STAFF REPORT

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PRC 3968.9
PRC 3949.9
S 10 M. Hays

GENERAL LEASE – PUBLIC AGENCY USE

APPLICANT:

Santa Clara Valley Water District

PROPOSED LEASE:

AREA, LAND TYPE, AND LOCATION:

Sovereign land in the Lower Guadalupe River and the historic bed of Alviso Slough and Steamboat Slough between Montague Expressway and the Alviso Marina County Park, near San Jose, Santa Clara County.

AUTHORIZED USE:

Continued use for flood protection and maintenance management purposes, which include bank stabilization, sediment removal, vegetation management, and routine maintenance activities.

LEASE TERM:

25 years, beginning June 19, 2017.

CONSIDERATION:

Public use and benefit, with the State reserving the right at any time to set a monetary rent if the Commission finds such action to be in the State's best interests.

SPECIFIC LEASE PROVISIONS:

1. Lessee agrees to be bound by and fully carry out, implement, and comply with all mitigation measures and reporting obligations identified as Lessee's, or Responsible Party's responsibility as set forth in the Mitigation Monitoring Program (MMP) attached as Exhibit C and by reference made a part of the Lease, or as modified by Lessor as permitted by law.

2. The Lease provides that within 60 days of the end of each year's maintenance season, the Lessee shall submit to the Lessor the Post-Construction Report which shall include a summary of the year's

maintenance projects, describing what activities occurred on the Lease Premises.

STAFF ANALYSIS AND RECOMMENDATION:

Authority:

Public Resources Code sections 6005, 6216, 6301, 6501.1, and 6503; California Code of Regulations, title 2, sections 2000 and 2003.

Public Trust and State's Best Interests Analysis:

The common law Public Trust Doctrine protects the public's right to use California's sovereign land for navigation, fishing, access, water dependent recreation, visitor-serving facilities, preservation of lands in a natural state to protect scenic and wildlife habitat values, as well as to take actions to protect and preserve those lands. The Commission's responsibility as trustee of Public Trust lands is to determine whether a particular public or private use, whether proposed or existing, is consistent with the Public Trust needs and values for the lands and waters involved.

The Santa Clara Valley Water District (SCVWD) has applied for a new lease that will combine two leases, as described below, into a single lease to continue long-term flood control management and maintenance activities in the river channel pursuant to its Stream Maintenance Program (SMP).

On May 23, 1968, the Commission approved a General Permit – Public Agency Use, PRC 3949.9, to the Santa Clara County Flood Control and Water District (now SCVWD) for the construction, operation and maintenance of a flood control channel in the Lower Guadalupe River between Montague Expressway and the Southern Pacific Railroad crossing at Alviso (Item C07, May 23, 1968). The lease expired on May 22, 2017.

On June 19, 1968, the Commission approved a General Permit – Public Agency Use, PRC 3968.9, to Santa Clara County Flood Control and Water District for the construction, operation, and maintenance of a flood control channel in the lower reach of the Lower Guadalupe River from the Southern Pacific Railroad crossing to the end of Mill Street in Alviso (now the Alviso Marina County Park) (Item C26, June 19, 1968). On February 23, 1984, the Commission approved an amendment to PRC 3968.9 to add an additional parcel for the construction of a cutoff levee and widening and raising an existing levee for additional flood protection between the Southern Pacific Railroad crossing and the Alviso Marina (Item C02, February 23, 1984). The lease expired on June 18, 2017.

The SMP is a long-term program adopted in 2001 and started in 2002 to define and improve management and maintenance of flood control channels and streams under SCVWD authority. The SMP initially used a 20-year planning horizon and was updated in 2012 for the 10-year period from 2012 through 2022. The SMP is ongoing and the time limit is indefinite with anticipated updates during the term of the lease. The lease includes a provision that any additional documentation prepared to update or modify the SMP, at the end of 2022 or during the term of the lease, must be submitted to the Commission for review, consistent with the Commission's role as a California Environmental Quality Act (CEQA) responsible and trustee agency for activities within the lease premises. In addition, the lease includes an acknowledgment that the lease premises are subject to the Public Trust and the management and maintenance activities authorized in the lease shall not interfere or limit the Public Trust rights of the public.

