell's vireo survey, conducted by a qualified biologist, is recommended to determine the presence or absence of this species prior to development of this site. Because this species is a migrant, these surveys can only be conducted during the breeding season (April 10 to July 31 according to the USFWS protocol).

On February 2, 1994, USFWS published the final critical habitat designation for the least Bell's vireo, designating approximately 37,560 acres of land in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego counties, California. The project site is not located within the designated critical habitat area for this species.

#### Western Yellow-Billed Cuckoo

The western yellow-billed cuckoo (*Dendroica petechia brewsteri*) is listed as state Endangered, and is a Candidate for federal listing. The willow riparian forest has potential to support this species. The presence of this species on or adjacent to the project site would present a significant project constraint. Therefore, a focused western yellow-billed cuckoo survey, conducted by a federally-permitted biologist, is recommended to determine the presence or absence of this species prior to development of this site. Because this species is a migrant, these surveys can only be conducted during the breeding season (June to August).

#### Nesting Raptors

The willow riparian forest and ornamental vegetation types on and adjacent to the project site have potential to be used for nesting by raptors. Regulations prohibit activities having the potential to disturb active raptor nests. This protection generally ceases once nesting activity is completed. A survey for active raptor nests would be required immediately prior to any habitat disturbance, including geotechnical testing near trees on the project site.

**VEGETATION IMPACTS**

Table 1 and Exhibit 4 show the vegetation that would be impacted by the proposed project.

**TABLE 1  
 PROJECT IMPACTS ON VEGETATION TYPES**

Vegetation Type	Existing Vegetation (acres)	Project Impacts* (acres)
<b>Coastal Sage Scrub</b>	<b>5.09</b>	<b>0.13</b>
Sagebrush Scrub	1.99	0.08
Sagebrush Scrub with Rocky Outcroppings	0.49	0.00
Disturbed Sagebrush Scrub	0.97	0.00
Southern Cactus Scrub	0.02	0.00
Southern Cactus Scrub/Mexican Elderberry Woodland	1.62	0.05
<b>Chaparral</b>	<b>7.66</b>	<b>0.20</b>
Sumac Chaparral	0.06	0.00
Sumac Chaparral/Mexican Elderberry Woodland	0.04	0.00
Sumac Chaparral/Mexican Elderberry Woodland/Ornamental	0.20	0.00
Sumac Chaparral/Mexican Elderberry Woodland/Ornamental/Annual Grassland	1.21	0.00
Sumac Chaparral/Ornamental	0.17	0.00
Sumac Savannah/Ornamental	1.60	0.00
Mexican Elderberry Woodland	2.26	0.15
Mexican Elderberry Woodland/Ornamental	2.12	0.05
<b>Annual Grassland</b>	<b>14.16</b>	<b>0.85</b>
Annual Grassland	14.16	0.85
<b>Riparian</b>	<b>5.76</b>	<b>0.05</b>
Willow Riparian Forest	5.76	0.05
<b>Agricultural Fields</b>	<b>19.94</b>	<b>1.68</b>
Irrigated Row and Field Crops	19.94	1.68
<b>Disturbed/Developed</b>	<b>17.66</b>	<b>0.63</b>
Disturbed/Developed	17.66	0.63
<b>Ornamental</b>	<b>10.26</b>	<b>1.48</b>
Ornamental	10.26	1.48
<b>Total</b>	<b>80.53</b>	<b>5.02</b>

\* These numbers do not include access because existing roads would be used.

**RECOMMENDATIONS**

**Special Status Habitats**

BonTerra Consulting recommends that a wetland delineation be conducted to identify all ACOE and CDFG jurisdictional areas. If these agencies have jurisdiction over the project site, a permit/agreement will be required from one or both of these agencies. Acquisition and implementation of the permit/agreement may constrain development and impacts to these areas should be



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minimized to the extent practicable. In addition, the permit/agreement process would be considered a federal/state nexus thus consultation with the USFWS and CDFG would be necessary for any impacts on federally or state-listed species.

