

1     **5.4           BIOLOGICAL RESOURCES**

2     The analysis of biological resources associated with the proposed project is based on the  
3     Metromedia Fiber Network Services, Inc. (Metromedia) Proponent’s Environmental Assessment  
4     (PEA) for the modification of its existing Certificate of Public Convenience and Necessity,  
5     authorizing Metromedia to install conduit and related facilities to create fiber optic networks  
6     serving the San Francisco Bay area and the Los Angeles basin (ESA 2000a). This analysis also  
7     summarizes supplemental field studies and literature review conducted by SAIC during May and  
8     June 2000. Supporting technical information is included in Appendix G (Common and Scientific  
9     Names of Plant and Wildlife Species) and Appendix H (Special Status Species Reported or Potentially  
10    Occurring in the Project Area).

11    **5.4.1       Regulatory Setting**

12    Potential project-related impacts on biological resources in California are subject to federal, state  
13    and local regulations and policies. The following discussion addresses regulations and policies  
14    applicable to the proposed project.

15    **5.4.1.1    Federal Regulations**

16    *Federal Endangered Species Act*

17    The United States Fish and Wildlife Service (USFWS) administers the Federal Endangered Species  
18    Act (FESA) of 1973 (as amended from 1966). Section 7 of the FESA mandates that all federal  
19    agencies consult with the USFWS and NMFS to ensure that their actions do not jeopardize the  
20    continued existence of an endangered or threatened plant or wildlife species, collectively referred  
21    to as “listed species,” or destroy or adversely modify critical habitat for listed species.<sup>a</sup>  
22    Accordingly, the FESA prohibits the “take” of any species listed as threatened or endangered.  
23    Take is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping,  
24    capturing, collecting, or attempting to engage in any such conduct (FESA Section 3(18), 1973). The  
25    Service has further defined the terms “harm” and “harass” through regulation to include certain  
26    types of habitat modification, including unoccupied habitat, as “take, ” as such modification could  
27    hinder species recovery.

28    Section 9 of the FESA accords fewer protections to plant species than wildlife species. However,  
29    Section 9 does prohibit the removal, possession, damage or destruction of any endangered plant  
30    from federal land; it further prohibits removal, damage to or destruction of an endangered plant  
31    species in nonfederal areas in knowing violation of any state law. Candidate species and species  
32    that are proposed or under petition for listing receive no protection under Section 9 of the federal  
33    ESA.

34    Section 10 of the FESA requires procurement of an “incidental take” permit before commencement  
35    of any public or private action that would potentially result in a “take” of a listed species. The

---

<sup>a</sup> Threatened species are defined as “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Endangered species are defined as “any species which is in danger of extinction throughout all or a significant portion of its range...” (16 U.S.C. Sections 1532(6) and (20).

## 5.4 Biological Resources

---

1 permit requires preparation and implementation of a habitat conservation plan (HCP) to mitigate  
2 the take of individuals that may occur incidental to implementation of the project.

3 In addition to the USFWS, the National Marine Fisheries Service (NMFS) possesses jurisdiction  
4 over anadromous fish and marine fish and mammals under the FESA.

### 5 *Federal Migratory Bird Treaty Act*

6 The Migratory Bird Treaty Act (1918, as amended) states that without a permit issued by the U.S.  
7 Department of the Interior, it is unlawful to pursue, hunt, take, capture, or kill any migratory bird  
8 (16 U.S.C. 703, et seq.).

### 9 *Bald and Golden Eagle Protection Act*

10 The federal Bald and Golden Eagle Protection Act (1940, as amended) makes it illegal to import,  
11 export, take (which includes molest or disturb), sell, purchase, or barter any bald eagle or golden  
12 eagle or part thereof (16 U.S.C., 668 et. seq.).

### 13 *U.S. Army Corps of Engineers and U.S. Environmental Protection Agency Regulation of Waters of the* 14 *United States*

15 The U.S. Army Corps of Engineers (Corps) regulates the discharge of dredged or fill material into  
16 jurisdictional “waters of the United States” under Section 404 of the federal Clean Water Act  
17 (CWA) (1972, 33 U.S.C. 1344) and Section 103 of the Marine Protection, Resources and Sanctuaries  
18 Act. Waters of the United States are defined as all tidal waters, interstate waters, and other waters  
19 including intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats,  
20 wetlands, sloughs, prairie potholes, wet meadows, playa lake or natural ponds (33 CFR 328.3(a)).  
21 Projects resulting in the placement of dredged or fill material into waters of the United States  
22 require procurement of a CWA Section 404 permit from the Corps.

23 Selected activities may be authorized under general permits (i.e., pre-authorized nationwide  
24 permits) subject to certain conditions. Section 404 Nationwide Permit No. 12 authorizes utility line  
25 construction activities, such as fiber optic cable installation activities, resulting in the placement of  
26 fill into waters of the United States. Nationwide permits do not authorize activities that are likely  
27 to jeopardize the existence of a threatened or endangered species (listed or proposed for listing  
28 under the federal ESA) or that may affect properties listed or eligible for listing in the National  
29 Register of Historic Places (56 FR 59134-59138, November 22, 1991).

### 30 *Additional Federal Policies Regarding Riparian and Wetland Communities in California*

31 USFWS mitigation policy identifies California’s riparian habitats as belonging to resource Category  
32 2, for which no net loss of existing habitat value is recommended (46 FR 7644, January 23, 1981).  
33 Riparian communities have a variety of functions, including providing high-quality habitat for  
34 resident and migrant wildlife, streambank stabilization, and runoff water filtration. Throughout  
35 the United States, riparian habitats have declined substantially in extent and quality compared  
36 with their historical distribution and condition. These declines have increased concerns about  
37 dependent plant and wildlife species, leading federal agencies to adopt policies to arrest further  
38 loss.

1 The federal government also supports a policy supporting the minimization of “the destruction,  
2 loss, or degradation of wetlands”. Executive Order 11990 (May 24, 1977) requires that each federal  
3 agency take action to minimize the destruction, loss, or degradation of wetlands and to preserve  
4 and enhance the natural and beneficial values of wetlands.

#### 5 **5.4.1.2 State Regulations**

##### 6 *California Endangered Species Act*

7 The 1984 California Endangered Species Act (CESA) is administered by the California Department  
8 of Fish and Game (CDFG). The CESA prohibits the take of endangered and threatened species.  
9 under Article 3, Sections 2080 through 2085 of the CESA. Take is defined as “hunt, pursue, catch,  
10 capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The CESA requires state  
11 agencies to comply with endangered species protection and recovery and to promote conservation  
12 of these species. In accordance with CESA, CDFG authorizes take through Section 2081  
13 agreements, known as Memoranda of Understanding. Sections 1901 and 1913 of the California  
14 Fish and Game Code state that notification is required prior to disturbance. Regarding rare plant  
15 species, CESA defers to the California Native Plant Protection Act of 1977, which prohibits  
16 importing of rare and endangered plants into California, taking of rare and endangered plants, and  
17 selling of rare and endangered plants.

18 In addition to listed species, some sensitive mammals and birds are protected by the State as “Fully  
19 Protected Mammals” and “Fully Protected Birds,” respectively. California Species of Special  
20 Concern (“special” animals and plants) include all state- and federally-protected and candidate  
21 taxa, Bureau of Land Management and U.S. Forest Service designated sensitive species, and  
22 species considered to be rare by the California Native Plant Society or National Audubon Society.

##### 23 *California Fish and Game Code*

24 The CDFG regulates activities that would interfere with the natural flow of, or substantially alter,  
25 the channel, bed, or bank of a lake, river, or stream, under the California Fish and Game Code  
26 (Section 1601 for public agencies and Section 1603 for private individuals). Such interference or  
27 alteration requires procurement of a Streambed Alteration Agreement from the CDFG. Streambed  
28 Alteration Agreements establish requirements for the protection of the integrity of biological  
29 resources and water quality. Such requirements may include avoidance or minimization of the use  
30 of heavy equipment, limitations on work periods to avoid impacts on wildlife and fisheries  
31 resources, and measures to restore degraded sites or compensate for permanent habitat losses.

##### 32 *State Lands Commission*

33 The State Lands Commission (SLC) administers lands owned by the state, which includes the beds  
34 of all naturally navigable waterways, such as major rivers, streams and lakes, and tidal and  
35 submerged lands below the high tide line. The SLC issues Land Use Leases or Permits for use of  
36 state lands that are determined to be consistent with the public trust values for fisheries,  
37 navigation, public access, recreation, wildlife habitat and open space.

1 **5.4.1.3 Regional and Local Regulations**

2 *Bay Conservation and Development Commission*

3 The Bay Conservation and Development Commission (BCDC) is authorized by the 1965 California  
4 McAteer-Petris Act to analyze, plan and regulate San Francisco Bay and its shoreline. The BCDC  
5 implements the San Francisco Bay Plan, and regulates filling and dredging in the Bay, its sloughs  
6 and marshes, certain creek and tributaries. BCDC jurisdiction encompasses the Bay and a  
7 shoreline buffer zone extending 100 feet inland from the high tide line. Procurement of BCDC  
8 permits is required for all work within the Bay or the shoreline buffer zone.

9 *Native and Heritage Tree Ordinances*

10 Some California cities and counties have adopted ordinances or policies governing impacts to  
11 native or “heritage” (i.e., very old or historically significant) trees. Most such regulations require  
12 procurement of a permit prior to commencement of project actions potentially resulting in impacts  
13 to trees.

14 **5.4.2 Environmental Setting**

15 The terrestrial biological resources present along, or in close proximity to, the San Francisco Bay  
16 and Los Angeles Basin network routes were surveyed by ESA and SAIC biologists as discussed  
17 under the subheading Survey Methodology, below. A detailed description of the network routes  
18 and associated “Point of Presence” (POP) facilities is contained in Chapter 3, Project Description.  
19 The San Francisco Bay and Los Angeles Basin Networks are treated as two separate routes for  
20 purposes of this analysis of biological resources, consistent with the Project Description.  
21 Accompanying comprehensive route maps, including regional index maps and detailed maps of  
22 network route segments, are contained in Appendix A, GIS Route Maps, of this document.

23 As stated in the Project Description, only those portions of the route designated as “new build”  
24 segments are proposed for construction under this project. Those network segment portions that  
25 will utilize existing conduit owned by Pacific Bell or which are covered under previously  
26 approved environmental documentation are not addressed in this analysis. However, where  
27 extensive conduit repair or replacement of the existing Pacific Bell network is anticipated as part of  
28 the San Francisco Bay network, analysis of existing biological resource conditions and potential  
29 project impacts is provided.

30 *Methodology*

31 Reconnaissance-level field surveys were conducted in December 1999 and January, February and  
32 May 2000 for the San Francisco Bay and Los Angeles Basin networks. Surveys were also  
33 conducted at each of the proposed POP sites for both networks. POP sites along the Los Angeles  
34 Basin Network are proposed for location entirely within existing buildings and would therefore  
35 not affect biological resources. Both the Los Angeles Basin and San Francisco network routes are  
36 located entirely within public roadways or railroad rights-of-way; accordingly, the project study  
37 area, as defined for purposes of biological resource surveys, varied depending on the location of  
38 individual route segments. Typically, all natural (i.e., undeveloped) habitat within 25 feet of the  
39 proposed alignment was evaluated with respect to vegetation resources. Along railroad  
40 alignments, the study area included the rights-of-way associated with the tracks. Along city

1 streets, the study area was limited to that area anticipated to be directly affected by construction.  
2 Where applicable, adjacent habitat potentially indirectly affected by construction was also  
3 surveyed.

4 A literature search was performed prior to field surveys to identify habitat types and locations  
5 potentially present in the project study area. References consulted include the CDFG Natural  
6 Diversity Data Base (NDDDB) (CDFG 2000), California Native Plant Society (CNPS) Inventory of  
7 Rare and Endangered Vascular Plants of California (Skinner and Pavlik 1994), relevant previously  
8 prepared environmental documents, and relevant information from local planning documents.  
9 Plant community nomenclature conforms as closely as possible to Holland (1986 and 1992 update)  
10 and Sawyer and Keeler-Wolf (1995). Plant community designations have been modified as  
11 necessary to more precisely to reflect conditions encountered in the field. Additionally, state and  
12 federal resource specialists were contacted to obtain information regarding sensitive plants,  
13 wetlands, and local ordinances (e.g., tree ordinances and policies).

14 Field surveys included characterization of land uses and plant communities, habitat evaluations  
15 for the determination of potentially suitable habitat for sensitive plants or animals, focused surveys  
16 for selected sensitive species, and delineation of potentially jurisdictional wetlands and “other  
17 waters of the United States.” Field surveys were typically conducted by driving the project routes  
18 (where possible) and surveying on foot those areas identified as potential habitat for sensitive  
19 plants. Plant communities and sensitive species were documented on network route maps  
20 prepared on USGS 7.5-minute topographic quadrangle base maps. To reduce the potential for  
21 impacts to biological resources, the presence of sensitive habitats and species was reported to  
22 project engineers and to the project applicant, for use in designing the route alignments and  
23 preparing resource avoidance measures in the Project.

#### 24 *Sensitive Habitats and Plant Species*

25 A total of 70 sensitive plant species were identified as potentially present in the San Francisco Bay  
26 Area network project area through preliminary literature review and resource agency consultation;  
27 39 plants were identified in the Los Angeles Basin network project area. Of the 70 sensitive species  
28 identified as potentially present along the San Francisco Bay network route, 24 were determined as  
29 having moderate potential for occurrence, and are discussed within this analysis. None of the 39  
30 sensitive species were identified as having moderate or greater potential for occurrence along the Los  
31 Angeles network route. Appendix H, Special Status Species Reported or Potentially Occurring in the  
32 Project Area, contains complete lists of all sensitive plant species identified as potentially present in  
33 the San Francisco Bay and Los Angeles Basin network project areas and indicates potential for  
34 occurrence.