Climate Change:

Climate change impacts, including sea-level rise, more frequent and intense storm events, and increased flooding and erosion, affect both open coastal areas and inland waterways in California. The lease area is in a tidally influenced site consisting of shallow coastal areas already vulnerable to flooding at current sea levels. The updated SMP would remove sediment and manage vegetation to maintain the hydraulic, safety, and habitat functions of the river; allow for levee inspections and maintenance access; stabilize the bed and banks of the river to protect existing infrastructure, maintain public safety, reduce sediment loading, and protect water quality and habitat values; and avoid, minimize, or mitigate impacts on the environment by incorporating stream stewardship measures into maintenance activities.

Based upon the National Research Council's 2012 data, the region could see up to 1 foot of sea-level rise (from year 2000 levels) by 2030, 2 feet by 2050, and possibly more than 5 feet by 2100. Rising sea levels can lead to more frequent flood inundation in low-lying areas and larger tidal events. In addition, as stated in *Safeguarding California* (California Natural Resources Agency 2014), climate change is projected to increase the frequency and severity of natural disasters related to flooding and storms (especially when coupled with sea-level rise).

In the SMP's Subsequent Environmental Impact Report (SEIR), the SCVWD agrees that global climate change and sea-level rise have the potential to affect waterways and associated shoreline habitat, and that necessitate changes in their approach to maintenance and flood

management in the lower portions of its maintenance reaches. However, as of February 2012 (when the SEIR was approved), SCVWD was not aware of any information that suggested that sea-level rise was an issue of concern for stream maintenance within the current 10-year phase of the program.

In tidally influenced waterways, more frequent and powerful storms can result in increased flooding conditions and damage from storm-created debris. Climate change and sea-level rise will further influence coastal and riverine areas by changing erosion and sedimentation rates. Near-coastal riverine areas will be exposed to increased wave force and run up, potentially resulting in greater bank and/or levee erosion than previously experienced. In tidally influenced waterways, flooding and storm flow will likely increase scour, decreasing bank stability and structure. The combination of these projected conditions could increase the likelihood of damage to any structures within the lease premises during the term of the lease.

The SCVWD favors the use of soft bank stabilization approaches that use bio-technological approaches in place of methods that create hardened banks. However, per the SMP, repairs may take several forms from installing hard structures (e.g., concrete, sack concrete) to soft structures (e.g., willow brush mattresses, log crib walls, pole-plantings) or a combination (hybrid) of hard and soft structures. Bank stabilization also includes preventative maintenance to reduce the chances of banks eroding in the future. Such bank stabilization can potentially balance sediment and improve water quality, and also reduce flood impacts to the upland parcels.

The lease includes an acknowledgment that the lease premises may be subject to the effects of sea-level rise and may require additional maintenance or protection as a result, for which the lessee agrees to be solely responsible.

Conclusion:

For all the reasons above, staff believes the issuance of a lease is consistent with the common law Public Trust Doctrine and will not substantially interfere with Public Trust needs at this location, at this time, and for the foreseeable term of the proposed lease, and is in the best interests of the State.

OTHER PERTINENT INFORMATION:

1. This action is consistent with Strategy 1.1 of the Commission's Strategic Plan to deliver the highest levels of public health and safety in the protection, preservation and responsible economic use of the lands and resources under the Commission's jurisdiction and with Strategy 1.4 to incorporate strategies to address climate change, adapt to sea-level rise, incentivize water conservation, and reduce greenhouse gas emissions and the generation of litter and marine debris into all the Commission's planning processes, project analyses and decisions.

2. A SEIR, State Clearinghouse No. 2000102055, was prepared for this project by the Santa Clara Valley Water District and certified on February 14, 2012. Commission staff has reviewed such document and the Mitigation Monitoring Program, contained in Exhibit C, Attachments C-1 and C-2, attached hereto, prepared pursuant to the provisions of the CEQA (Pub. Resources Code, § 21081.6) and adopted by the lead agency.

   Findings and a Statement of Overriding Considerations made in conformance with the State CEQA Guidelines (Cal. Code Regs., tit. 14, §§ 15091, 15093, and 15096) are contained in Exhibit D, attached hereto.

3. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code section 6370 et seq., but such activity will not affect those significant lands. Based upon staff's consultation with the persons nominating such lands and through the CEQA review process, it is staff's opinion that the project, as proposed, is consistent with its use classification.