#### **Special Status Plants**

Sixteen special status species have potential to occur on the project site. Impacts on these species may be considered significant under CEQA by the Lead Agency if a population of these species is found within the impact area, and if the number of plants found and the status of that population warrant a finding of significance. Appropriate mitigation may include avoidance, relocation with monitoring, or purchase of offsite habitat areas containing this species to complement existing open space areas. Impacts to any special status plant species should be avoided if possible; however, these species are typically not considered constraints to development because none of the species are currently listed as federal or state Threatened or Endangered species. Therefore, no permitting from the USFWS or CDFG would be required for impacts on special status plants.

#### **Special Status Wildlife**

##### **Coastal California Gnatcatcher**

The coastal sage scrub on the project site has the potential to support the coastal California gnatcatcher. A focused coastal California gnatcatcher survey following guidelines established by the USFWS would be necessary to determine the presence or absence of the species on or adjacent to the project site. Focused surveys would be required whether or not this habitat would be impacted in order to evaluate potential indirect impacts on this species. It is recommended that direct or indirect impacts on habitat potentially supporting the species be avoided or minimized to the greatest extent possible. Indirect construction impacts, such as noise and dust, could impact the species during the breeding season (February 15 to August 15) if the species is found to occur within 500 feet of the construction boundary. If this species is found to occur on or immediately adjacent to the project site, consultation and permitting with the USFWS would be required. Appropriate mitigation may include avoidance, restoration, or purchase of off-site habitat. The presence of this species could substantially constrain development.

##### **Southwestern Willow Flycatcher, Least Bell's Vireo, and Western Yellow-Billed Cuckoo**

The willow riparian forest has potential to support these three species. Focused surveys following the guidelines established by the USFWS would be necessary to determine the presence of these species on or adjacent to the project site. Focused surveys for these species can be conducted concurrently due to their similar habitat requirements. Focused surveys would be required whether or not this habitat would be impacted in order to evaluate potential indirect impacts on these species. It is recommended that direct or indirect impacts on habitat potentially supporting these species be avoided or minimized to the greatest extent possible. Indirect construction impacts such as noise and dust could impact these species during the breeding season (March 15 through September 15) if any of these species are found to occur within 500 feet of the construction boundary. If any of these species are found to occur on or immediately adjacent to the project site, consultation and permitting with the USFWS would be required. Appropriate mitigation may include avoidance, restoration, or purchase of off-site habitat. The presence of these species could substantially constrain development.

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### Nesting Raptors

A survey for active raptor nests is recommended 30 days prior to commencement of any construction activities during the raptor nesting season, February 1 to June 30. Any active raptor nests observed during the survey would be mapped on construction plans. Restrictions on construction activities would be required in the vicinity of the nest until the nest is no longer active as determined by a qualified biologist. Typically, a 300- to 500-foot buffer zone is designated around a nest to allow construction to proceed while minimizing disturbance to the active nest. Once the nest is no longer active, construction can proceed within the buffer zone. Impacts on active raptor nests should be avoided, however, raptor nesting is not typically considered a constraint to development.

Please contact Amber Oneal at (714) 444-9199 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