#### 35 *Wildlife Resources*

36 Prior to field surveys, a literature search was performed to determine the location and types of  
37 wildlife resources potentially present occur in each project study area. Documents reviewed  
38 included local resource management plans, Environmental Impact Reports, and other  
39 environmental documents prepared for projects in the study area. Information on species  
40 occurrences was also gathered from the CDFG (Natural Heritage Division) Natural Diversity Data  
41 Base (NDDDB). USFWS and CDFG resource specialists were also contacted regarding potential  
42 wildlife present in the project areas.

1 Habitat assessments were performed along the project network routes to identify potential wildlife  
2 species potentially present in the project study areas. A total of six state- or federally-listed fish  
3 and wildlife species and four non-listed special-status wildlife species were identified as  
4 potentially occurring in the San Francisco Bay project study area, and are discussed in this  
5 analysis. A total of 57 special status wildlife species were identified as potentially present in the  
6 general San Francisco Bay Area Network project area and 40 species were identified in the Los  
7 Angeles Basin Network project area. Appendix H, Special Status Species Reported or Potentially  
8 Occurring in the Project Area, contains complete lists of all sensitive wildlife species identified as  
9 potentially present in the San Francisco Bay and Los Angeles Basin network project areas and  
10 indicates potential for occurrence.

11 *Waters of the United States (including Wetlands)*

12 Potentially jurisdictional wetlands were delineated in December 1999 and January 2000 by ESA  
13 biologists, using the methods outlined in the 1987 Corps of Engineers Wetlands Delineation  
14 Manual (Environmental Laboratory 1987). Wetland mapping and documentation methods were  
15 consistent with those used for similar fiber optic network projects.

16 A total of 75 waterway crossings were identified along the San Francisco Bay network route; 25  
17 crossings of 17 waterways were identified along the Los Angeles network route. Stream crossings  
18 are identified within the discussion of each network route in this analysis. Additionally, pre-  
19 construction notification (PCN) documents, part of the formal Corps 404 consultation conducted in  
20 May 2000, were prepared for network route stream crossings for the San Francisco Bay Area and  
21 are summarized in this analysis. No Corps consultation was conducted for the Los Angeles Basin  
22 network route.

23 **5.4.2.1 San Francisco Bay Area Network**

24 The San Francisco Bay Area Network comprises two distinct components, including two segments  
25 constituting the “backbone,” or “new build,” network, which would encircle San Francisco Bay  
26 within existing railroad rights of way, and the repair and replacement of existing Pacific Bell  
27 conduit to provide service to northern and eastern regions of the Bay Area. The backbone  
28 segments consist of the Peninsula Backbone Segment, extending from San Francisco to San Jose  
29 along the Caltrain right-of-way, and the East Bay Backbone Segment, extending from Oakland to  
30 San Jose along the Union Pacific Railroad right-of-way. Some stretches of the backbone segments  
31 would also be located within local roadways and highways. The Pacific Bell conduit is contained  
32 within public roadways. Together, the two network components total approximately 108.7 miles.  
33 The project also includes construction of eight points of presence (POPS), above-ground facilities  
34 housing ancillary equipment. Because all San Francisco Bay Area POPs are planned for location  
35 within existing buildings or in developed commercial areas, they are not addressed further in this  
36 analysis. Specific jurisdictions and roadways traversed by the proposed network are identified in  
37 Chapter 3, Project Description. The San Francisco network route is mapped in figures contained in  
38 Appendix A, GIS Route Maps.

39 The San Francisco Bay Area Network crosses six counties bordering San Francisco Bay and San  
40 Pablo Bay, including the Counties of San Francisco, San Mateo, Santa Clara, Alameda, Contra  
41 Costa and Marin. New conduit (i.e., “new build”) installation alone is proposed in San Francisco,  
42 San Mateo and Santa Clara Counties; both new conduit installation and repair or replacement of

1 existing conduit is proposed in Alameda and Contra Costa Counties. Project construction in  
2 Marin County would be limited to either installation of fiber in existing conduit or repair or  
3 replacement of existing conduit at an estimated 30 locations. Each segment of the San Francisco  
4 network route is discussed below; the network segments incorporating exiting Pacific Bell conduit  
5 are grouped according to County and discussed accordingly. The order in which the segments are  
6 discussed corresponds to the order in which the network route maps are presented in the  
7 previously referenced Appendix A of this document (i.e., counter-clockwise beginning in San  
8 Francisco, continuing south through San Jose, and turning north through Alameda and Oakland).

### 9 *Peninsula Backbone Segment*

#### 10 GENERAL DESCRIPTION

11 The 47.7-mile Peninsula backbone segment is located entirely within the Caltrain right-of-way.  
12 The segment begins in downtown San Francisco at the Caltrain station at Fourth and Berry Streets  
13 and connects with the East Bay Backbone in San Jose, at Luther Junction between Almaden Road  
14 and West Alma Avenue. The railroad right-of-way generally parallels the west shore of San  
15 Francisco Bay. The Peninsula backbone segment travels through predominantly urban and  
16 suburban neighborhoods throughout its length, including densely developed commercial and  
17 residential neighborhoods in downtown San Francisco and the South Bay and a range of industrial  
18 and commercial districts throughout the “Peninsula South” segment (south of Redwood City).  
19 Topography along the Peninsula segment is generally flat and near sea level; a 2,000-foot portion  
20 of the segment travels through an underground tunnel beneath Bayview Hill in San Francisco.

21 South of downtown San Francisco, the Peninsula backbone segment also passes adjacent to  
22 numerous stream channels and areas of aquatic habitat discharging into San Francisco Bay,  
23 including Islais Creek, Brisbane Lagoon, Colma Creek, the “West of Bayshore” wetland complex  
24 (near San Francisco International Airport), Mills Creek, Cordillas Creek, Sanchez Creek, San Mateo  
25 Creek, Cordilleras Creek, San Francisquito Creek, Matadero Creek, Adobe Creek, Permanente  
26 Creek, Stevens Creek, Calabazas Creek, Saratoga Creek, Los Gatos Creek and the Guadalupe  
27 River. In addition, the route intersects four tidally-influenced channels that connect to San  
28 Francisco Bay.

29 Most of the Caltrain right-of-way proposed to contain the network route undergoes continual  
30 disturbance associated with railroad maintenance activities and operations, including herbicide  
31 spraying. Upland areas traversed by the right-of-way generally support little to no vegetation  
32 except for narrow strips of ornamental or ruderal vegetation.

#### 33 SENSITIVE HABITATS AND SPECIES

34 Biologically sensitive areas along the Peninsula backbone segment are generally associated with  
35 aquatic habitat. Accordingly, sensitive species in the project area are concentrated at wetland and  
36 stream crossings, where potential habitat exists for state- and federally-listed species, including  
37 steelhead, Chinook salmon, California red-legged frog, San Francisco garter snake, salt marsh  
38 harvest mouse, California least tern, California clapper rail and California black rail. Protected  
39 raptor species such as white-tailed kite and northern harrier may also be present along portions of  
40 the network segment, nesting in planted ornamental trees or in wetlands adjacent to the railroad  
41 right-of-way. Burrowing owls, a federal species of concern, may be present in non-native  
42 grassland fields and roadcuts adjacent to the right-of-way in Santa Clara and Alameda Counties.

## 5.4 Biological Resources

---

1 Additionally, the network route crosses through several groves of historic redwood trees which  
2 are protected by ordinance by the City of Menlo Park.

### 3 *East Bay Backbone Segment*

#### 4 GENERAL DESCRIPTION

5 The 47.5-mile East Bay Backbone segment is located entirely within the Union Pacific Railroad  
6 right-of-way along the eastern shoreline of San Francisco Bay. The route connects with the  
7 Peninsula backbone at Luther Junction in San Jose and continues north to Oakland to the  
8 intersection of 34<sup>th</sup> and Beach Street, just south of the MacArthur Maze (Interstate 80/580/880  
9 interchange). As with the Peninsula backbone segment, land uses along this segment are  
10 predominantly urban in nature. The segment crosses through a range of primarily industrially-  
11 and commercially developed areas within and surrounding the downtown central business  
12 districts of the cities along the route. Topography is flat throughout the segment as it skirts low-  
13 lying areas along the southern and eastern shoreline of San Francisco Bay.

#### 14 SENSITIVE HABITATS AND SPECIES

15 As along the Peninsula backbone, sensitive species potentially present in the vicinity of the East  
16 Bay backbone include wetland are typically associated with stream crossings where potential  
17 habitat exists for California State and federally listed species including, steelhead, Chinook salmon  
18 and California red-legged frog. Potential habitat for several protected raptor species, including  
19 Cooper's hawk, white-tailed kite and burrowing owl, is also present adjacent to the railroad right-  
20 of-way.

21 Between San Jose and Oakland the right-of-way intersects numerous stream crossings, including  
22 Coyote Creek, Miguelita Creek, Penitencia Creek, Berryessa Creek, Callera Creek, Mission Creek,  
23 Alameda Creek, Stiver's Lagoon, San Lorenzo Creek, San Leandro Creek, Arroyo Viejo Creek,  
24 Estudillo Canal, Damon Slough, Lion Creek and the Lake Merrit Inlet. Four of the streams are  
25 tidally influenced. Project implementation would include trenching construction techniques in  
26 two unnamed wetland areas in Milpitas (identified as BTP-017 and BTP-023 in Table 5.4-1, List Of  
27 Stream Crossings and Wetlands in the San Francisco Bay Area Network, following this discussion  
28 of the project route). Both wetlands are dominated by ruderal vegetation and are not known or  
29 assumed to support any sensitive species.

### 30 *Pacific Bell Structure*

31 As previously stated, segments of the network in the San Francisco Bay area will utilize existing  
32 Pacific Bell conduit. Although the Pacific Bell Structure is an existing conduit, repair or  
33 replacement is required at 30 locations throughout the San Francisco Bay. These segments are  
34 located adjacent to the Peninsula backbone segment and in scattered locations throughout the East  
35 Bay. The segments are discussed below, grouped according to the County in which they are  
36 located and following the order in which they are identified on the project route maps contained in  
37 Chapter 4. Segments are not necessarily numbered consecutively with respect to County location.



1 MARIN COUNTY

2 Segments 1 and 2 of the existing Pacific Bell Network are located in Sausalito adjacent to  
3 Richardson Bay, an arm of the San Francisco Bay. One segment is located within Bridgeway Street  
4 and a slightly longer segment runs along 2<sup>nd</sup> Street. Both segments are entirely located within  
5 public roadways.

6 Segment 3 is located in the City of Larkspur within Magnolia Street. Segments 4 through 7 are  
7 located in San Rafael, within portions of East and West Francisco Boulevards, adjacent to  
8 Highways 580 and 101, respectively. Segment 4 intersects a small, unnamed intermittent swale  
9 along Rice Drive.

10 CONTRA COSTA COUNTY

11 Segments 8 and Segments 16 through 19 are located in Contra Costa County, in the cities of  
12 Richmond, Walnut Creek, Danville and San Ramon; all are located within public roadways.  
13 Segments 17 and 18 intersect two small intermittent drainages adjacent to San Ramon Valley  
14 Boulevard. One drainage is a concrete-lined channel, while the other supports sparse vegetation  
15 in a natural (i.e., soft-bottom) channel.

16 ALAMEDA COUNTY

17 Segments 9 through 15 and 20 through 26 are located in Alameda County. Segments 9 and 10 are  
18 within Berkeley city limits and Segments 11 through 15 are located in downtown Oakland just  
19 north of Lake Merritt. Segments 21 through 24 are located in the City of Hayward. Segment 21 is  
20 located within Depot Road and is adjacent to a reported population of three rare plants: hairless  
21 popcorn flower, Congdon's tarplant and alkali milk vetch (CNDDDB 2000). Segment 24 intersects  
22 an apparent dry wash with sparse herbaceous vegetation.

23 Segment 20 is located in Dublin and intersects the Clark Creek Canyon freshwater marsh.  
24 Although this drainage is channelized and contained within concrete levees in some places, it  
25 contains flowing water and is lined with a dense growth of willow and alder. This riparian  
26 vegetation provides limited habitat for aquatic species nesting birds.

27 Segment 26 is located along Thornton Avenue in Newark. The route is adjacent to the Newark  
28 Slough, an extensive pickleweed saltmarsh that is part of the San Francisco Bay National Wildlife  
29 Refuge. The marsh provides potential habitat for numerous special status species including:  
30 California black rail, California clapper rail, western snowy plover, California least tern and salt  
31 marsh harvest mouse.

32 SANTA CLARA COUNTY

33 Segments 28 and 29 are located in Santa Clara County. Segment 28 is located in downtown San  
34 Jose and Segment 29 is located in Mountain View on Pioneer Way. Although both are located  
35 within densely developed urban areas, burrowing owl, a state and federal Species of Concern, has  
36 been documented as nesting in the vicinity of the proposed network alignment.

## 5.4 Biological Resources

---

### 1 SAN MATEO COUNTY

2 Segments 27 and 30 through 32 are located in San Mateo County. Segments 30 and 31 are located  
3 in Redwood City within public roadways. Segment 32 is located in Belmont along Old County  
4 Road between Harbor Blvd and O'Neill Street. The southern end of this segment terminates just  
5 north of Belmont Creek, which drains to the San Francisco Bay.

6 Segment 27 is located along Bayfront Expressway in Menlo Park. Salt ponds and marshland  
7 adjacent to the San Francisco Bay National Wildlife Refuge, border this segment. The marshland  
8 serves as potential habitat for California clapper rail, California least tern, western snowy plover  
9 and salt marsh harvest mouse

### 10 *Plant Communities*

#### 11 RUDERAL VEGETATION

12 Areas subject to continual disturbance frequently support ruderal vegetation, comprising  
13 predominantly non-native or weed species. Accordingly, ruderal habitat dominated most areas  
14 adjacent to the San Francisco network route not subject to active landscape maintenance. Most of  
15 the railroad right-of-way along the Peninsula and East Bay backbone segments supported only  
16 sparse ruderal vegetation. Species composition was dominated by coyote bush and wild fennel.  
17 Ruderal habitats provide limited foraging or nesting habitat for a few species of birds and small  
18 mammals. In the project vicinity, such habitats may be occupied by ground squirrels and other  
19 rodents, and may support nest sites for burrowing owl.