APPROVALS OBTAINED:

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
National Marine Fisheries Service
Central Coast Regional Water Quality Control Board
San Francisco Regional Water Quality Control Board
California Department of Fish and Wildlife
Bay Conservation and Development Commission

FURTHER APPROVALS REQUIRED:

None

EXHIBITS:

A. Land Description
B. Site and Location Map
C. Mitigation Monitoring Program
D. Findings and Statement of Overriding Considerations

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Find that an SEIR, State Clearinghouse No. 2000102055, was prepared for this Project by the Santa Clara Valley Water District and certified on February 14, 2012, and that the Commission has reviewed and considered the information contained therein; that in the Commission's independent judgement, the scope of activities to be carried out under the lease to be issued by this authorization have been adequately analyzed; that none of the events specified in Public Resources Code section 21166 or the State CEQA Guidelines section 15162 resulting in any new or substantially more severe significant impact has occurred; and, therefore no additional CEQA analysis is required.

Adopt the Mitigation Monitoring Program, as contained in Exhibit C, attached hereto.

Adopt the Findings and a Statement of Overriding Considerations, made in conformance with California Code of Regulations, title 14, sections 15091, 15093, and 15096, subdivision (h), as contained in Exhibit D, attached hereto.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

Find that the proposed lease will not substantially impair the public rights to navigation and fishing or substantially interfere with the Public Trust needs and values at this location, at this time, or for the foreseeable term of the lease, is consistent with the common law Public Trust Doctrine, and is in the best interests of the State.

SIGNIFICANT LANDS INVENTORY FINDING:

Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

AUTHORIZATION:

Authorize issuance of a General Lease – Public Agency Use to the Applicant beginning June 19, 2017, for a term of 25 years, for flood protection and maintenance management purposes, which include bank stabilization, sediment removal, vegetation management, and routine maintenance activities, as described on Exhibit A and as shown on Exhibit B (for reference purposes only) attached and by this reference made a part hereof; consideration being the public use and benefit, with the State reserving the right, at any time, to set a monetary rent as specified in the lease if the Commission finds such action to be in the State's best interests.

EXHIBIT A

LAND DESCRIPTION

PRC 3968.9

PORTIONS OF LAND OF THE STATE OF CALIFORNIA CONSISTING OF TIDE AND SUBMERGED LANDS AND UNSOLD SWAMP AND OVERFLOWED LANDS LYING WITHIN OR ADJACENT TO THE BEDS OF THE GUADALUPE RIVER, THE ALVISO SLOUGH, AND STEAMBOAT SLOUGH, WITHIN THE CITY OF SAN JOSE (FORMERLY THE TOWN OF ALVISO), COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

PARCEL 1

BEGINNING AT THE INTERSECTION OF THE WESTERLY PROLONGATION OF THE SOUTHERLY LINE OF TAYLOR STREET (75.00 FEET WIDE AS SHOWN ON THE RECORD OF SURVEY FILED IN BOOK 324 OF MAPS AT PAGE 51, IN THE OFFICE OF THE RECORDER, SANTA CLARA COUNTY) WITH THE GENERAL EASTERLY LINE OF THE LANDS OF THE SANTA CLARA VALLEY WATER DISTRICT, AS DESCRIBED IN THAT CERTAIN GRANT DEED RECORDED ON SEPTEMBER 30, 2008 IN DOCUMENT NUMBER 20001451, IN THE OFFICE OF THE RECORDER, COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, INTERSECTING THE COURSE OF SAID GENERAL EASTERLY LINE WHICH BEARS S16°17'19"W 51.49 FEET, SAID GENERAL EASTERLY LINE OF THE LANDS OF THE SANTA CLARA VALLEY WATER DISTRICT ALSO BEING THE LEFT (WESTERLY) BANK OF ALVISO SLOUGH;

THENCE NORTHERLY ALONG SAID LEFT (WESTERLY) BANK OF ALVISO SLOUGH THE FOLLOWING SEVEN (7) COURSES:
1) N16°18'25"E (N16°19'31"E PER DOCUMENT NUMBER 20001451) 5.35 FEET;
2) N88°14'25"E (N88°13'19"E PER DOCUMENT NUMBER 20001451) 126.71 FEET;
3) N52°19'25"E (N52°18'19"E PER DOCUMENT NUMBER 20001451) 104.27 FEET;
4) N18°53'35"W (N18°54'41"W PER DOCUMENT NUMBER 20001451) 611.12 FEET;
5) N29°32'35"W (N29°33'41"W PER DOCUMENT NUMBER 20001451) 131.99 FEET;
6) N68°00'35W" (N68°01'41"W PER DOCUMENT NUMBER 20001451) 313.48 FEET;
7) N43°39'35"W (N43°40'41"W PER DOCUMENT NUMBER 20001451) 329.98 FEET TO THE MOST NORTHERLY CORNER OF SAID LANDS OF THE SANTA CLARA VALLEY WATER DISTRICT;