  
Ann M. Johnston  
Principal, Biological Services

  
Amber S. Oneal  
Project Manager/Ecologist

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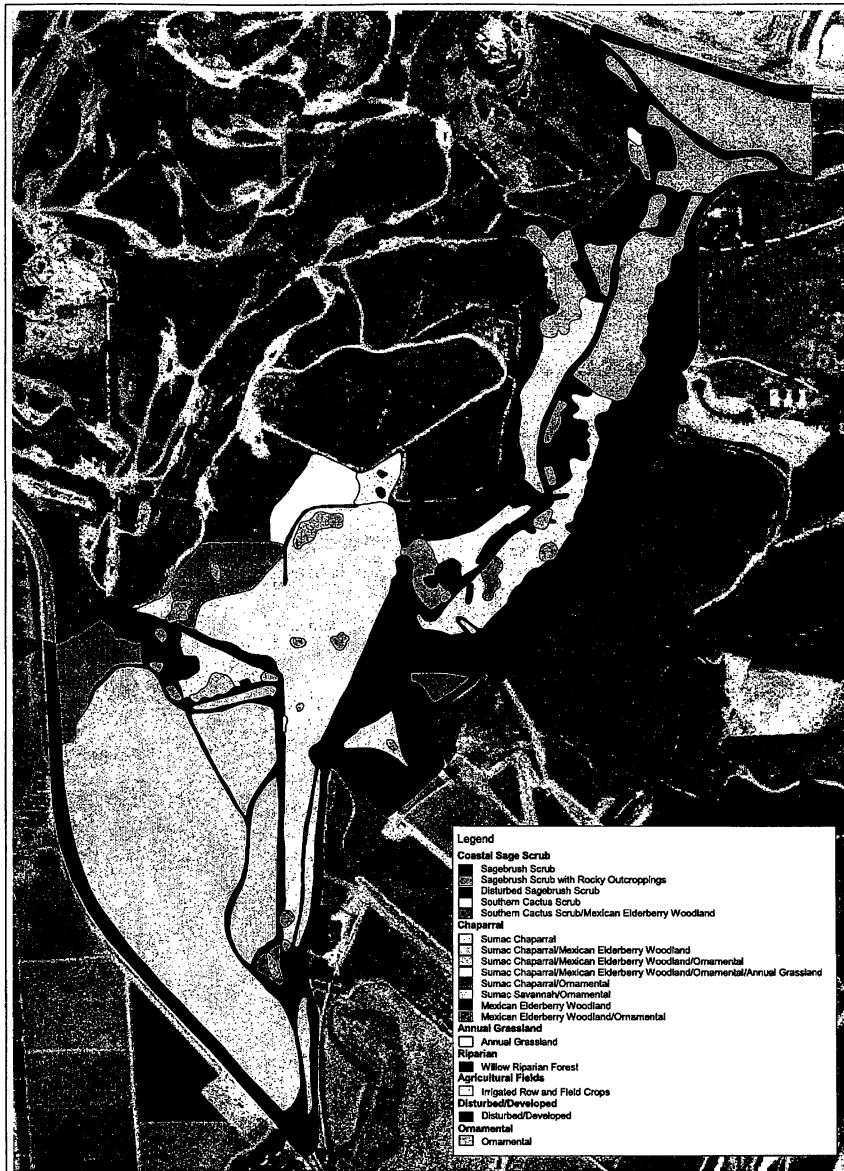
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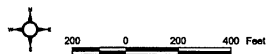
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**Biological Resources**

Exhibit 3

Carbon Canyon



**Bonterra**  
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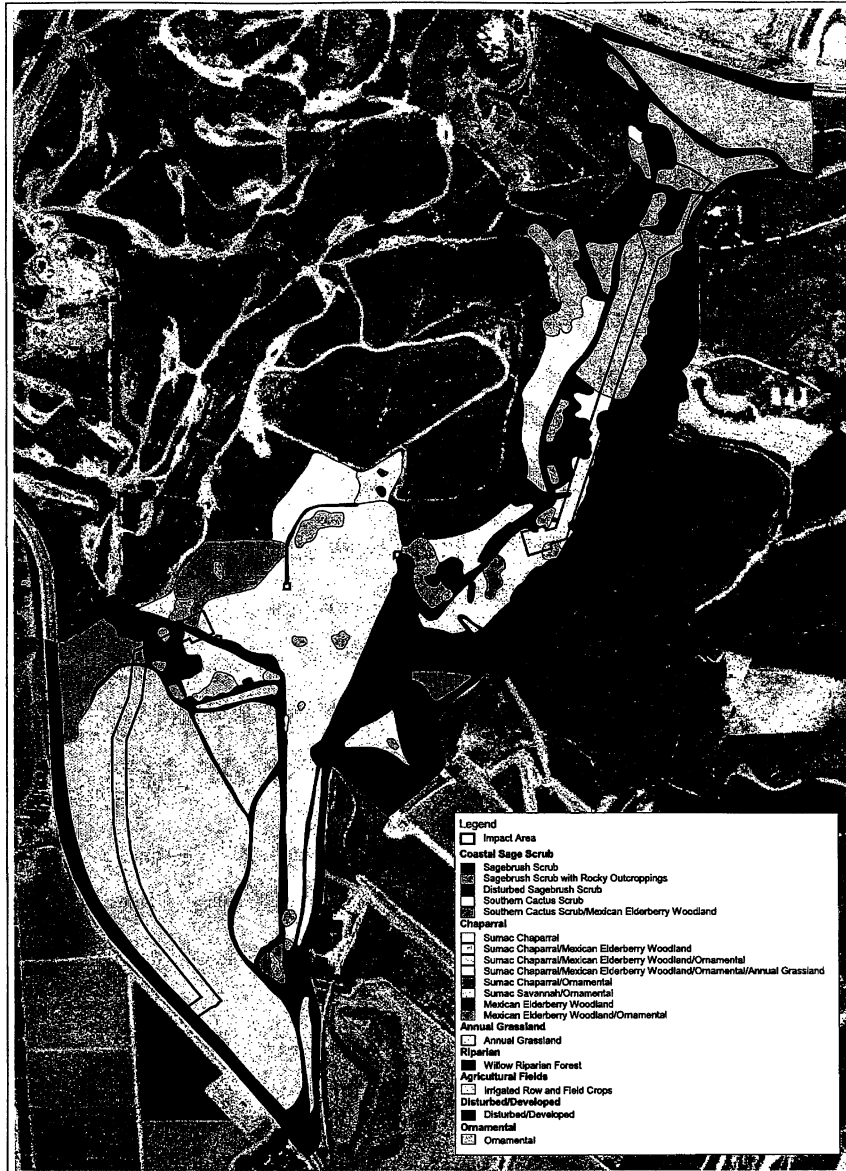
Coastal California Gnatcatcher Survey Area