#### 20 ORNAMENTAL LANDSCAPING

21 The majority of the network route passes through urban settings, wherein vegetation is typically  
22 limited to ornamental trees, shrubs and similar plantings and lawns. In several locations along the  
23 right-of-way, stands of planted eucalyptus or other introduced trees may provide nesting habitat  
24 for protected raptor species including red-shouldered hawk and great horned owl.

#### 25 AGRICULTURE

26 Agricultural habitat in the project vicinity was limited to a few scattered orchards and field crops  
27 located along the East Bay backbone in San Jose, Milpitas and Fremont. Crop fields showed  
28 evidence of regular plowing; they may provide limited habitat for burrowing mammals or for  
29 burrowing owl.

#### 30 ANNUAL GRASSLANDS

31 Fields of annual grassland were observed in several locations between Brisbane and San Bruno on  
32 the Peninsula Backbone and in the City of Fremont on the East Bay backbone. Dominant species  
33 included California wild oat, ripgut brome, annual poa, and other introduced annual grasses.  
34 Grasslands provide habitat for reptiles and amphibians, such as western fence lizard and Pacific  
35 tree frog, and birds, including mourning dove and western meadowlark. Mammals, such as the  
36 California ground squirrel, striped skunk, black-tailed jackrabbit, and mule deer may occasionally  
37 forage in grassland habitat adjacent to the railroad right-of-way. Raptors (birds of prey), including  
38 red-tailed hawks, American kestrel, white-tailed kite, and red-shouldered hawk may similarly

1 forage in small grassland patches adjacent to the right-of-way. Burrowing owl may occur also occur  
2 in grassland habitats in the project vicinity, especially in Santa Clara and Alameda County.

### 3 RIPARIAN WOODLAND AND FOREST

4 Riparian woodland may be considered transitional between riparian scrub and riparian forest  
5 communities. It is characterized by the presence of intermittent or perennial water flow, tree cover  
6 comprised of shrub- or tree-form willows, sycamore, cottonwood and other species, and an  
7 herbaceous understory. Riparian woodland is intersected by or located adjacent to the network  
8 route in several areas where the railroad right-of-way passes near or crosses stream corridors.  
9 Most riparian habitat lacks along the network route lacked a well-developed canopy as the result  
10 of ongoing railroad right-of-way maintenance activities. In some areas, patchy areas of willow,  
11 alder, and oaks lined creek channels; however, at most locations, only a few trees were present in  
12 disjunct stands upstream or downstream of the railroad crossings. Larger waterways, especially  
13 along the Peninsula backbone, constituted marginal nesting habitat for protected raptors and  
14 special status birds, including Cooper's hawk and yellow warbler.

15 Riparian forest is differentiated from riparian woodland by the presence of greater or more  
16 constant water availability, and consequently may support a more diverse assemblage of specie,  
17 including oaks, sycamores, broadleaf maples and other species in addition to willows. Riparian  
18 forest was observed along San Mateo Creek, San Francisquito Creek, Los Gatos Creek, Coyote  
19 Creek, Guadalupe River and Stiver's Lagoon along the Peninsula backbone. Mixed stands of  
20 riparian forest and woodland consisting of only a few trees were identified at other perennial  
21 creeks that cross the project route including Penitencia Creek on the East Bay backbone. Mixed  
22 willow riparian forest and woodland are dominated by various species of willows, white alder,  
23 Fremont cottonwood, California bay, coast live oak, sycamore and California black walnut.  
24 Understory shrub species included California wild rose and Himalaya blackberry. Herbaceous  
25 vegetation includes sedges, grasses and aquatic species.

26 Riparian habitat supports an abundant assortment of reptiles and amphibians such as western  
27 toad, California newt, Pacific tree frog, and Pacific slender salamander. Resident and migratory  
28 birds found in mixed riparian forest and woodland include song sparrow, spotted towhee, yellow-  
29 rumped warbler, and white-crowned sparrow. Western scrub jay, barn swallow, and black phoebe  
30 are common birds that forage in riparian forest habitats. Riparian areas are also important  
31 foraging grounds for bat species, including little brown and pallid bats. Mammals such as western  
32 harvest mouse, deer mouse, western gray squirrel, opossum, and raccoon also utilize streamside  
33 habitats for nesting and foraging and as a movement corridor between habitat patches. Raptors that  
34 breed and nest in riparian woodland include red-tailed, sharp-shinned and Cooper's hawks and  
35 white-tailed kite.

### 36 *Freshwater Emergent Marsh*

37 Freshwater marsh is typically associated with slow-moving water, such as is found at the edges of  
38 canals, irrigation ditches, sloughs, perennial drainages and riverbanks. Perennial emergent  
39 species, including cattail, tule, three-square and umbrella sedge, dominate emergent marsh.  
40 Annual species, such as water smartweed, duckweed, and annual rabbit's-foot grass are also  
41 common. The narrow band of emergent marsh vegetation along canals, ditches, and other  
42 drainages provides some nesting and foraging opportunities and cover for water bird species and

## 5.4 Biological Resources

---

1 small mammals, including mallards, green-winged teals, great blue herons, great egrets, marsh  
2 wrens, song sparrows, red-winged blackbirds, raccoons, and California voles. Freshwater  
3 emergent marsh was observed in numerous locations adjacent to the network route, wherever  
4 year-round, shallow, standing water was present.

### 5 *Salt Marsh*

6 Coastal salt marsh habitats are the most biologically sensitive habitats found in the project area  
7 and was observed at several locations adjacent to the Peninsula backbone segment, including  
8 Brisbane Lagoon and adjacent to Pacific Bell Network Segments 26 and 27, located in Newark and  
9 Menlo Park, respectively. Limited saltmarsh vegetation was also observed along Sanchez Creek in  
10 San Mateo and along Colma Creek in South San Francisco, both adjacent to the Peninsula  
11 backbone. Pickleweed and salt grass dominated most salt marsh habitat, with species composition  
12 varying depending on relative elevation above sea level. Coastal salt marsh provides potential  
13 habitat for several sensitive species including California clapper rail and salt marsh harvest mouse

14 Raptors typical of Bay Area salt marsh habitats include northern harrier, red-tailed hawk, and  
15 American kestrel. Migratory shorebirds that forage in the mudflats during low tide include black-  
16 necked stilt, American avocet, long-billed curlew, marbled godwit, and several sandpipers.  
17 During high tides, ducks that may be found in salt marsh environments include northern shoveler,  
18 American wigeon, northern pintail, gadwall, and canvasback. Common mammals in salt marsh  
19 include California vole and house mouse.

### 20 *Aquatic Habitat*

21 The San Francisco Bay Area network crosses several creeks that provide moderate to high quality  
22 freshwater aquatic habitat and support common and potentially sensitive fisheries resources. Such  
23 waterways include San Francisquito Creek, Los Gatos Creek, Coyote Creek, Alameda Creek,  
24 Colma Creek and the Guadalupe River. The proposed network route crosses the lower reaches of  
25 each of these tributaries to San Francisco Bay. Fish species that have been identified in the lower  
26 portions of these Santa Clara Valley creeks include Sacramento perch, splittail, hitch, tule perch,  
27 blackfish and sucker, bass, sunfish, catfish and mosquitofish.

28 Three brackish-water creeks, San Lorenzo Creek, Colma Creek and the Lake Merritt inlet, are  
29 intersected by the network route. Each of these creeks has been channelized and supports  
30 predominantly ruderal vegetation growing in the channel. Fish are present in several of the  
31 perennial drainages crossed by the network route and sensitive fish present in San Francisco Bay  
32 could occur in the lower reaches of these drainages. However, the overall quality of fish habitat is  
33 generally low because of channelization, seasonal flow variation and the urban setting of project  
34 streams.

35 Species that could be present in these streams include bat ray, Pacific staghorn sculpin, arrow  
36 goby, shiner surfperch, longfin smelt, bay pipefish, and the introduced yellowfin goby. Based on  
37 habitat values, the only sensitive fish species potentially present in these waterways include coastal  
38 California steelhead (foraging only), Pacific lamprey and, at Colma Creek, Pacific herring.  
39 Upstream reaches of the Lake Merritt inlet and Colma Creek would not provide habitat for any of  
40 these species.

1 *San Francisco Bay Area Network Route Stream and Wetland Crossings*

2 A total of 84 wetlands and streams were identified adjacent to or within the San Francisco Bay  
 3 network route. The crossings were primarily located along the Peninsula Backbones and East Bay  
 4 backbones, with six located along Pacific Bell Network segments. All 84 wetlands and streams  
 5 qualify as jurisdictional wetlands or “other waters of the United States” and are, accordingly,  
 6 subject to regulation by the Corps and CDFG. While most of the wetlands and streams in the  
 7 project area are freshwater, eight streams crossed by the network route are tidally influenced. The  
 8 project applicant has procured permit approval from the Corps under NWP 12 for all project-  
 9 related crossings of wetland and “other waters of the United States” in the San Francisco Bay Area.

10 Table 5.4-1, San Francisco Bay Area Network Route Stream and Wetland Crossings, summarizes  
 11 the geographic distribution and jurisdictional acreage of waterways in the project area. Table 5.4-  
 12 2, Comprehensive List of Wetlands and “Other Waters of the United States” in the Project Area,  
 13 provides a list of the 84 identified wetlands and “other waters of the United States” in the project  
 14 area.

15 **Table 5.4-1. San Francisco Bay Area Network Route Stream and Wetland Crossings**

Network Segment	“OTHER WATERS OF THE U.S.”			WETLANDS			Totals
	Square feet	Jurisdictional Acreage	Number of “Other Waters” in Project Area	Square feet	Jurisdictional Acreage	Number of Wetlands in Project Area	
Peninsula Backbone	8,500	0.19	19	3,180	0.07	13	<b>32</b>
East Bay Backbone	24,400	0.56	21	2,640	0.50	25	<b>46</b>
Pacific Bell Newbuild Structure	560	0.02	2	400	0.01	4	<b>6</b>
<i>Totals</i>	<b>33,460</b>	<b>0.77</b>	<b>42</b>	<b>25,220</b>	<b>0.58</b>	<b>42</b>	<b>84</b>
Sources: Pre-Construction Notification Application for 404 Permit submitted to the U.S. Army Corps of Engineers (March 1, 2000); and correspondence between Chris Rodgers, ESA, and Gordon Liu, U.S. Army Corps of Engineers, March 21, 2000.							

16 *Sensitive Plants*

17 A total of 70 special status plant species was documented the San Francisco Bay Area Network  
 18 project area; a comprehensive list is provided in Appendix H, Special Status Species Reported or  
 19 Potentially Occurring in the Project Area. Eleven of these species are state- or federally-listed as  
 20 threatened or endangered; the remaining 59 represent state and federal Species of Concern and  
 21 CNPS special status species. No sensitive plants or habitats that would support these species were  
 22 identified during field surveys within, or in close proximity to, the network route. Absence of  
 23 sensitive species was attributed to ongoing disturbance associated with railroad right-of-way  
 24 maintenance.

5.4 Biological Resources

1 Table 5.4-2. Comprehensive List of Wetlands and Other Waters of the U.S. in the Project Area

Site No.	Site Name	USGS Quadrangle	General Description	Jurisdictional Determination	Drainage Type and Water Regime	Ordinary High Water (feet)	Area of Impact (sq. ft.)
PENINSULA BACKBONE							
YM-003	Saratoga Creek (San Tomas Aqueduct)	San Jose West	Concrete lined channel.	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Perennial	60	0
YM-004	Calabazas Creek	San Jose West	Concrete lined channel.	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Perennial	45	0
YM-005	Unnamed Parallel Drainage	San Jose West	Cyperus, Epilobium, Lactuca serriola.	CORPS: Wet/Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	12	0
YM-006	Unnamed Drainage	Mountain View	No vegetation in concrete-lined portion.	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Perennial	15	0
YM-007	Stevens Creek	Mountain View	<i>Salix</i> , <i>Acacia</i> , <i>Quercus agrifolia</i> .	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Perennial	35	0
YM-008	Permanente Creek – concrete-lined	Mountain View	No vegetation. Concrete banks.	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	10	0
YM-009	Adobe Creek – culvert under Alma St. and ROW	Mountain View	No vegetation in MFN route (culvert)	CORPS: Waters CDFG: No BCDC: No OTHER: --	Intermittent	15	0
YM-010	Barron Creek	Palo Alto	No vegetation. Concrete channel	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	10	0
YM-011	Matadero Creek	Palo Alto	No vegetation.	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	40	0
YM-011A	Matadero Creek Tributary	Palo Alto	<i>Acacia</i> , <i>Foeniculum vulgare</i>	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	20	0

**Table 5.4-2. Comprehensive List of Wetlands and Other Waters of the U.S. in the Project Area**  
(continued)

Site No.	Site Name	USGS Quadrangle	General Description	Jurisdictional Determination	Drainage Type and Water Regime	Ordinary High Water (feet)	Area of Impact (sq. ft.)
PENINSULA BACKBONE							
YM - 012	San Francisquito Creek	Palo Alto	<i>Quercus agrifolia</i> , <i>Sequoia sempervirens</i>	CORPS: Waters CDFG: Yes BCDC: No OTHER: -	Perennial	100	0
YM - 013	Watkins Avenue Canal	Palo Alto	<i>Cyperus</i> , <i>Typha</i> , <i>Foeniculum</i>	CORPS: Wetland CDFG: No BCDC: No OTHER: --	Intermittent	25	0
YM-014	Cordilleras	Palo Alto	<i>Typha</i> , <i>Cyperus</i> , <i>Vicia</i>	CORPS: Wetland CDFG: Yes BCDC: No OTHER: --	Perennial	20-30	0
YM-015	Otay Creek	San Mateo	No vegetation in affected area. Culvert. <i>Typha</i> in natural creek portion	CORPS: Waters CDFG: No BCDC: No OTHER: --	Perennial	--	0
YM-016	Unnamed ditch	San Mateo	No wetland vegetation in affected area; <i>Typha</i> on other bank	CORPS: Waters CDFG: No BCDC: No OTHER:	Intermittent	--	0
YM-017	Unnamed Creek	San Mateo	<i>Acacia</i> , <i>Equisetum</i> , <i>Salix</i>	CORPS: Wetland CDFG: Yes BCDC: No OTHER: --	Perennial	4	0
YM-018	Parallel drainage to Unnamed Creek (YM-017)	San Mateo	<i>Typha</i>	CORPS: Wetland CDFG: Yes BCDC: No OTHER: --	Perennial	--	0
YM-019	Unnamed Culvert at 16 <sup>th</sup> Avenue	San Mateo	<i>Cyperus</i> , <i>Hedera helix</i>	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	10	0