THENCE ALONG THE NORTHEASTERLY LINE OF THE LANDS OF THE UNITED STATES OF AMERICA AS DESCRIBED IN DOCUMENT NUMBER 16865920, SANTA CLARA COUNTY RECORDS, N49°51'09"W 89.05 FEET;

THENCE LEAVING SAID NORTHEASTERLY LINE OF SAID LANDS OF THE UNITED STATES, CROSSING THE ALVISO SLOUGH, N51°30'45"E 352 FEET +/- TO A POINT SHOWN AS "4176" ON THAT CERTAIN RECORD OF SURVEY FILED IN BOOK 378 OF MAPS AT PAGE 52, SANTA CLARA COUNTY RECORDS, AND ALSO SHOWN AS "4985" ON THE RECORD OF SURVEY FILED IN BOOK 380 OF MAPS AT PAGE 26, SANTA CLARA COUNTY RECORDS;

EXHIBIT A
(CONTINUED)

THENCE ALONG THE GENERAL NORTHERLY LINES OF STEAMBOAT SLOUGH PER THE DECREE QUIETING TITLE, S.C.C.NO. 41492, DATED SEPTEMBER 19, 1932, AND AS SHOWN ON SAID RECORD OF SURVEY FILED IN BOOK 380 OF MAPS AT PAGE 26, N50°07'11"E 105.62 FEET (RECORD: N50°07'11"E 105.62 FEET);

THENCE S61°17'49"E 374.91 FEET ALONG A LINE WHICH BEARS "S61°17'49"E 413.38 FEET" AS SHOWN ON SAID RECORD OF SURVEY,

THENCE S37°24'03"W 90.64 FEET TO A CAST ALUMINUM MONUMENT NUMBER "177" ALSO BEING SHOWN AS "POINT 5109", BOTH BEING SHOWN ON THE GENERAL SOUTHWESTERLY BANK OF STEAMBOAT SLOUGH ON THAT CERTAIN RECORD OF SURVEY FILED IN BOOK 380 OF MAPS AT PAGE 26, SANTA CLARA COUNTY RECORDS;

THENCE ALONG THE GENERAL SOUTHWESTERLY BANK OF STEAMBOAT SLOUGH AND THE NORTHEASTERLY BANK OF ALVISO SLOUGH (GUADALUPE RIVER) AS DESCRIBED IN THE BOUNDARY LINE SETTLEMENT AGREEMENT BETWEEN THE STATE OF CALIFORNIA AND FLORENCE L. COMFORT, DATED NOVEMBER 11, 1977, FILED AS BLA 165 IN THE OFFICES OF THE CALIFORNIA STATE LANDS COMMISSION, AND RECORDED IN BOOK D 418 AT PAGE 185, OFFICIAL RECORDS OF SANTA CLARA COUNTY, AND AS SHOWN ON SAID RECORD OF SURVEY, FILED IN BOOK 380 OF MAPS AT PAGE 26, THE FOLLOWING THIRTY (30) COURSES:

1) N53°00'00"W 135.89 FEET;
2) N82°15'15"W 17.98 FEET;
3) N71°49'34"W 27.77 FEET;
4) N73°25'39"W 32.41 FEET;
5) N76°21'19"W 45.01 FEET;
6) N73°42'02"W 20.93 FEET;
7) N87°46'07"W 25.05 FEET;
8) S73°40'35"W 24.26 FEET;
9) S35°37'51"W 23.70 FEET;
10) S30°35'55"W 42.37 FEET;
11) S19°53'05"W 32.96 FEET;
12) S22°42'31"W 30.32 FEET;
13) S00°00'39"W 24.04 FEET;
14) S48°38'58"E 16.38 FEET;
15) S29°41'12"E 22.89 FEET;
16) S24°06'04"E 21.27 FEET;
17) S31°48'41"E 20.54 FEET;
18) S35°48'21"E 16.04 FEET;
19) S40°35'33"E 26.52 FEET;
20) S42°27'56"E 25.32 FEET;
21) S38°10'38"E 17.33 FEET;
22) S17°22'46"E 18.23 FEET;
23) S21°28'38"E 11.34 FEET;
24) S61°57'25"E 16.01 FEET;