Exhibit 3

Carbon Canyon



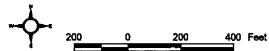
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CONSULTING  
15200 SANDHILL FIVE CIRCLE, SUITE 200



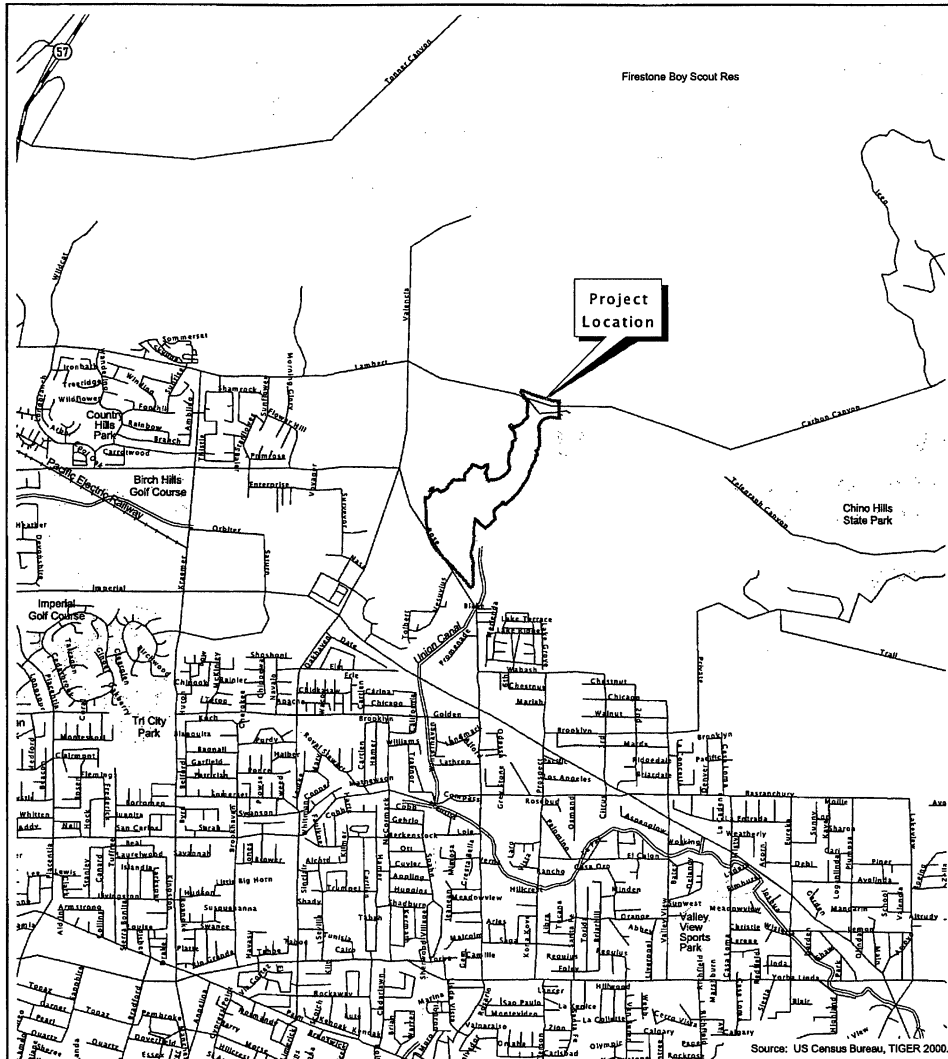
**Biological Impacts**

Exhibit 4

Carbon Canyon



**Bonterra**  
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Source: US Census Bureau, TIGER 2000.

**Local Vicinity**

Carbon Canyon

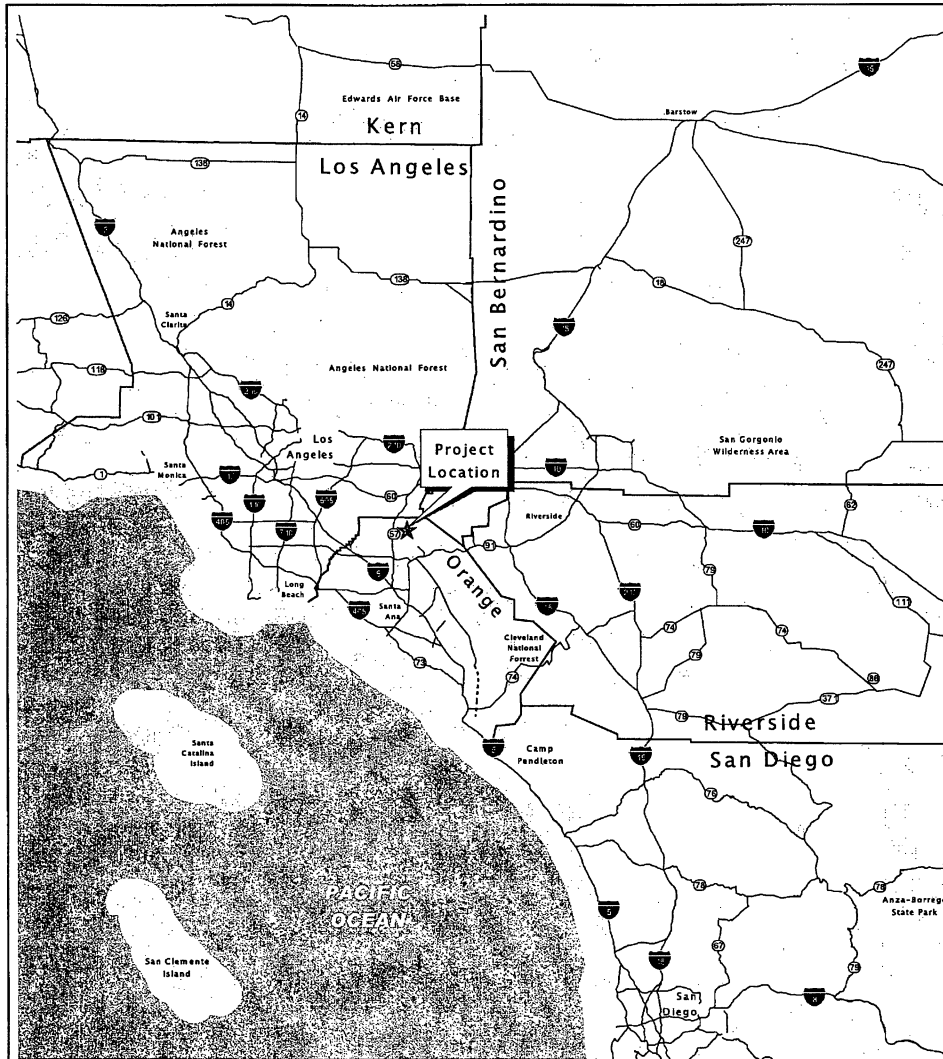
**Exhibit 2**



0.25 0 0.25 0.5 Miles

**Benterra**  
CONSULTING

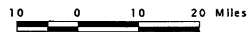
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**Regional Location**