5.4 Biological Resources

**Table 5.4-2. Comprehensive List of Wetlands and Other Waters of the U.S. in the Project Area**  
(continued)

Site No.	Site Name	USGS Quadrangle	General Description	Jurisdictional Determination	Drainage Type and Water Regime	Ordinary High Water (feet)	Area of Impact (sq. ft.)
PENINSULA BACKBONE							
YM-020	San Mateo Creek	San Mateo	<i>Quercus agrifolia</i> , <i>Salix</i>	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Perennial	5	0
YM-021	Parallel ditch	San Mateo	<i>Picris ech</i> , <i>Distichlis spi</i> , <i>Lolium per</i>	CORPS: Wetland CDFG: Yes BCDC: No OTHER: --	Intermittent	8	0
YM-022	Sanchez Creek	San Mateo	<i>Grindelia</i> , <i>Distichlis spicata</i>	CORPS: Wetland CDFG: Yes BCDC: No OTHER: Sec. 10	Perennial, tidal	8	0
YM-023	Concrete Canal/ Cordillas Creek	San Mateo	No vegetation	CORPS: Waters CDFG: No BCDC: No OTHER: --	Perennial	30	0
YM-026	Concrete Canal	Montara Mountain	<i>Rubus discolor</i> , <i>Foeniculum vulgare</i>	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	10	0
YM-027	Unnamed Drainage	Montara Mountain	<i>Salix</i> , non-native grasses	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	15	0
YM-029	Colma Creek	South San Francisco	<i>Spartina foliosa</i> , <i>S. alternifolia</i> , <i>Grindelia</i> Tidal	CORPS: Wetland CDFG: No BCDC: Yes OTHER: Sec. 10	Perennial, tidal	50	0
YM-030	Canal to Brisbane Lagoon	South San Francisco	<i>Grindelia</i> , <i>Spartina</i> , <i>Genista mono</i> , <i>Foeniculum</i> Tidal,	CORPS: Wetland CDFG: No BCDC: Yes OTHER: Sec. 10	Perennial, tidal	10	0
YM-031	Parallel ditch at Paul Avenue Station	South San Francisco	<i>Typha</i> , <i>Epilobium</i> , <i>Rubus discolor</i> , <i>Foeniculum</i>	CORPS: Wetland CDFG: Yes BCDC: No OTHER: --	Intermittent	8	0



**Table 5.4-2. Comprehensive List of Wetlands and Other Waters of the U.S. in the Project Area**  
(continued)

Site No.	Site Name	USGS Quadrangle	General Description	Jurisdictional Determination	Drainage Type and Water Regime	Ordinary High Water (feet)	Area of Impact (sq. ft.)
PENINSULA BACKBONE							
YM-032	Parallel Ditch at Center Street	Montara Mountain	<i>Picris ech</i> , <i>Lolium per</i> , <i>Rubus dis</i> , <i>Typha ang</i>	CORPS: Wetland CDFG: Yes BCDC: No OTHER: --	Intermittent	--	0
YM-033	Drainage Ditch	Montara Mountain	<i>Acacia</i> , <i>Salix</i>	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	5	0
YM-034	Small Drainage Ditch	Montara Mountain	<i>Bromus diandrus</i> , <i>Rubus discolor</i> , <i>Juncus</i>	CORPS: Wetland CDFG: No BCDC: No OTHER: --	Intermittent	--	0
YM-035	Small Drainage Ditch	Montara Mountain	<i>Rumex</i> , <i>Picris</i> , <i>Typha</i>	CORPS: Wetland CDFG: No BCDC: No OTHER: --	Perennial	--	0
YM-036	Parallel Wetland	South San Francisco	<i>Polypogon monospelien</i> <i>seDistichlis</i> , <i>spicata</i> , <i>Epilobium</i>	CORPS: Wetland CDFG: No BCDC: Yes OTHER: Sec. 10	Seasonal Tidal	27	0
EAST BAY BACKBONE							
VXD-002	Inlet to Lake Merritt	Oakland West	Channelized tidal saltmarsh on bank, <i>Grindelia stricta</i> , <i>Salicornia virginica</i> .	CORPS: Waters CDFG: Yes BCDC: Yes OTHER: State Lands Sec. 10	Perennial, tidal	100	0
VXD-003	Unnamed drainage	Oakland West	<i>Acacia</i> sp.	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	20	0
VXD-004	Unnamed drainage	Oakland West	<i>Rubus discolor</i> , <i>Foeniculum vulgare</i>	CORPS: Waters, wetl CDFG: Yes BCDC: No OTHER: --	Intermittent	15	0
VXD-005	Lion Creek	Oakland East	No vegetation - Tidal.	CORPS: Waters CDFG: Yes BCDC: Yes OTHER: --	Perennial, tidal	70	0

5.4 Biological Resources

**Table 5.4-2. Comprehensive List of Wetlands and Other Waters of the U.S. in the Project Area**  
(continued)

Site No.	Site Name	USGS Quadrangle	General Description	Jurisdictional Determination	Drainage Type and Water Regime	Ordinary High Water (feet)	Area of Impact (sq. ft.)
EAST BAY BACKBONE							
VXD-006	Damon Slough	Oakland East	No vegetation - Tidal.	CORPS: Waters CDFG: Yes BCDC: Yes OTHER: Sec. 10	Perennial tidal	50	0
VXD-007	Arroyo Viejo Creek	San Leandro	Ruderal, English ivy	CORPS: Waters CDFG: Yes BCDC: No OTHER: Sec. 10	Perennial	12	0
VXD-008	San Leandro Creek	San Leandro	Cottonwood., concrete channel	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Perennial	70 80-riparian	0
VXD-009	Estudillo Canal	San Leandro	Concrete channel. No vegetation.	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	50	0
VXD-010	San Lorenzo Creek	Hayward	Ornamental trees	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	50	0
VXD-011	Unnamed dry wash	Hayward	Non-native grasses, <i>Brassica</i> , <i>Malva</i> .	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	5	0
VXD-012	ACFC & WCD Flood Control Canal	Hayward	Concrete canal. No vegetation.	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Intermittent	7	0
VXD-013	Ditch parallel to tracks, S. of Tennyson	Hayward	<i>Cyperus</i> , <i>Epilobium</i> , <i>Mentha puleg</i> , <i>Rubus ursinus</i> .	CORPS: Wetland CDFG: Yes BCDC: No OTHER: --	Seasonal	6	0
VXD-014	Drainage ditch	Hayward	Freshwater marsh, <i>Typha</i> , <i>Rubus ursinus</i> , <i>Rorippa</i>	CORPS: Wetland CDFG: No BCDC: No OTHER: --	Intermittent	5	
VXD-015	Alameda Creek	Hayward	<i>Agrostis</i> , <i>Cyperus erag</i> , <i>Scirpus</i>	CORPS: Wetland CDFG: Yes BCDC: No OTHER: --	Perennial	13	0

**Table 5.4-2. Comprehensive List of Wetlands and Other Waters of the U.S. in the Project Area**  
(continued)

Site No.	Site Name	USGS Quadrangle	General Description	Jurisdictional Determination	Drainage Type and Water Regime	Ordinary High Water (feet)	Area of Impact (sq. ft.)
EAST BAY BACKBONE							
VXD-017	Dry Creek	Newark	<i>Salsola, Mentha puleg, Cyperus erag</i>	CORPS: Wetl/waters CDFG: Yes BCDC: No OTHER: --	Intermittent	15	0
VXD-018	Unnamed Culvert	Newark	<i>Salsola, Foeniculum, Malva</i>	CORPS: Wetl/waters CDFG: No BCDC: No OTHER: --	Intermittent	8	0
VXD-019	Alameda Creek, North of UP yard	Niles	<i>Salix, Conyza, Epilobium, Foeniculum</i>	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Perennial	300	0
BTP-001	Creek at Paseo Padre	Niles	<i>Salix, Rumex crispus, Rorippa</i>	CORPS: Wetl/waters CDFG: Yes BCDC: No OTHER: --	Perennial	5	0
BTP-002	Mission Creek	Niles	<i>Typha, Polypogon, Rorippa</i>	CORPS: Wetland CDFG: Yes BCDC: No OTHER: --	Perennial	4	0
BTP-003	Parallel wetland	Niles	Seasonal wetland, bermuda grass, saltgrass, blackberry	CORPS: Wetland CDFG: No BCDC: No OTHER: --	Seasonal	1	0
BTP-004	Mission Creek	Niles	<i>Rumex, unidentifiable vegetation</i>	CORPS: Wetl/waters CDFG: Yes BCDC: No OTHER: --	Intermittent	2	0
BTP-005	Drainage	Niles	Black mustard, vetch, unidentified grasses	CORPS: Wetl/waters CDFG: Yes BCDC: No OTHER: --	Intermittent	2	0
BTP-006	Concrete channel	Niles	Concrete lined channels; no vegetation	CORPS: Waters CDFG: No BCDC: No OTHER: --	Intermittent	8	0
BTP-007	Parallel drainage	Niles	<i>Avena fatua, Phalaris aq</i>	CORPS: Wetland CDFG: No BCDC: No OTHER: --	Seasonal	5	0

5.4 Biological Resources

**Table 5.4-2. Comprehensive List of Wetlands and Other Waters of the U.S. in the Project Area**  
(continued)

Site No.	Site Name	USGS Quadrangle	General Description	Jurisdictional Determination	Drainage Type and Water Regime	Ordinary High Water (feet)	Area of Impact (sq. ft.)
EAST BAY BACKBONE							
BTP-008	Concrete channel	Niles	No vegetation	CORPS: Waters CDFG: No BCDC: No OTHER: --	Intermittent	8	0
BTP-009	Parallel ditch	Niles	<i>Rorippa</i> , <i>Typha latif</i> , <i>Picris ech</i> , <i>Lolium multi</i>	CORPS: Wetl/water CDFG: s Yes BCDC: No OTHER: --	Perennial	5	0
BTP-010	Parallel ditch	Milpitas	Freshwater marsh, <i>Typha latifolia</i> , <i>Picris echiodides</i>	CORPS: Wetland CDFG: No BCDC: No OTHER: --	Perennial	5	0
BTP-011	Concrete channel	Milpitas	No vegetation	CORPS: Waters CDFG: No BCDC: No OTHER: --	Intermittent	8	0
BTP-012	Parallel ditch	Milpitas	Seasonal wetl., <i>Rumex crispus</i> , <i>Eleocharis</i> , <i>Cynodon dact</i>	CORPS: Wetland CDFG: No BCDC: No OTHER: --	Seasonal	10	0
BTP-013	Concrete channel	Milpitas	No vegetation	CORPS: Waters CDFG: No BCDC: No OTHER: --	Intermittent	12	0
BTP-014	Concrete channel	Milpitas	No vegetation	CORPS: Waters CDFG: No BCDC: No OTHER: --	Intermittent	8	0
BTP-015	Drainage at Dixon Landing	Milpitas	<i>Typha</i> , <i>Picris echiodides</i>	CORPS: Wetland CDFG: Maybe BCDC: No OTHER: --	Intermittent	10	0
BTP-016	Concrete canal	Milpitas	No vegetation	CORPS: Waters CDFG: No BCDC: No OTHER: --	Intermittent	5	0

**Table 5.4-2. Comprehensive List of Wetlands and Other Waters of the U.S. in the Project Area**  
(continued)

Site No.	Site Name	USGS Quadrangle	General Description	Jurisdictional Determination	Drainage Type and Water Regime	Ordinary High Water (feet)	Area of Impact (sq. ft.)
EAST BAY BACKBONE							
BTP-017	Parallel wetland	Milpitas	Disturbed seasonal wetl. <i>Xanthium</i> , <i>Picris ech</i> , <i>Distichlis spicata</i>	CORPS: Wetland CDFG: No BCDC: No OTHER: --	Seasonal	4	120
BTP-018	Calera Creek (concrete lined)	Milpitas	No vegetation	CORPS: Waters CDFG: No BCDC: No OTHER: --	Intermittent	15	0
BTP-019	Parallel wetland/drainage	Milpitas	<i>Polypogon</i> , <i>Cyperus</i> , <i>Paspalum dil.</i>	CORPS: Wetland CDFG: No BCDC: No OTHER: --	Seasonal, artificial water source	10	0
BTP-020	Berryessa Creek	Milpitas	<i>Typha latifolia</i>	CORPS: Wetl/waters CDFG: Yes BCDC: No OTHER: --	Perennial	60	0
BTP-021	Parallel trapezoid channel	Milpitas	<i>Polygonum</i> , <i>Picris ech</i> , <i>Epilobium cil.</i>	CORPS: Wetland CDFG: No BCDC: No OTHER: --	Intermittent	14	0
BTP-022	Wrigley Creek	Milpitas	<i>Typha</i> , <i>Epilobium</i>	CORPS: Wetland CDFG: Yes BCDC: No OTHER: --	Perennial	4	0
BTP-023	Parallel wetland	Milpitas	<i>Distichlis spicata</i> , <i>Cyperus</i> / <i>Carex</i>	CORPS: Wetland CDFG: No BCDC: No OTHER: --	Seasonal	20	2,000
BTP-024	Culvert/concrete channel	Milpitas	<i>Picris echioides</i>	CORPS: Waters CDFG: No BCDC: No OTHER: --	Intermittent	2	0
BTP-026	Penitencia Creek	San Jose East	<i>Populus frem</i> , <i>Platanus rac</i> <i>Quercus agrif</i>	CORPS: Waters CDFG: No BCDC: No OTHER: --	Perennial	30	0
BTP-027	Miguelita Creek	San Jose East	Non-native grasses, <i>Baccharis</i>	CORPS: Waters CDFG: Yes BCDC: No OTHER: --	Perennial	35	0