25) S51°52’24”E 20.06 FEET;
26) S71°14’14”E 23.94 FEET;
27) S72°55’41”E 24.01 FEET;
28) S69°49’21”E 32.59 FEET;
29) S61°16’10”E 20.38 FEET TO A CAST ALUMINUM MONUMENT NUMBER “178” AS SHOWN ON SAID RECORD OF SURVEY, FILED IN BOOK 380 OF MAPS AT PAGE 26;
30) N69°17’40”E 9.44 FEET;
THENCE CONTINUING ALONG THE NORTHEASTERLY BANK OF THE ALVISO SLOUGH AS DESCRIBED IN THE BOUNDARY LINE SETTLEMENT AGREEMENT BETWEEN THE STATE OF CALIFORNIA AND JACK W. RUBY, DATED MAY 2, 1977, FILED AS BLA 155 IN THE OFFICES OF THE CALIFORNIA STATE LANDS COMMISSION, AND AS SHOWN ON SAID RECORD OF SURVEY FILED IN BOOK 380 OF MAPS AT PAGE 26 THE FOLLOWING TWENTY ONE (21) COURSES:
1) N69°17’40”E 16.35 FEET
2) N75°45’50”E 15.63 FEET;
3) N25°36’20”E 17.95 FEET;
4) N84°01’34”E 19.01 FEET;
5) N83°30’12”E 16.78 FEET;
6) S49°33’29”E 15.06 FEET;
7) S05°32’14”E 16.59 FEET;
8) S04°00’31”W 29.17 FEET;
9) S06°19’08”E 18.93 FEET;
10) S22°12’47”E 11.93 FEET;
11) S51°02’27”E 20.91 FEET;
12) S50°58’59”E 47.15 FEET;
13) S53°27’57”E 6.41 FEET;
14) S15°49’04”E 11.83 FEET;
15) S17°09’41”E 15.84 FEET;
16) S47°22’31”E 20.50 FEET;
17) S42°03’07”E 25.81 FEET;
18) S49°50’17”E 15.82 FEET;
19) S27°07’28”E 22.96 FEET;
20) S48°33’54”E 19.84 FEET;
21) S26°36’12”E 19.96 FEET TO A POINT WHICH BEARS N88°47’06”W 24.21 FEET FROM A CAST ALUMINUM MONUMENT NUMBER “164” AS SHOWN ON SAID RECORD OF SURVEY FILED IN BOOK 380 OF MAPS AT PAGE 26;

THENCE S88°47’06”E ALONG THE SOUTHERLY LINE OR THE PROJECTION THEREOF OF THE LANDS OF THE UNITED STATES OF AMERICA COMPRISING AN EASEMENT TO THE SANTA CLARA VALLEY WATER DISTRICT AS RECORDED IN DOCUMENT NUMBER 7949444, SANTA CLARA COUNTY RECORDS, TO THE RIGHT (EASTERLY) BANK OF ALVISO SLOUGH (GUADALUPE RIVER);

THENCE IN A GENERALLY SOUTHERLY DIRECTION ALONG THE RIGHT (EASTERLY) BANK

OF ALVISO SLOUGH (GUADALUPE RIVER) 850 FEET, MORE OR LESS TO THE WESTERLY PROLONGATION OF THE SOUTHERLY LINE OF SAID TAYLOR STREET (75.00 FEET WIDE) AS SHOWN ON SAID RECORD OF SURVEY FILED IN BOOK 324 OF MAPS AT PAGE 51;

THENCE ALONG SAID WESTERLY PROLONGATION OF THE SOUTHERLY LINE OF SAID TAYLOR STREET, N89°03'27"W, 400 FEET, MORE OR LESS TO THE **POINT OF BEGINNING.**

CONTAINING 7 ACRES OF LAND, MORE OR LESS

BASIS OF BEARINGS PARCEL 1

BEARINGS ARE BASED ON THE LINE BETWEEN POINT 3904 AND POINT 3903 HAVING THE BEARING OF S61°17'49"E AS SHOWN ON THAT CERTAIN RECORD OF SURVEY FILED IN BOOK 380 OF MAPS AT PAGE 26, IN THE OFFICE OF THE RECORDER, SANTA CLARA COUNTY, STATE OF CALIFORNIA.