**Exhibit 1**

*Carbon Canyon*



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An Environmental Planning/Resource  
Management Corporation

September 26, 2003



Mr. Alan Ashimine  
RBF Consulting  
14725 Alton Parkway  
Irvine, California 92618-2027

**VIA FACSIMILE AND OVERNIGHT  
(949) 837-4122**

Subject: Results of Survey for Nesting Raptors for the Carbon Canyon Pipeline Project Site, Orange County, California

Dear Mr. Ashimine:



This letter report presents the results of a survey for nesting raptors for the Carbon Canyon pipeline project site (hereafter referred to as the project site) in Orange County, California. The purpose of the survey was to locate active raptor nests on the project site and its associated study area.

**Project Location and Description**



The project site and its associated study area are located in Carbon Canyon Regional Park near the cities of Brea and Yorba Linda in unincorporated Orange County (Exhibit 1). The project is located in Orange County along the western end of Carbon Canyon Regional Park and through private property between Carbon Canyon Road (Highway 142) and Rose Drive, just east of Valencia Avenue (Exhibit 2). The northern third of the pipeline route is in the basin behind Carbon Canyon Dam, and the southern third is primarily through ruderal habitat and agricultural lands. The middle third of the pipeline would be bored under the northeastern corner of Carbon Canyon Dam.



Elevations in the study area range from approximately 420 to 525 feet above mean sea level (msl). Land uses in the vicinity include agriculture, oil drilling, residential development, water retention (Carbon Canyon Dam), and open space within Carbon Canyon Park.

Native vegetation types include coastal sage scrub, chaparral, and willow riparian forest. Although many of the native areas have scattered ornamentals, they are still considered high quality habitats. Non-native vegetation types include annual grassland, ornamental, irrigated row and field crops, and other disturbed and developed areas.