5.4 Biological Resources

**Table 5.4-2. Comprehensive List of Wetlands and Other Waters of the U.S. in the Project Area**  
(continued)

Site No.	Site Name	USGS Quadrangle	General Description	Jurisdictional Determination	Drainage Type and Water Regime	Ordinary High Water (feet)	Area of Impact (sq. ft.)
EAST BAY BACKBONE							
BTP-028	Coyote Creek	San Jose East	<i>Fraxinus, Nicotiana glauca, Salix, Populus, Acer</i>	CORPS: Wetl/water CDFG: s Yes BCDC: No OTHER: State Lands	Perennial	150 (+250 ripar)	0
BTP-030	Guadalupe River	San Jose East	<i>Salix, Eucalyptus</i>	CORPS: Wetl/water CDFG: s BCDC: Yes OTHER: No State Lands	Perennial	50 (+150 ripar)	0
BTP-031	Los Gatos Creek	San Jose East	<i>Arundo, Salix, Acer</i>	CORPS: Wetl/water CDFG: s Yes BCDC: No OTHER: State Lands	Perennial	75 (+325 ripar)	0
PACIFIC BELL STRUCTURE							
CR-002	Bike Path / Slough	Palo Alto	Paved trail adjacent to drainage slough with <i>Salicornia, Picris echiodes, Rumex crispus</i>	CORPS: Wetland CDFG: Yes BCDC: Yes OTHER: Sec. 10	Perennial Tidal	N/A	0
CR-003	Thornton Ave. USFWS Preserve	Newark Newbuild 26	Saltmarsh with sparse <i>Frankenia salina, Bromus diandrus, Salsola</i>	CORPS: Wetland CDFG: Yes BCDC: Yes OTHER: --	Diked, historic tidal saltmarsh	N/A	0
CR-004	Thorton Ave Marsh and Newark Slough	Newark Newbuild 26	Saltmarsh, <i>Salicornia virginica, Typha angustifolia Distichlis spicata</i>	CORPS: Wetland CDFG: Yes BCDC: Yes OTHER: Sec. 10	Tidal saltmarsh and slough	N/A	0
CR-005	Clark Canyon Creek	Diablo Newbuild 20 In Dublin	Weedy freshwater marsh, <i>Deschapsia cespitosa, Epilobium ciliatum, Polygonum, Salix, Alnus</i>	CORPS: Wetland CDFG: Yes BCDC: No OTHER: --	Intermittent	20	0

**Table 5.4-2. Comprehensive List of Wetlands and Other Waters of the U.S. in the Project Area**  
(continued)

Site No.	Site Name	USGS Quadrangle	General Description	Jurisdictional Determination	Drainage Type and Water Regime	Ordinary High Water (feet)	Area of Impact (sq. ft.)
PACIFIC BELL STRUCTURE							
CR-007	Unnamed drainage, San Ramon Valley Blvd.	Diablo Newbuild 17 in Danville	Roadside ruderal, <i>Xanthium</i> , <i>Rumex crispus</i> , <i>Brassica nigra</i> , <i>Quercus agrifolia</i>	CORPS: Waters CDFG: No BCDC: No OTHER: --	Intermittent	3	0
NB-001	Unnamed drainage at Rice Street	San Quentin Newbuild 4 In San Rafael	Ruderal, non-native grasses, <i>Sonchus</i>	CORPS: Waters CDFG: No BCDC: No OTHER: --	Intermittent	25	0

### Sensitive Wildlife

A total of 57 sensitive wildlife species was identified as historically or potentially present in the San Francisco Bay Area Network project area. Of these, 20 species were determined to have moderate or greater potential to occur within or adjacent to the network route. These species are summarized in Listed and otherwise sensitive species determined to have moderate potential for occurrence along the network route are summarized in Table 5.4-3, Sensitive Wildlife Species Potentially Present along the San Francisco Bay Area Network Route, and are discussed in more depth below following the table.

*Pacific Lamprey.* The Pacific lamprey, a federal Species of Concern, may occur in streams in the Peninsula and East Bay Backbone project areas, including San Francisquito Creek, Los Gatos Creek, Coyote, Creek Alameda Creek, Penitencia Creek, Stevens Creek, San Lorenzo Creek and the Guadalupe River. Pacific lamprey may occur throughout the San Francisco Bay watershed in relatively small drainages.

*Central California Coast Steelhead/Central Coast Chinook Salmon.* The central California coast ESU steelhead and Central coast ESU chinook salmon are both federally-listed threatened species that could potentially immigrate into, or otherwise use, five south San Francisco Bay drainages along the network route, including San Francisquito Creek, Los Creek, Coyote Creek, Alameda Creek and the Guadalupe River. Each of these streams has historically supported steelhead and salmon runs; however, extensive upland and channel alterations have likely eliminated spawning from all five drainages. Spawning habitat is generally of poor quality in these streams as the result of urbanization and accompanying stream alteration and placement of dams or barriers impeding upstream migration, as well as seasonal flow variation as a result of reservoir management on San Francisquito Creek and Coyote Creek.

**Table 5.4-3. Sensitive Wildlife Species Potentially Present along the San Francisco Bay Area Network Route**

<i>Common Name Scientific Name</i>	<i>Listing Status USFWS/ CDFG</i>	<i>General Habitat</i>	<i>Potential for Occurrence</i>
FEDERAL OR STATE THREATENED AND ENDANGERED SPECIES			
<b>Fish</b>			
Central California coast steelhead <i>Oncorhynchus mykiss</i>	FT/--	Drainages of central Calif. coastal rivers.	<b>Moderate-high potential.</b> During wet years steelhead may migrate during periods of adequate flow into six drainages that feed San Francisco Bay: San Francisquito, Los Gatos, Coyote, San Leandro and Alameda Creek, and Guadalupe River.
Central coast chinook salmon <i>Oncorhynchus tshawytscha</i>	FT/--	Drainages of central Calif. Coastal rivers.	<b>Moderate potential.</b> Salmon have been reported in Guadalupe River during wet years. They may also occur in Los Gatos and Coyote Creek on the Peninsula backbone.
<b>Amphibians</b>			
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in ponds, pools, and slow-moving streams with emergent vegetation; adjacent upland habitats are often used outside the breeding season.	<b>Present.</b> This species is present within 50 feet of the proposed ROW in the west of Bayshore wetland complex, near SFIA. Other portions of the project provide marginally suitable habitat. Large creeks, including San Francisquito and Coyote Creeks, may support frogs following periods of heavy flooding, when could be inadvertently washed downstream.
FEDERAL OR STATE THREATENED AND ENDANGERED SPECIES			
<b>Reptiles</b>			
San Francisco garter snake <i>Masticophis lateralis euryxanthus</i>	FE/CE	Freshwater ponds and slow streams with emergent vegetation; nearby upland grasslands with small rodent burrows may also provide habitat for this species.	<b>Present.</b> This species is present within 50 feet of the proposed ROW in the west of Bayshore wetland complex near SFIA.



**Table 5.4-3. Sensitive Wildlife Species Potentially Present along the San Francisco Bay Area Network Route**

Common Name Scientific Name	Listing Status USFWS/ CDFG	General Habitat	Potential for Occurrence
<i>Birds</i>			
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/CE	Nests and forages in emergent wetlands with pickleweed, cordgrass, and bulrush	<b>Low-moderate potential.</b> Potential breeding habitat occurs at three salt marsh habitats in the San Francisco Bay network: Brisbane lagoon and Pacific Bell Network Segments 26 and 27. The CNDDDB has records of breeding clapper rails adjacent to the Pacific Bell Network Segment 26 in Newark.
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/CT	Nests and forages in tidal emergent wetland with pickleweed	<b>Low-moderate potential.</b> Potential breeding habitat is present along the Peninsula backbone segment in Brisbane Lagoon and at Pacific Bell Network Segments 26 and 27. Most recent records of nesting black rails are from northern San Francisco and San Pablo Bay marshes.
California least tern <i>Sterna antillarum browni</i>	FE/CE	Nests along the coast from San Francisco Bay south to northern Baja California - colonial breeder on bare or sparsely vegetated flat substrates including sand beaches, alkali flats, land fills, or paved areas	<b>Moderate potential.</b> Potential nesting and foraging habitat for the California least tern may occur salt marsh habitat adjacent to the ROW at Newbuild sections 26 and 27 in Newark and Menlo Park, respectively. Brisbane Lagoon on the Peninsula backbone provides foraging habitat on open water areas but nesting habitat is limited because most of the site is covered with sparse to dense vegetation.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Nests and forages on sandy beaches on marine and estuarine shores - requires sandy, gravelly, or friable soils for nesting; may nest on salt pond levees or other suitable barren habitat.	<b>Moderate potential.</b> Historical breeding records are documented within 500 feet of the proposed newbuild section 26 in Newark. This site and Pacific Bell Network Segment 27 in Menlo Park, both provide low quality nesting habitat for western snowy plover because they lack the open sandy or sparsely vegetated flats required for nest sites.

**Table 5.4-3. Sensitive Wildlife Species Potentially Present along the San Francisco Bay Area Network Route**

<i>Common Name Scientific Name</i>	<i>Listing Status USFWS/ CDFG</i>	<i>General Habitat</i>	<i>Potential for Occurrence</i>
FEDERAL OR STATE THREATENED AND ENDANGERED SPECIES			
<i>Mammals</i>			
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/CE	Saline emergent marsh with dense pickleweed	<b>Moderate potential.</b> Salt marsh habitat adjacent to newbuild sections 26 and 27 provides the only potential habitat for salt marsh harvest mouse in the project area. The CNDDDB (1999) has two records within 1,000 feet of the ROW along Thornton Avenue.
OTHER SPECIES OF CONCERN			
<i>Fish</i>			
Pacific lamprey <i>Lampetra tridentata</i>	FSC/--	Adults inhabit estuaries and nearby ocean areas with spawning in upstream gravel beds. Larvae remain buried throughout most of their 5-7 year larval life and then move to downstream estuarine stream reaches.	<b>Moderate-high potential.</b> This species is distributed throughout large drainages of San Francisco Bay, where suitable salmonid spawning habitat exists. San Lorenzo, Alameda, Coyote, Los Gatos, and San Francisquito Creek, and Guadalupe River may support Pacific lamprey during years when salmonids are present
<i>Amphibians</i>			
California tiger salamander <i>Ambystoma californiense</i>	FC/CSC	Wintering sites occur in grasslands occupied by burrowing mammals; breed in ponds, vernal pools, and slow-moving or receding streams	<b>Low-moderate potential.</b> Project area provides minimal, degraded habitat in Clark Canyon Creek at Pacific Bell Network Segment 20 in Dublin and San Francisquito Creek in Menlo Park on the Peninsula backbone. High levels of disturbance and lack of burrows for aestivation habitat lessen the potential for this species at these sites and elsewhere in the project ROW.

**Table 5.4-3. Sensitive Wildlife Species Potentially Present along the San Francisco Bay Area Network Route**

<i>Common Name Scientific Name</i>	<i>Listing Status USFWS/ CDFG</i>	<i>General Habitat</i>	<i>Potential for Occurrence</i>
<i>Reptiles</i>			
Western pond turtle <i>Clemmys marmorata</i>	FSC/CSC	Requires permanent streams, creeks and ponds with sandy banks for egg laying.	<b>Low-moderate potential.</b> This species may occur in Alameda Creek, Coyote Creek, and the Guadalupe River, on the Peninsula and East Bay backbone segments. Other creeks in the project area provide marginally suitable habitat. Recorded occurrences are typically in the upper reaches of project streams and reservoirs outside the project ROW.
OTHER SPECIES OF CONCERN			
<i>Birds</i>			
Tricolored blackbird (nesting) <i>Agelaius tricolor</i>	FSC/CSC	Nests in freshwater marshes with dense stands of cattails or bulrushes, occasionally in willows, thistles, mustard, blackberry brambles, and dense shrubs and grains	<b>Low-moderate potential.</b> Potential breeding habitat occurs at three sites: Stiver's Lagoon in Newark on the East Bay backbone, and Brisbane Lagoon and the west of Bayshore wetland complex near SFIA on the Peninsula backbone.
Northern harrier <i>Circus cyaneus</i>	--/CSC	Nests in coastal freshwater and saltwater marshes, nest and forages in grasslands	<b>Present.</b> The project area provides suitable ground nesting habitat in the west of Bayshore wetland complex near SFIA. Northern harrier was observed during winter field surveys in this area (ESA 2000a).
White-tailed kite (nesting) <i>Elanus leucurus</i>	CDFG fully protected	Nests near wet meadows and open grasslands dense oak, willow or other large tree stands.	<b>Present.</b> The project area provides potential nesting habitat in eucalyptus trees adjacent to the west of Bayshore wetland complex near SFIA. White tailed kites were observed during winter field surveys in this area (ESA 2000a).

**Table 5.4-3. Sensitive Wildlife Species Potentially Present along the San Francisco Bay Area Network Route**

<i>Common Name Scientific Name</i>	<i>Listing Status USFWS/ CDFG</i>	<i>General Habitat</i>	<i>Potential for Occurrence</i>
Sharp-shinned hawk (nesting) <i>Accipiter striatus</i>	3503.5	Nests in riparian growths of deciduous trees and live oaks	<b>Low potential.</b> Potential nesting habitat occurs on drainages along the Peninsula backbone segment. Coyote and Los Gatos Creek and the Guadalupe River have the best quality habitat for nesting sharp-shinned hawks, however, few nesting records for this species are known from the project area.
OTHER SPECIES OF CONCERN			
<i>Birds</i>			
Cooper's hawk (nesting) <i>Accipiter cooperi</i>	3503.5	Nests in riparian growths of deciduous trees and live oak woodlands.	<b>Moderate potential.</b> Potential nesting habitat occurs on drainages along the Peninsula backbone segment. Coyote and Los Gatos Creek and the Guadalupe River have the best quality habitat for nesting, however, few nesting records for this species are known from the project area. A Cooper's hawk was observed near Penitencia Creek during winter surveys.
Loggerhead shrike (nesting) <i>Lanius ludovicianus</i>	FSC/CSC	Scrub, open woodlands, and grasslands	<b>Present.</b> The project area provides foraging and marginal nesting habitat in grassland habitat adjacent to the network route on the East Bay backbone. Loggerhead shrike was observed in the Fremont area during a survey in January 2000.
Burrowing owl <i>Speotyto cunicularia</i>	FSC/CSC	Nests and forages in low-growing grasslands that support burrowing mammals	<b>Moderate-high potential.</b> Burrowing owls may nest along the Peninsula and East Bay backbone segments and at Pacific Bell Network Segment 26 in Newark. Two breeding occurrences are reported in this area within 1,000 feet of the proposed network route (CNDDDB 2000). Occupied burrows were identified during winter surveys in Milpitas near Berryesa Creek on the East Bay Backbone.