PARCEL 2

COMMENCING AT THE CENTERLINE INTERSECTION OF EL DORADO STREET (80.00 FEET WIDE) AND TAYLOR STREET (75.00 FEET WIDE), AS SHOWN ON THE RECORD OF SURVEY FILED IN BOOK 515 OF MAPS AT PAGE 31, IN THE OFFICE OF THE RECORDER, SANTA CLARA COUNTY, STATE OF CALIFORNIA;

THENCE ALONG THE CENTERLINE OF SAID TAYLOR STREET, N89°03'10" W 40.00 FEET;

THENCE LEAVING SAID CENTERLINE OF TAYLOR STREET ALONG THE WESTERLY LINE OF SAID EL DORADO STREET, S00°56'50"W 274.45 FEET TO THE **POINT OF BEGINNING**;

THENCE CONTINUING ALONG SAID WESTERLY LINE OF SAID EL DORADO STREET AND ITS PROLONGATION, S00°56'50"W 537.75 FEET;

THENCE LEAVING SAID LINE, S50°24'28"E 28.61 FEET;

THENCE ALONG A CURVE TO THE LEFT, WITH A RADIUS OF 559.98 FEET, THROUGH A CENTRAL ANGLE OF 29°00' 00", FOR AN ARC DISTANCE OF 283.43 FEET;

THENCE (NON-TANGENT TO LAST MENTIONED CURVE) S10°04'54"W 480.02 FEET;

THENCE N78°15'05"W 105.13 FEET;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 845.00 FEET, THROUGH A CENTRAL ANGLE OF 68°25'24", FOR AN ARC DISTANCE OF 1,009.11 FEET;

THENCE N09°49’41”W 58.91 FEET;

THENCE N23°01’10”W 437.30 FEET;

THENCE N23°01’10”W 251.14 FEET TO THE WESTERLY PROLONGATION OF THE SOUTHERLY LINE OF SAID TAYLOR STREET;

THENCE ALONG SAID WESTERLY PROLONGATION, S89°03’10”E 576.61 FEET TO THE NORTHEASTERLY LINE OF THE LANDS OF THE SANTA CLARA VALLEY WATER DISTRICT (FORMERLY SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT) AS DESCRIBED IN THAT CERTAIN GRANT DEED RECORDED ON OCTOBER 5, 1962 IN DOCUMENT NUMBER 2272298 OF OFFICIAL RECORDS, IN THE OFFICE OF THE RECORDER, SANTA CLARA COUNTY;

THENCE ALONG SAID NORTHEASTERLY LINE THE FOLLOWING FIVE (5) COURSES:
1) S59°02’10”E 46.95 FEET;
2) S45°44’04”E 110.32 FEET;
3) S62°23’36”E 123.00 FEET;
4) S43°36’10”E 58.00 FEET;
5) S20°51’16”E 41.74 FEET TO THE **POINT OF BEGINNING.**

CONTAINING 19 ACRES OF LAND, MORE OR LESS.

BASIS OF BEARINGS PARCEL 2

BEARINGS ARE BASED ON AND IDENTICAL TO THOSE OF PARCEL 1 AS DESCRIBED IN BOOK M823 OF OFFICIAL RECORDS AT PAGE 1349, OFFICE OF THE RECORDER, SANTA CLARA COUNTY, STATE OF CALIFORNIA.

PARCEL 3

PORTIONS OF THE LANDS WITHIN THE SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT PROJECT AS SHOWN ON THAT CERTAIN MAP DESIGNATED AS “MAP AND GENERAL CONSTRUCTION PLANS OF GUADALUPE RIVER UNIT 1, FROM MONTAGUE ROAD TO ALVISO SLOUGH”, DATED APRIL 26, 1963, AND FILED IN THE OFFICE OF THE COUNTY ENGINEER, COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, MAP FILE NO. 15022, TO WIT:

COMMENCING AT THE CENTERLINE INTERSECTION OF EL DORADO STREET AND MOFFAT STREET AS SHOWN ON SAID MAP;

THENCE FROM SAID **POINT OF COMMENCEMENT** ALONG THE CENTERLINE OF EL DORADO STREET SOUTH 00°58’30” WEST, 95.03 FEET TO A POINT ON THE NORTHERLY LINE OF SAID LANDS;

THENCE ALONG A NON-TANGENT CURVE TO THE LEFT FROM A TANGENT BEARING SOUTH 57°30’48” EAST, WITH A RADIUS OF 559.98 FEET THROUGH A CENTRAL ANGLE OF 21°53’40” FOR AN ARC DISTANCE OF 213.99 FEET TO THE **POINT OF BEGINNING** OF THIS DESCRIPTION;