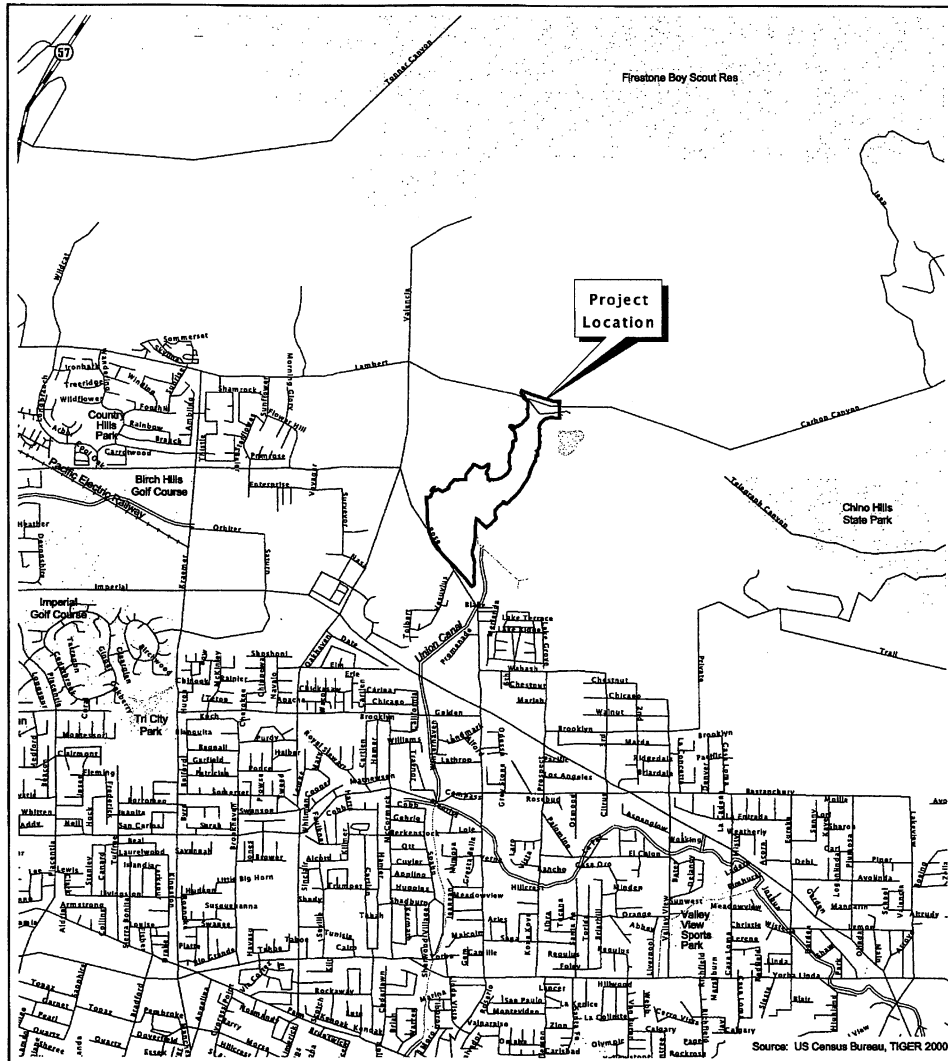
**Survey Methods**

The nesting raptor survey was conducted by Consulting Biologist Brian Leatherman. The surveys were conducted in conjunction with other focused surveys in the study area on April 11, 16, 18, 22, May 5, 12, 15, 22, 28, June 5, 11, 12, 26, July 8, and 15, 2003. An additional survey on August 8, 2003 focused exclusively on searching trees for raptor nests. The study area was searched using binoculars (8 X 42) to detect raptor activity and to determine areas that

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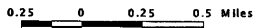




**Local Vicinity**

Carbon Canyon

**Exhibit 2**



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Source: US Census Bureau, TIGER 2000.  
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provide potentially suitable habitat for raptor nests. Any raptors present were identified to species, age, and sex if possible. The raptors were then monitored to assess behavior for any signs of breeding such as carrying nesting material, copulation, nests, etc. Areas that potentially supported nests in the study area were walked in order to search more thoroughly for existing nests.

### **Survey Results**

A total of six raptor species were observed in the study area: turkey vulture (*Cathartes aura*), Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*) and great horned owl (*Bubo virginianus*). Other species that are known to occur in the study area vicinity, but were not observed during these surveys, include the white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), and barn owl (*Tyto alba*). Suitable nesting trees were identified in the study area for the white-tailed kite, Cooper's hawk, red-shouldered hawk, red-tailed hawk, American kestrel, and great horned owl. Evidence of nesting was confirmed for three of these species in the vicinity of the study area, but no nests were observed in trees within the pipeline route. Detail on each of these species is provided below.

#### **Great Horned Owl**

One great horned owl nest with two nestlings was observed behind the Carbon Canyon Dam on May 5, 2003 but was located at least 2,000 feet east-southeast of the pipeline route, in the Carbon Canyon Regional Park Redwood Grove.

#### **Cooper's Hawk and Red-shouldered Hawk**

Cooper's hawks and red-shouldered hawks also likely nest behind the dam. Adults of both species were frequently heard calling in the riparian forest throughout the breeding season, and juveniles of both species were observed in the area during the latter surveys. Nests for these species were likely in the area where the adults concentrated their activities. Based on this, the Cooper's hawks nest was likely about 1,000 feet east of the northern end of the pipeline route, and the red-shouldered hawk nest was likely about 1,500 feet southeast of the northern end of the pipeline route. The habitat in these locations was dense black willow riparian forest.

#### **Red-tailed Hawk**

A pair of red-tailed hawks were observed foraging over the study area regularly, and were observed roosting on telephone poles near the agricultural fields near Rose Drive. Red-tailed hawks typically build large platform nests in the tops of tall trees, telephone poles, or cliffs. Although this species likely nests in the area, no nests for this species were observed.

#### **American Kestrel**

A pair of American kestrels was also observed roosting on telephone poles near the agricultural fields near Rose Drive in the study area. The study area provides suitable nest sites (tree cavities). Although this species likely nests in the area, no nests for this species were observed.

#### **Turkey Vulture**

The turkey vulture was observed on every survey and several individuals were noted soaring over the study area at once. Nesting sites for this species consist of secluded areas, such as inaccessible rocky cliffs faces, which do not occur in the study area.