**Table 5.4-3. Sensitive Wildlife Species Potentially Present along the San Francisco Bay Area Network Route**

<i>Common Name Scientific Name</i>	<i>Listing Status USFWS/ CDFG</i>	<i>General Habitat</i>	<i>Potential for Occurrence</i>
<i>Mammals</i>			
Salt marsh wandering shrew <i>Sorex vagrans halicoetes</i>	FSC	Restricted to tidal salt marshes in the south San Francisco Bay.	<b>Moderate potential.</b> Potential habitat occurs in salt marshes adjacent to Pacific Bell Network Segments 26 and 27, in Newark and Menlo Park, respectively.
Sources: CDFG NDDDB 2000; ESA 2000a			
<p><b>FEDERAL: (U.S. Fish and Wildlife Service)</b></p> <p>FE Listed as Endangered (in danger of extinction) by the Federal Government.</p> <p>FT Listed as Threatened (likely to become Endangered within the foreseeable future) by the Federal Government.</p> <p>FP Proposed for Listing as Endangered or Threatened.</p> <p>FC Candidate to become a <i>proposed</i> species.</p> <p>FSC Federal Species of Concern. May be Endangered or Threatened, but not enough biological information has been gathered to support listing at this time.</p> <p><b>STATE: (California Department of Fish and Game)</b></p> <p>CE Listed as Endangered by the State of California</p> <p>CT Listed as Threatened by the State of California</p> <p>CR Listed as Rare by the State of California (plants only)</p> <p>CSC California Species of Special Concern</p> <p>3503.5 Protection for nesting species of Falconiformes (hawks) and Strigiformes (owls)</p>			

1 *California tiger salamander.* The California tiger salamander is a federal candidate for listing as  
2 threatened and a California Species of Special Concern. It breeds primarily between December and  
3 February and spends the majority of its adult life underground in burrows, including ground  
4 squirrel burrows in grasslands adjacent to breeding ponds. Adult salamanders emerge from  
5 underground burrows for only a few weeks per year, usually at the height of the rainy season in  
6 December or January. They move to temporary rain pools, streams, and ponds to mate and lay  
7 eggs. During the short breeding season, salamanders can be observed moving to temporary rain  
8 pools, ponds, streams and lakes. Habitat elements required for species presence include  
9 aestivation sites such as small mammal burrows or debris piles and the presence of suitable  
10 breeding sites, which may include ephemeral pools, ponds, or slow-moving streams. Although  
11 some areas in the San Francisco Bay area network have potential breeding or aestivation habitat;  
12 no sites had both habitats in close proximity. For this reason, California tiger salamander is not  
13 expected in the project area. High quality habitat for California tiger salamander does occur in the  
14 upper watershed of two sites in the San Francisco Bay network, including San Francisquito Creek  
15 along the Peninsula backbone and at Clark Canyon Creek in Dublin along Pacific Bell Network  
16 Segment 20.

17 *California Red-Legged Frog.* The California red-legged frog is a federally-listed threatened species  
18 and a state Species of Special Concern. Six streams crossed by the network route have moderate  
19 potential to support California red-legged frog. In addition, California red-legged frog is known to  
20 occur in the “West of Bayshore Wetland Complex” near San Francisco International Airport.

## 5.4 Biological Resources

---

1 Although these streams were identified as being within the historic range of California red-legged  
2 frog, current degraded habitat conditions preclude their presence. Most stream crossings are  
3 concrete channels or underground culverts in highly urbanized areas. Other sites that could  
4 provide suitable California red-legged frog habitat along the network route include Alameda  
5 Creek, Stiver's Lagoon, Coyote Creek, Guadalupe River, Los Gatos Creek, Clark Canyon Creek  
6 and San Francisquito Creek.

7 *Western Pond Turtle.* The western pond turtle is a federal and state Species of Concern. Pond  
8 turtles are found in permanent ponds, rivers, streams, and irrigation ditches; they prefer rocky or  
9 muddy substrates and the presence of emergent vegetation. The species also seeks habitat with  
10 accessible basking sites, including partially submerged rocks and floating logs. Most habitat in the  
11 project area is of poor quality as the result of to channel modification and urbanization. Potential  
12 habitat for western pond turtle occurs in the upstream reaches of Coyote Creek, Guadalupe River,  
13 Penitencia Creek, Steven's Creek and Alameda Creeks. Habitat conditions in downstream reaches  
14 of these streams, which are crossed by the network route, were determined to represent marginal  
15 habitat as creek banks were generally too steep to allow access.

16 *San Francisco Garter Snake.* The San Francisco garter snake is a state- and federally-listed  
17 endangered species. It is found in association with standing water, including ponds, lakes,  
18 marshes and sloughs. Preferred cover species include bankside vegetation such as cattails,  
19 bulrushes and spike rushes. The interface between stream and pond habitats and grasslands is  
20 used for basking, while nearby water sources and dense vegetation along the stream or pond  
21 margins provide escape cover. Upland sites such as grassy hillsides near drainages and ponds  
22 may also be used for basking. Rodent burrows are used for shelter and escape.

23 The only recorded location of the San Francisco garter snake in the project area is the "West of  
24 Bayshore Wetland Complex" near San Francisco International Airport along the Peninsula  
25 backbone segment. Most other potential habitat was channelized or had little aquatic vegetation  
26 that would support this species.

27 *Northern Harrier.* This species, like other raptors and birds in general, is protected under California  
28 Code Sections 3503 and 3503.5, which prohibit the taking or destroying of any bird or nest in the  
29 order of Falconiformes (falcons, kites, and hawks) and Strigiformes (owls). Northern harrier nest  
30 and forage along wet meadows, sloughs, savanna or prairie and marshes, feeding on small  
31 mammals, such as California vole and western harvest mice. Northern harriers were identified in  
32 the wetland complex near SFIA, but were not detected elsewhere in the project area.

33 *White-tailed Kite.* The white-tailed kite is protected under California Code 3503 and 3503.5. Prior to  
34 1895 this species was common to widespread in valley and lower foothill territory, but is now rare  
35 in many sections of the state. White-tailed kites forage in wetlands and open brushlands. Oak  
36 woodlands, valley oak or live oak, or trees along marsh edges are used for nesting sites. The nest  
37 is a platform of sticks, leaves, weed stalks, and similar materials located in a tree or bush. Potential  
38 nesting and foraging habitat for this species occurs in scattered locations throughout the Peninsula  
39 and East Bay backbone segments. Large eucalyptus trees at the "West of Bayshore Wetland  
40 Complex" near San Francisco International Airport provide the highest quality nesting habitat in  
41 the project area. During winter surveys, a white-tailed kite was observed foraging over the  
42 marshlands in this area.

1 *California Clapper Rail/California Black Rail.* Potential habitat for California clapper rail, a California  
2 State and federally Endangered species and California black rail, a federal species of concern and  
3 California Threatened species occurs in three locations where the ROW intersects salt marsh  
4 habitats, including Brisbane Lagoon along the Peninsula backbone segment in the City of Brisbane  
5 and Pacific Bell Network Segments 26 and 27 in Newark and Fremont, respectively. California  
6 clapper rails are restricted to San Francisco Bay marshlands and occur throughout the north and  
7 south San Francisco Bay region. California black rails were historically present in south bay  
8 marshes but now are generally restricted to north San Francisco and San Pablo Bay marshes.

9 *Western Snowy Plover.* The western snowy plover is a federally-listed threatened species and a state  
10 Species of Special Concern. This rare shorebird requires sandy, gravelly or friable soil substrate for  
11 nesting. It nests in shallow depressions in the sand or soil, sometimes lining them with small  
12 pebbles, glass fragments, or gravel. The snowy plover frequently locates its nest near or under  
13 objects such as driftwood, rocks, or defoliated bushes, but may also nest on barren ground with no  
14 nearby cover. In fall and winter this species is common on sandy marine and estuarine shores, and  
15 uncommon at salt ponds, with small numbers of plovers remaining year-round at salt ponds on  
16 San Francisco Bay. Potential nesting habitat and historical breeding sites are documented within  
17 500 feet of the proposed Pacific Bell Network Segment 26 in Newark. The project construction  
18 corridor in this area is proposed on the shoulder of an existing well-traveled roadway, and does  
19 not provide suitable nesting habitat for this species.

20 *California Least Tern.* California least terns are state- and federally-listed as endangered. California  
21 least tern adults roost primarily on the ground, and nest in loose colonies in areas with minimal  
22 human or predatory disturbance. Courtship may take place away from nest colony, typically on a  
23 beach or exposed tidal flat. The California least tern nests on barren to sparsely vegetated areas  
24 near water, usually on sandy or gravelly substrate. On hard soil, the least tern may nest in  
25 artificially created depressions such as a dried boot impression. They require unpolluted feeding  
26 areas in lagoons and estuaries and where they feed primarily in shallow areas with abundant fish.  
27 Potential nesting and foraging habitat for the California least tern is present in salt marsh habitat  
28 adjacent to Pacific Bell Network Segment 26 in Newark and Pacific Bell Network Segment 27 in  
29 Menlo Park.

30 *Burrowing Owl.* Burrowing owl is a state and federal Species of Concern. Burrowing owl is found  
31 in open grasslands and disturbed sites with existing burrows, elevated perches and large patches  
32 of bare ground. Ground squirrel colonies are associated with burrowing owls because they  
33 provide a source of burrows and are typically located near water and areas with large numbers of  
34 prey species, primarily insects. Breeding takes place between March and August, peaking in April  
35 and May. Potential nesting habitat occurs in disturbed annual grasslands in the Newark and  
36 Menlo Park near Pacific Bell Network Segments 26 and 27, and an historic burrowing owl nest site  
37 was recorded within 500 feet of Pacific Bell Network Segment 26 in Newark (CNDDDB 2000).. Two  
38 active burrows were also identified during winter surveys on the East Bay backbone near Berryessa  
39 Creek in Fremont. The potential for species presence is considered high at this location.

40 *Tricolored blackbird.* The tricolored blackbird is a state and federal Species of Concern. Tricolored  
41 blackbirds are a colonial species that nest in freshwater marsh vegetation such as cattails, tules,  
42 and blackberry thickets. This species has been known to forage both along edges of ponds in the  
43 immediate vicinity of the nest site and in grasslands and croplands up to four miles from the nest  
44 site. Three locations in the project area were identified that could support tricolored blackbird:

## 5.4 Biological Resources

---

1 Stiver's Lagoon in Fremont, Brisbane Lagoon, and the wetland complex near San Francisco  
2 International Airport. Although these sites provide potential habitat, the limited extent of habitat  
3 at these sites reduces opportunities for colonization.

4 *Loggerhead Shrike.* Loggerhead shrike is a state and federal Species of Concern. They forage and  
5 nest in grasslands and scrubland habitats. They are typically observed perched on overhead lines  
6 or fences. During winter surveys, loggerhead shrike was observed on both the East Bay and  
7 Peninsula backbone segments. Loggerhead shrike was observed foraging in disced agricultural  
8 fields near Fremont, on the East Bay backbone and in small grassland patches between Sunnyvale  
9 and Brisbane on the Peninsula backbone.

10 *Salt Marsh Harvest Mouse/Salt Marsh Wandering Shrew.* The salt marsh harvest mouse, a state- and  
11 federally-listed endangered species, is restricted to San Francisco, San Pablo and Suisun Bay. Salt  
12 marsh harvest mouse inhabits dense pickleweed stands in tidal and diked coastal salt marshes  
13 bordering San Francisco Bay. Seeds and green vegetation make up the mouse's diet. Habitat for  
14 this small mammal is present in the three salt marshes area adjacent to the San Francisco Bay  
15 network. Pacific Bell Network Segments 26 and 27 and Brisbane lagoon all support dense stands  
16 of pickleweed marsh adjacent to the ROW, but no recent records are known from these sites. The  
17 salt marsh wandering shrew is a federal species of concern that occurs in habitats similar to those  
18 of the salt marsh harvest mouse. This shrew may occur at the same salt marsh areas as salt marsh  
19 harvest mouse.

### 20 *Local Tree Ordinances*

21 Trees that may be protected by local ordinances were documented along the Caltrain right-of-way,  
22 in the Peninsula Backbone Segment, and along the Union Pacific Railroad right-of-way, along the  
23 East Bay Backbone Segment, in the cities of Palo Alto, Atherton and Fremont. Protection afforded  
24 various trees and processes for obtaining permission for potential disturbance or removal varies  
25 between these jurisdictions. The relevant ordinances for the affected jurisdictions are summarized  
26 below.

#### 27 CITY OF PALO ALTO

28 Chapter 8.10 of the Palo Alto Municipal Code (Tree Preservation and Management Regulations)  
29 defines "protected trees" to include coast live oak and valley oak with a trunk diameter greater  
30 than 11.5 inches above normal grade. Removal or work within the dripline (i.e., the perimeter of  
31 the canopy) of these trees requires procurement of a permit from the city. Application for the  
32 permit requires submittal of a tree report for review by the City arborist. Oak trees proposed for  
33 disturbance or removal may require replacement at the discretion of the City arborist.