THENCE ALONG THE NORTHERLY LINE AND EASTERLY LINE OF SAID LANDS SOUTH 79°24’28” EAST 1,254.46 FEET;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 1,765.50 FEET THROUGH A CENTRAL ANGLE OF 66°52’14” FOR AN ARC DISTANCE OF 2,060.54 FEET;

THENCE SOUTH 12°32’14” EAST 358.31 FEET;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 825.00 FEET THROUGH A CENTRAL ANGLE OF 21°47’13” FOR AN ARC DISTANCE OF 313.71 FEET;

THENCE SOUTH 34°19’27” EAST 2,983.95 FEET;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 1,035.00 FEET, THROUGH A CENTRAL ANGLE OF 32°00’09” FOR AN ARC DISTANCE OF 578.10 FEET;

THENCE SOUTH 66°19’36” EAST 692.32 FEET;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 3,280.00 FEET THROUGH A CENTRAL ANGLE OF 23°16’26” FOR AN ARC DISTANCE OF 1,332.36 FEET, TO A POINT OF COMPOUND CURVATURE;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 2,495.00 FEET, THROUGH A CENTRAL ANGLE OF 17°25’37” FOR AN ARC DISTANCE OF 758.87 FEET TO A POINT OF REVERSED CURVATURE;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 1,335.00 FEET, THROUGH A CENTRAL ANGLE OF 29°17’03” FOR AN ARC DISTANCE OF 682.33 FEET;

THENCE SOUTH 54°54’36” EAST, 183.64 FEET;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS 1,660.00 FEET, THROUGH A CENTRAL ANGLE OF 17°18’26” FOR AN ARC DISTANCE OF 501.43 FEET TO A POINT OF REVERSED CURVATURE;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 1,490.00 FEET, THROUGH A

CENTRAL ANGLE OF 11°33’29” FOR AN ARC DISTANCE OF 300.57 FEET;

THENCE SOUTH 49°09’39” EAST, 164.80 FEET;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 137.11 FEET, THROUGH A CENTRAL ANGLE OF 6°56’42” FOR AN ARC DISTANCE OF 16.62 FEET TO A POINT OF COMPOUND CURVATURE;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 1,500.00 FEET, THROUGH A CENTRAL ANGLE OF 17°36’03” FOR AN ARC DISTANCE OF 460.79 FEET;

THENCE SOUTH 73°42’24” EAST, 164.80 FEET;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 147.10 FEET, THROUGH A CENTRAL ANGLE OF 6°56’42” FOR AN ARC DISTANCE OF 17.83 FEET TO A POINT OF COMPOUND CURVATURE;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 1,510.00 FEET, THROUGH A CENTRAL ANGLE OF 18°31’44” FOR AN ARC DISTANCE OF 488.32 FEET TO A POINT OF REVERSED CURVATURE;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 640.00 FEET THROUGH A CENTRAL ANGLE OF 115°41’36” FOR AN ARC DISTANCE OF 1,292.31 FEET TO A POINT OF REVERSED CURVATURE;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 1,360.00 FEET THROUGH A CENTRAL ANGLE OF 46°53’25” FOR AN ARC DISTANCE OF 1,113.01 FEET;

THENCE (NON-TANGENT TO LAST MENTIONED CURVE) SOUTH 16°30’00” EAST, 121.19 FEET, TO A POINT ON THE CENTERLINE OF MONTAGUE ROAD, FROM WHICH SAID POINT THE CENTERLINE INTERSECTION OF MONTAGUE ROAD AND SAN JOSE ALVISO ROAD BEARS NORTH 65°51’37” EAST 1,375.09 FEET;

THENCE ALONG SAID CENTERLINE OF MONTAGUE ROAD SOUTH 65°51’37” WEST, 58.76 FEET;

THENCE NORTH 68°44’51” WEST, 47.24 FEET;

THENCE SOUTH 63°16’04” WEST, 162.77 FEET;

THENCE ALONG A NON-TANGENT CURVE TO THE RIGHT FROM A TANGENT BEARING NORTH 32°39’36” WEST WITH A RADIUS OF 1,640.00 FEET, THROUGH A CENTRAL ANGLE OF 49°10’22” FOR AN ARC DISTANCE OF 1,407.49 FEET TO A POINT OF REVERSED CURVATURE;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 360.00 FEET, THROUGH A CENTRAL ANGLE OF 115°41’36” FOR AN ARC DISTANCE OF 726.92 FEET TO A POINT OF REVERSED CURVATURE;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 1,790.00 FEET, THROUGH A CENTRAL ANGLE OF 18°31’44” FOR AN ARC DISTANCE OF 578.87 FEET;