#### 34 CITY OF ATHERTON

35 Metromedia submitted a Tree Evaluation and Impact Report (Mayne Tree Expert Company 1999)  
36 to the City of Atherton in accordance with local ordinance requirements. The report documented  
37 94 significant trees, including oaks as well as non-native species, along the Caltrain right-of-way in  
38 the City of Atherton. The report also provided recommendations for avoidance of most trees that  
39 could be impacted by the proposed alignment. These included inspection of the cable trench by an  
40 arborist to determine degree of root cutting and removal of trees in weakened or diseased  
41 condition.



1 CITY OF FREMONT

2 Mature trees are defined by the City of Fremont as native or non-native trees greater than four  
3 inches diameter at breast height. Portions of the proposed cable route may extend within the  
4 driplines of mature trees or require complete removal during cable installation or construction.  
5 Permits are typically obtained from the City's Planning Department for the removal of trees  
6 greater than four inches in diameter. As a condition of this permit, removed trees may need to be  
7 replaced at onsite or offsite locations as specified by the City arborist with trees approved under  
8 the City's tree ordinance.

#### 9 **5.4.3.2 Los Angeles Basin Network**

10 The Los Angeles Basin network system totals approximately 193 miles of conduit for fiber optic  
11 cable, as well as utility access vaults and points of presence (POPs), above-ground facilities  
12 housing ancillary equipment. The route traverses predominantly urban and suburban portions of  
13 coastal and inland Los Angeles and Orange Counties. The majority of the network, which would  
14 consist of both underground and aboveground conduit, would be located within public roadways  
15 throughout the Los Angeles Basin network route. All POPs along the Los Angeles network route  
16 are proposed for housing within existing buildings and no biological resources would be affected.  
17 Specific jurisdictions and roadways traversed by the proposed network are identified in Chapter 3,  
18 Project Description. The Los Angeles network route is mapped in figures contained in Appendix  
19 A, GIS Route Maps.

20 Each segment of the Los Angeles network route, with respect to associated land use and the  
21 presence or absence of sensitive biological resources, is discussed below. The order in which the  
22 segments are discussed corresponds to the order in which the network route maps are presented in  
23 the previously referenced Appendix A of this document. The plant communities found in the Los  
24 Angeles Basin network project study area are described in more detail following the segment  
25 descriptions. A table summarizing stream crossings along the network route follows plant  
26 community characterizations.

#### 27 *Los Angeles Basin Network Segments*

##### 28 PASADENA LOCAL SEGMENT

29 *General Description.* This 4.2-mile segment is located in northeast Pasadena and a portion of the  
30 unincorporated County of Los Angeles community of Altadena, and traverses relatively densely  
31 developed commercial and single-family residential neighborhoods. The segment begins at the  
32 Foothill (210) Freeway and travels north along Los Robles and Lake Avenues, and east along  
33 Washington Boulevard, terminating at New York Drive in the vicinity of Eaton Canyon Reservoir.  
34 The segment is planned for location within the public roadways throughout its length. Vegetation  
35 along the roadways is limited to street trees and occasional planter strips in commercially  
36 developed areas, and typical residential landscaping in residential neighborhoods. A portion of  
37 this segment skirts Eaton Canyon Reservoir along New York Drive, and crosses Eaton Canyon  
38 Wash (above- and below-ground channels). The above-ground portion of the wash retains a dirt  
39 (i.e., sand and cobble) bottom contained within earthen levees and supports sparse mulefat scrub.

40 *Sensitive Habitats and Species.* No sensitive habitats or species are located along, or in proximity to,  
41 the planned network alignment. Eaton Canyon Wash and reservoir contain mulefat scrub,

## 5.4 Biological Resources

---

1 considered a sensitive community by CDFG and threatened with eradication by channelization of  
2 natural waterways and elimination of habitat throughout southern California.

### 3 SANTA MONICA LOCAL SEGMENT

4 *General Description.* This 8.3-mile segment begins in western Santa Monica along Ocean Avenue  
5 and travels northeast through the City of Los Angeles communities of Sawtelle, West Los Angeles  
6 and Rancho Park. The segment travels through a variety of neighborhoods, typically composed of  
7 commercial uses along major boulevards and mixed multi- and single family housing along  
8 adjacent collector streets. Vegetation along or in proximity to this portion of the network route is  
9 limited to street trees throughout commercial districts and typical residential landscaping in  
10 neighborhoods. This segment would be entirely contained within public roadways throughout its  
11 length.

12 *Sensitive Habitats and Species.* No sensitive habitats or species are located along or in proximity to  
13 the planned network alignment.

### 14 GLENDALE LOCAL SEGMENT

15 *General Description.* This 2.4-mile segment is contained within the central business district of the  
16 City of Glendale, forming a small loop traversing Doran Street, Glendale Avenue, Harvard Street  
17 and Central Avenue. Vegetation along the roadways proposed to contain the fiber optic route is  
18 limited to street trees, occasional sidewalk planter strips and similar, typical urban landscaping.  
19 The network route would be entirely located within paved roadways in a developed urban  
20 environment.

21 *Sensitive Habitats and Species.* No sensitive habitats or species are located along or in proximity to  
22 this segment.

### 23 CENTURY CITY LOCAL SEGMENT

24 *General Description.* This segment totals 7.4 miles and extends west from West Olympic Boulevard,  
25 within the City of Los Angeles community of Century City, to West Santa Monica Boulevard at  
26 Wilshire Boulevard, just inside the western city limits of the City of Beverly Hills. The route is  
27 predominantly characterized by densely developed commercial land uses with some multi-family  
28 residential uses, and passes adjacent to the Los Angeles Country Club. Vegetation along the route  
29 includes street trees and occasional planter strips, with denser landscaping associated with the  
30 country club. The network route would be entirely located within public roadways.

31 *Sensitive Habitats and Species.* No sensitive habitats or species are located along or in proximity to  
32 this segment.

### 33 SANTA MONICA TO BURBANK SEGMENT

34 *General Description.* This 22.0-mile segment begins south of the Santa Monica Mountains, in the  
35 City of Los Angeles community of Westwood at Wilshire Boulevard, and extends north through  
36 the Santa Monica Mountains along Beverly Glen Boulevard, in the City of Los Angeles community  
37 of Beverly Glen, and Mulholland Drive. North of the Santa Monica Mountains, the segment turns  
38 east through the City of Los Angeles communities of Sherman Oaks, Van Nuys and North

1 Hollywood and terminates at the western Burbank city limits. The majority of the route passes  
2 through moderate- to high-density single- and multi-family residential neighborhoods in  
3 Westwood, Beverly Glen and Sherman Oaks. Limited commercial development is present in  
4 Beverly Glen, with increasingly dense commercial development in Sherman Oaks, Van Nuys and  
5 North Hollywood. Vegetation along or in proximity to this portion of the network alignment is  
6 limited to street trees and similar, typical urban landscaping. The segment crosses the Los Angeles  
7 River and Tujunga Wash within the City of Glendale; both are channelized for flood control  
8 purposes at the point of crossing and support no riparian vegetation.

9 *Sensitive Habitats and Species.* Steep hillsides bordering periodic stretches of Beverly Glen  
10 Boulevard, which passes through Beverly Glen Canyon, and Mulholland Drive, which traverses  
11 the ridgeline of the Santa Monica Mountains, support coastal sage scrub, chaparral and remnants  
12 of walnut woodland, together with ruderal (weed) species growing along roadway verges and in  
13 vacant lots. The fiber optic route would be contained entirely within public roadways throughout  
14 this segment. This segment would not pass through, or in proximity to, undeveloped open space  
15 or areas supporting native vegetation. Mulholland Drive crosses several unnamed drainages that  
16 are culverted beneath the roadway within the network alignment.

#### 17 MARINA DEL REY LOCAL SEGMENT

18 *General Description.* The segment within the City of Los Angeles community of Marina del Rey  
19 comprises 4.3 miles, and forms a loop beginning and ending at Inglewood Boulevard and  
20 extending west along Culver Boulevard, Lincoln Boulevard and several collector streets. The  
21 segment is entirely contained within public roadways. Culver and Jefferson Boulevards pass  
22 through the planned Playa Vista residential and commercial community, presently under  
23 construction; existing landscape features include the channelized Ballona Creek, associated  
24 remnant Ballona wetlands, open, ruderal fields and a small, operational oilfield. Beyond the Playa  
25 Vista property, the remaining roadways containing this segment are lined with a mix of single-  
26 and multi-family residential uses and commercial and light industrial development.

27 *Sensitive Habitats and Species.* The Ballona Wetlands include undeveloped salt- and freshwater  
28 marsh and upland habitats, formerly fed by the now-channelized Ballona Creek and now largely  
29 dependent upon runoff from the surrounding Westchester Bluffs. Wetlands are considered  
30 sensitive by CDFG and other regulatory and conservation organizations; the Ballona Wetlands  
31 represent the largest remaining intact wetlands in Los Angeles County. Additionally, the  
32 surrounding Westchester Bluffs support coastal sage scrub.

#### 33 LAX/FLORENCE SEGMENT

34 *General Description.* The 12.1-mile LAX-Florence segment begins southeast of Los Angeles  
35 International Airport (LAX) and extends east along El Segundo Boulevard, north along South La  
36 Brea Avenue and east along Florence Avenue to Santa Fe Avenue. The segment crosses the  
37 jurisdictions of the Cities of Hawthorne, Huntington Park and Inglewood, the City of Los Angeles  
38 Harbor-Gateway district bordering the 110 (Harbor) Freeway, and the unincorporated County of  
39 Los Angeles communities of Del Aire and Athens. The area traversed is heavily developed with a  
40 mix of residential, commercial and light and heavy industrial uses, and contains no undeveloped  
41 open space.

## 5.4 Biological Resources

---

1 *Sensitive Habitats and Species.* No sensitive habitats or species are located along or in proximity to  
2 this segment.

3 LAX SEGMENT

4 *General Description.* This 2.1-mile segment is contained within the City of Los Angeles community  
5 of Westchester, immediately adjacent to (east of) LAX. It is entirely contained in public roadways,  
6 including Airport, Sepulveda and Century Boulevards and 96<sup>th</sup> Street. Land uses are  
7 predominantly airport-serving commercial and light industrial uses. No undeveloped or open  
8 space is present along the segment.

9 *Sensitive Habitats and Species.* No sensitive habitats or species are located along or in proximity to  
10 this segment.

11 EL SEGUNDO SEGMENT

12 *General Description.* This 6.9-mile segment is contained within the City of El Segundo and is  
13 entirely contained in public roadways. Land uses are predominantly airport-serving hotels and  
14 corporate parks housing office and light industrial uses, with the Imperial Highway reach of the  
15 segment located immediately adjacent to (south of) the airport. Vegetation is limited to street trees  
16 and ornamental landscaping associated with the hotels and corporate parks.

17 *Sensitive Habitats and Species.* No sensitive habitats or species are located along or in proximity to  
18 this segment.

19 LONG BEACH/DOWNEY SEGMENT

20 *General Description.* This 8.0-mile segment is crosses the jurisdictions of the Cities of Downey,  
21 Bellflower, Lakewood and Long Beach. It is entirely contained within the public roadways of  
22 Bellflower Boulevard and Carson Street and passes through predominantly commercial and light  
23 industrial areas, with scattered single- and multi-family residential uses. The Carson Street portion  
24 of the segment passes adjacent to Heartwell Park and Golf Course. Vegetation along this segment  
25 is limited to street trees and ornamental landscaping.

26 *Sensitive Habitats and Species.* No sensitive habitats or species are located along or in proximity to  
27 this segment.

28 CYPRESS/BUENA PARK SEGMENT

29 *General Description.* This 7.7-mile segment crosses the jurisdictions of the Cities of Buena Park,  
30 Anaheim and Stanton in Orange County. It is entirely contained within the public roadways of  
31 Artesia Boulevard, Knott Avenue and Beach Boulevard, which pass through predominantly  
32 commercial neighborhoods. Knott Avenue crosses the Coyote/Brea Creek, Fullerton Creek and  
33 Carbon Creek flood control channels, all of which are concrete-lined and support little or no  
34 vegetation. Vegetation along this segment

35 *Sensitive Habitats and Species.* No sensitive habitats or species are located along or in proximity to  
36 this segment.

1 FASHION ISLAND SEGMENT

2 *General Description.* The Fashion Island segment is 14.2 miles in length and crosses central and  
3 eastern Irvine north of the San Diego (405) Freeway. The segment extends in an approximate loop  
4 between Culver Boulevard, at the western edge of the residential Woodbridge neighborhood, and  
5 the interchange of the Santa Ana (5) Freeway with the 405 (the “El Toro Y”). The segment is  
6 contained within the major public roadways of Culver Boulevard, Irvine Center Drive, Alton  
7 Parkway and Barranca Parkway, as well as within Technology Drive and Ada Street. The segment  
8 passes through moderate-density single- and multi-family residential neighborhoods, corporate  
9 business parks, scattered commercial development along the major boulevards, and, approaching  
10 the El Toro Y, cultivated and fallow agricultural fields. The segment also crosses the San Diego  
11 Creek Channel, which is channelized in the project area. Vegetation along this segment is limited  
12 to typical residential and urban landscaping.

13 *Sensitive Habitats and Species.* No sensitive habitats or species are located along or in proximity to  
14 this segment.

15 CARSON/COSTA MESA SEGMENT

16 *General Description.* The Carson-Costa Mesa segment is 37 miles in length and crosses numerous  
17 jurisdictions in eastern Los Angeles County and western and central Orange County, including the  
18 Cities of Cypress, Long Beach, and Lakewood in Los Angeles County and the Cities of Los  
19 Alamitos, Cypress, Garden Grove, Westminster, Santa Ana and Irvine in Orange County. The  
20 entire segment is located within densely-developed urban settings, and land uses accordingly  
21 encompass single- and multi-family residential neighborhoods, commercial development, light  
22 and heavy industry, municipal and County parks and golf courses, Long Beach Municipal Airport  
23 and other uses. Vegetation along the network route is entirely limited to street trees and typical  
24 urban ornamental streetscaping and ornamental landscaping typical of residential and park or golf  
25 course settings.

26 Waterways crossed by this segment include the San Gabriel River via Willow Street, in the City of  
27 Long Beach; Coyote Creek Channel via Spring Street/Cerritos Avenue, at the border of Long  
28 Beach in Los Angeles County and Los Alamitos in Orange County; the Anaheim Barber City  
29 Channel and Westminster Channel in Westminster; the East Garden Grove Wintersburg Channel  
30 in Santa Ana; the Santa Ana River in Santa Ana via 1<sup>st</sup> Street; and the Santa Ana Gardens Channel  
31 and Santa Ana Delhi Channel, both in Santa Ana. All waterways are completely channelized  
32 where crossed by the segment and contain little or no vegetation.

33 *Sensitive Habitats and Species.* No sensitive habitats or species are located along or in proximity to  
34 this segment.

35 IRVINE SEGMENT

36 *General Description.* The 17.8-mile Irvine segment begins in the City of Irvine in the area of John  
37 Wayne Airport and the San Diego (405) Freeway, and passes through a mix of airport-adjacent  
38 light industrial and corporate business parks. The remainder of the segment, to the south, is  
39 located in the City of Newport Beach and forms a loop beginning at the intersection of MacArthur  
40 Boulevard and Jamboree Road and extending south toward the Fashion Island mall in the  
41 Newport Center area. The segment crosses through moderate-density residential development,

## 5.4 Biological Resources

---

1 corporate and light industrial parks throughout most of its length. The segment crosses the San  
2 Diego Creek Channel via these roadways as it approaches and discharges into Newport Back Bay.  
3 A portion of the route contained in MacArthur Boulevard also passes adjacent to the UC Natural  
4 Reserve System San Joaquin Freshwater Marsh, in the vicinity of San Diego Creek.

5 *Sensitive Habitats and Species.* The southern portion of the segment crosses San Diego Creek  
6 Channel at its mouth at Newport Back Bay. While the creek is constrained by topography in this  
7 area, it is unchannelized and supports substantial mulefat scrub and willow riparian forest. A  
8 concrete weir beneath the roadway overpasses impounds low flows. Newport Back Bay is a  
9 broad, tidally influenced wetland and shallow water bay. The network segment crosses the creek  
10 via Jamboree Road and MacArthur Boulevard. The UC Natural Reserve property supports  
11 predominantly coastal sage scrub in the vicinity of the network alignment.

### 12 COSTA MESA SEGMENT

13 *General Description.* The 4.3-mile Costa Mesa segment forms a loop east of the South Coast Plaza  
14 mall in the City of Costa Mesa. The segment is entirely contained within public roadways, which  
15 pass through the Town Center commercial area, residential neighborhoods and other commercial  
16 and institutional (school) uses.

17 *Sensitive Habitats and Species.* No sensitive habitats or species are located along or in proximity to  
18 this segment.

### 19 DOWNTOWN LOS ANGELES LOCAL SEGMENT

20 *General Description.* This 12.4-mile segment is entirely contained within the City of Los Angeles's  
21 Central Business District and encompasses an area spanning, and southeast of, the Pasadena (110)  
22 and Hollywood (101) Freeways. This area is densely developed with commercial, industrial and  
23 some multi-family residential uses, as well as freeway rights-of-way and off-ramps. Landscaping  
24 throughout this area is minimal and limited to street trees and the landscaped freeway rights-of-  
25 way.

26 *Sensitive Habitats and Species.* No sensitive habitats or species are located along or in proximity to  
27 this segment.

### 28 *Plant Communities*

#### 29 RUDERAL VEGETATION

30 Areas subject to continual disturbance in southern California frequently support ruderal habitat,  
31 comprising predominantly non-native or weed species. Ruderal habitat along the Los Angeles  
32 Basin network route typically included a high proportion of non-native annual grasses, together  
33 with black mustard (*Brassica nigra*), radish (*Raphanus sativa*), thistle species (*Cirsium* spp.) and other  
34 vegetation. Ruderal habitat provides limited foraging or nesting habitat for generally common,  
35 disturbance-tolerant bird species and small mammals. Ruderal habitat along the network route  
36 was encountered in a variety of settings, including along freeway rights-of-ways, roadway verges,  
37 vacant lots, along the margins of agricultural fields and fallow agricultural lands.

## 1 ORNAMENTAL LANDSCAPING

2 The majority of the network route in the Los Angeles Basin and Orange County passes through  
3 developed urban settings, wherein vegetation is largely limited to street trees and maintained  
4 landscape plantings associated with commercial districts, corporate business parks, public parks  
5 and residential neighborhoods. Such urban landscaping typically provide little habitat for native  
6 wildlife species; accordingly, wildlife diversity in developed urban settings tends to be relatively  
7 low.

## 8 COASTAL SAGE SCRUB

9 Coastal sage scrub or “soft chaparral” is an open, low-growing, shrub-form community found  
10 throughout cismontane California between along coastal plains and low foothills. Coastal scrub is  
11 considered a collection of series by Sawyer and Keeler-Wolfe (1995) differentiated by their  
12 dominant species and species composition, in turn determined by location and other factors.  
13 Generally, dominant species typically included California buckwheat, California sagebrush,  
14 California encelia, purple sage and white sage, conforming to Riversidean and Venturan sage  
15 scrub classifications (Holland, 1986 and 1992 update). Sage scrub is typically accompanied by an  
16 herbaceous understory comprising annual (non-native grasses) and other forbs.

17 Remnant stands of coastal sage scrub were encountered in several locations along the network  
18 route, including along Mulholland Drive and Beverly Glen Boulevard in the Santa Monica  
19 Mountains (Santa Monica to Burbank Segment); the Ballona Wetlands and adjacent Westchester  
20 Bluffs (Marina del Rey Segment); and scattered throughout undeveloped portions of the Fashion  
21 Island Segment.

22 Coastal sage scrub communities are considered sensitive by CDFG, as they support a number of  
23 sensitive species, including the federally listed threatened California gnatcatcher, and the  
24 community’s continued existence is threatened by development of the coastal plain of southern  
25 California.

## 26 RIPARIAN SCRUB

27 Riparian scrub communities in southern California are found along intermittent and perennial  
28 watercourses with a sufficient watershed to support a diversity of riparian species. For purposes  
29 of this analysis, riparian scrub serves as a catch-all phrase encompassing several plant  
30 communities, chiefly southern willow scrub and mulefat scrub, which are successional to riparian  
31 woodland or forest, but which are maintained by continual disturbance (i.e., flooding) in an early  
32 seral stage. A mix of shrub-form mulefat and willows (*Salix* spp.) typically dominate the  
33 community, with an occasional riparian woodland overstory (e.g., western sycamore (*Platanus*  
34 *racemosa*), broadleaf maple (*Acer macrophyllum*) or oaks (*Quercus* spp.), etc.). An herbaceous  
35 understory includes species typical of wetland, emergent marsh, and terrestrial, or upland, plant  
36 communities.

37 Riparian scrub communities serve as habitat for various passerines, waterbirds and amphibians,  
38 and provide a source of water for many wildlife species. Riparian scrub also functions as foraging  
39 and breeding habitat for a variety of wildlife. Species typically associated with this habitat include  
40 bullfrog, black-crowned night heron, green-backed heron, great blue heron and belted kingfisher.

## 5.4 Biological Resources

---

1 Riparian scrub was observed in several locations along the network route, including the Ballona  
2 Wetlands (Marina del Rey Segment); the Los Angeles River in Long Beach (Carson/Costa Mesa  
3 Segment); Eaton Canyon Wash in Pasadena (Pasadena Local Segment); the San Diego Creek  
4 Channel and Newport Back Bay in Newport Beach (Irvine Segment); and the San Diego Creek  
5 Channel in Irvine (Fashion Island Segment).

6 Riparian scrub communities are considered sensitive by CDFG because of the historic and  
7 continuing loss of riparian vegetation from agricultural conversion, urbanization and flood control  
8 development.

### 9 *Freshwater Emergent Marsh*

10 Freshwater marsh occurs wherever year-round, shallow, standing water or soil saturation is  
11 present. It is typically associated with the edges of canals, irrigation ditches, sloughs, some  
12 perennial drainages, springs and riverbanks with a soft substrate, as opposed to concrete lining.  
13 The narrow band of emergent marsh vegetation along canals, ditches, and other drainages  
14 provides some nesting and foraging opportunities and cover for water bird species and small  
15 mammals, including mallards, green-winged teals, great blue heron, great egret, marsh wren, song  
16 sparrow, red-winged blackbird, raccoon and California vole.

17 Freshwater marsh was encountered along the margins of Newport Back Bay (Irvine Segment).  
18 Marsh vegetation was dominated by perennial emergent monocots including cattail and bulrush.  
19 Several small freshwater springs in the areas were observed to support cattails, yerba mansa, water  
20 parsnip and umbrella sedge.

21 Emergent marsh is considered a sensitive community by CDFG and other regulatory and  
22 conservation entities because of historic and continuing loss of wetland habitats from agricultural  
23 conversion, urbanization, and flood control development.

### 24 *Aquatic Habitat*

25 The network route is proposed to cross several large rivers and smaller waterways draining the  
26 Los Angeles Basin. Channelization of these waterways for flood control purposes has eliminated  
27 the majority of aquatic habitat or reduced habitat value. Less disturbed aquatic habitat exists just  
28 upstream of the point at which San Diego Creek discharges into Newport Back Bay (Irvine  
29 Segment). Impounded water retained behind a checkdam under the Jamboree Street overcrossing  
30 supports a warm water fishery, including small-mouth bass.

### 31 *Los Angeles Basin Network Route Stream Crossings*

32 The Los Angeles Basin network route includes a total of 25 crossings of 17 waterways, including  
33 several rivers and smaller drainages courses representing former native streams and manufactured  
34 flood control channels. The stream crossings are identified in Table 5.4-4.



**Table 5.4-4. Los Angeles Basin Network Route Stream Crossings**

<i>Network Segment</i>	<i>Drainage Crossing</i>	<i>Drainage Characteristics and Vegetation</i>	<i>Conduit Construction Method</i>
Pasadena Local Segment	Eaton Canyon Wash via New York Boulevard; 400-foot crossing (Los Angeles Co.)	Aboveground channel reconfigured for flood control; sandy and cobble bed; ephemeral stream; sparse mulefat scrub	Cable to be installed by directional bore
	Eaton Canyon Wash via New York Boulevard (Los Angeles Co.)	Channel underground, concrete-lined	Cable to be installed by directional bore
Santa Monica to Burbank Segment	Los Angeles River via Keston Avenue; 100-foot crossing (Los Angeles Co.)	Perennial flow contained within concrete-lined flood control channel; no riparian vegetation	Cable to be installed by directional bore
	Tujunga Wash via Van Houten Avenue; 40-foot crossing (Los Angeles Co.)	Perennial flow contained within concrete-lined flood control channel; no riparian vegetation	Cable to be installed by directional bore
Cypress/Buena Park Segment	Fullerton Creek Channel via Knott Avenue; 30-foot crossing (Orange Co.)	Perennial flow contained within concrete-lined flood control channel; no vegetation	Cable to be installed by directional bore
	Carbon Creek Channel via Knott Avenue; 15-foot crossing (Orange Co.)	Perennial flow contained within concrete-lined flood control channel; no vegetation	Cable to be installed by directional bore
Fashion Island Segment	San Diego Creek via Laguna Canyon Road and Alton Parkway; two crossings totaling 100 feet	Intermittent flow contained within concrete-lined flood control channel; no vegetation	Cable to be installed by directional bore
	Agua Chinon Wash via Alton and Barranca Parkways; two crossings (Orange Co.)	Intermittent flow contained within concrete-lined flood control channel; no vegetation	Cable to be installed by directional bore
	Bee Canyon (alt: Borrego Canyon) Wash via Irvine Center Drive and Alton and Barranca Parkways; three crossings (Orange Co.)	Intermittent flow contained within concrete-lined flood control channel; no vegetation	Cable to be installed by directional bore
	Peters Canyon Wash/San Diego Creek Channel via Alton and Barranca Parkways; two crossings	Intermittent flow contained within concrete-lined flood control channel; no vegetation	Cable to be installed by directional bore

**Table 5.4-4. Los Angeles Basin Network Route Stream Crossings**

<i>Network Segment</i>	<i>Drainage Crossing</i>	<i>Drainage Characteristics and Vegetation</i>	<i>Conduit Construction Method</i>
Carson/Costa Mesa Segment	Los Angeles River via Willow Avenue; 100-foot crossing (Los Angeles Co.)	Perennial flow contained within concrete-lined flood control channel; limited mulefat scrub	Cable to be installed by directional bore
	Unnamed drainage via East Atherton Street and North Greenbrier Road; 15-foot crossing (Los Angeles Co.)	Intermittent flow contained within concrete-lined channel (presumed storm drain); no vegetation present	Cable to be installed by directional bore
	Unnamed drainage via Carson Avenue, adjacent to Heartwell Park; 20-foot crossing (Los Angeles Co.)	Intermittent flow contained within concrete-lined channel (presumed storm drain); no vegetation present	Cable to be installed by directional bore
	San Gabriel River via Spring Street (Los Angeles Co.)	Intermittent flow contained within concrete-lined flood control channel; no vegetation	Cable to be installed by directional bore
	Coyote Creek Channel via Cerritos Avenue (Orange Co.)	Intermittent flow contained within concrete-lined flood control channel; no vegetation	Cable to be installed by directional bore
	East Garden Wintersburg Channel via East First Street (Orange Co.)	Underground concrete-lined storm drain channel	Cable to be installed by directional bore
	Santa Ana River via East First Street; 250-foot crossing (Orange Co.)	Perennial flow contained within concrete-lined flood control channel; no vegetation	Cable to be installed by directional bore
	Lane Channel via Red Hill Avenue; 6-foot crossing (Orange Co.)	Perennial flow contained within riprap-lined channel; no vegetation	Cable to be installed by directional bore
Irvine Segment	San Diego Creek near Newport Back Bay at Jamboree Street and MacArthur Boulevard; two crossings @200 feet each (Orange Co.)	Unlined perennial creek supporting riparian scrub (willow and mulefat scrub), freshwater marsh and aquatic habitat	Cable to be installed by directional bore
<i>Sources: ESA, April 2000 and SAIC, June 2000.</i>			