THENCE NORTH 80°39’06” WEST, 164.80 FEET;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 437.04 FEET THROUGH A CENTRAL ANGLE OF 6°56’42” FOR AN ARC DISTANCE OF 52.97 FEET TO A POINT OF COMPOUND CURVATURE;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 1,800.00 FEET THROUGH A CENTRAL ANGLE OF 17°36’03” FOR AN ARC DISTANCE OF 552.95 FEET;

THENCE NORTH 56°06’21” WEST, 164.80 FEET;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 447.06 FEET THROUGH A CENTRAL ANGLE OF 6°56’42” FOR AN ARC DISTANCE OF 54.19 FEET, TO A POINT OF COMPOUND CURVATURE;

THENCE ALONG A CURVE TO RIGHT WITH A RADIUS OF 1,810.00 FEET, THROUGH A CENTRAL ANGLE 11°33’29” FOR AN ARC DISTANCE OF 365.12 FEET TO A POINT OF REVERSED CURVATURE;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 1,340.00 FEET, THROUGH A CENTRAL ANGLE OF 16°59’19” FOR AN ARC DISTANCE OF 397.32 FEET TO A POINT OF COMPOUND CURVATURE;

THENCE ALONG A CURVE OT THE LEFT WITH A RADIUS OF 908.89 FEET, THROUGH A CENTRAL ANGLE OF 6°19’32” FOR AN ARC DISTANCE OF 100.34 FEET TO A POINT OF REVERSED CURVATURE;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 908.89 FEET, THROUGH A CENTRAL ANGLE OF 6°19’39” FOR AN ARC DISTANCE OF 100.37 FEET TO A POINT OF COMPOUND CURVATURE;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 1,665.00 FEET THROUGH A CENTRAL ANGLE OF 28°57’56” FOR AN ARC DISTANCE OF 841.73 FEET TO A POINT OF REVERSED CURVATURE;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 2,165.00 FEET THROUGH A CENTRAL ANGLE OF 17°25’37” FOR AN ARC DISTANCE OF 658.50 FEET TO A POINT OF COMPOUND CURVATURE;

THENCE ALONG A CURVE OT THE LEFT WITH A RADIUS OF 2,950.00 FEET THROUGH A CENTRAL ANGLE OF 23°16’26” FOR AN ARC DISTANCE OF 1,198.31 FEET;

THENCE NORTH 66°19’36” WEST, 692.32 FEET;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 1,365.00 FEET THROUGH A CENTRAL ANGLE OF 31°37’07” FOR AN ARC DISTANCE OF 753.27 FEET;

THENCE NORTH 34°42’29” WEST 2,985.29 FEET;

THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 1,175.00 FEET THROUGH A CENTRAL ANGLE OF 22°10’15” FOR AN ARC DISTANCE OF 454.67 FEET;

THENCE NORTH 12°32’14” WEST, 358.31 FEET;

THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 1,236.39 FEET THROUGH A CENTRAL ANGLE OF 67°44’18” FOR AN ARC DISTANCE OF 1,461.73 FEET;

THENCE NORTH 80°16’32” WEST, 1,395.03 FEET;

THENCE NORTH 10°04’54” EAST, 479.24 FEET TO THE **POINT OF BEGINNING**.

CONTAINING 122 ACRES OF LAND, MORE OR LESS.

BASIS OF BEARINGS PARCEL 3

BEARINGS ARE BASED ON AND IDENTICAL TO SAID MAP DESIGNATED AS “MAP AND GENERAL CONSTRUCTION PLANS OF GUADALUPE RIVER UNIT 1, FROM MONTAGUE ROAD TO ALVISO SLOUGH”, DATED APRIL 26, 1963, AND FILED IN THE OFFICE OF THE COUNTY ENGINEER, COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, MAP FILE NO. 15022.

EXCEPTING FROM PARCELS 1, 2, AND 3 ANY PORTION LYING LANDWARD OF THE ORDINARY HIGH WATER MARKS ALONG THE BANKS OF ALVISO SLOUGH WHERE NOT OTHERWISE FIXED BY FORMAL AGREEMENT BETWEEN THE STATE AND THE UPLAND OWNER.

EXHIBIT A
(CONTINUED)

ALSO **EXCEPTING FROM** PARCEL 3 ANY PORTION LYING WITHIN THE RANCHO EMBARCADERO DE SANTA CLARA.

END OF DESCRIPTION

SURVEYOR'S STATEMENT:

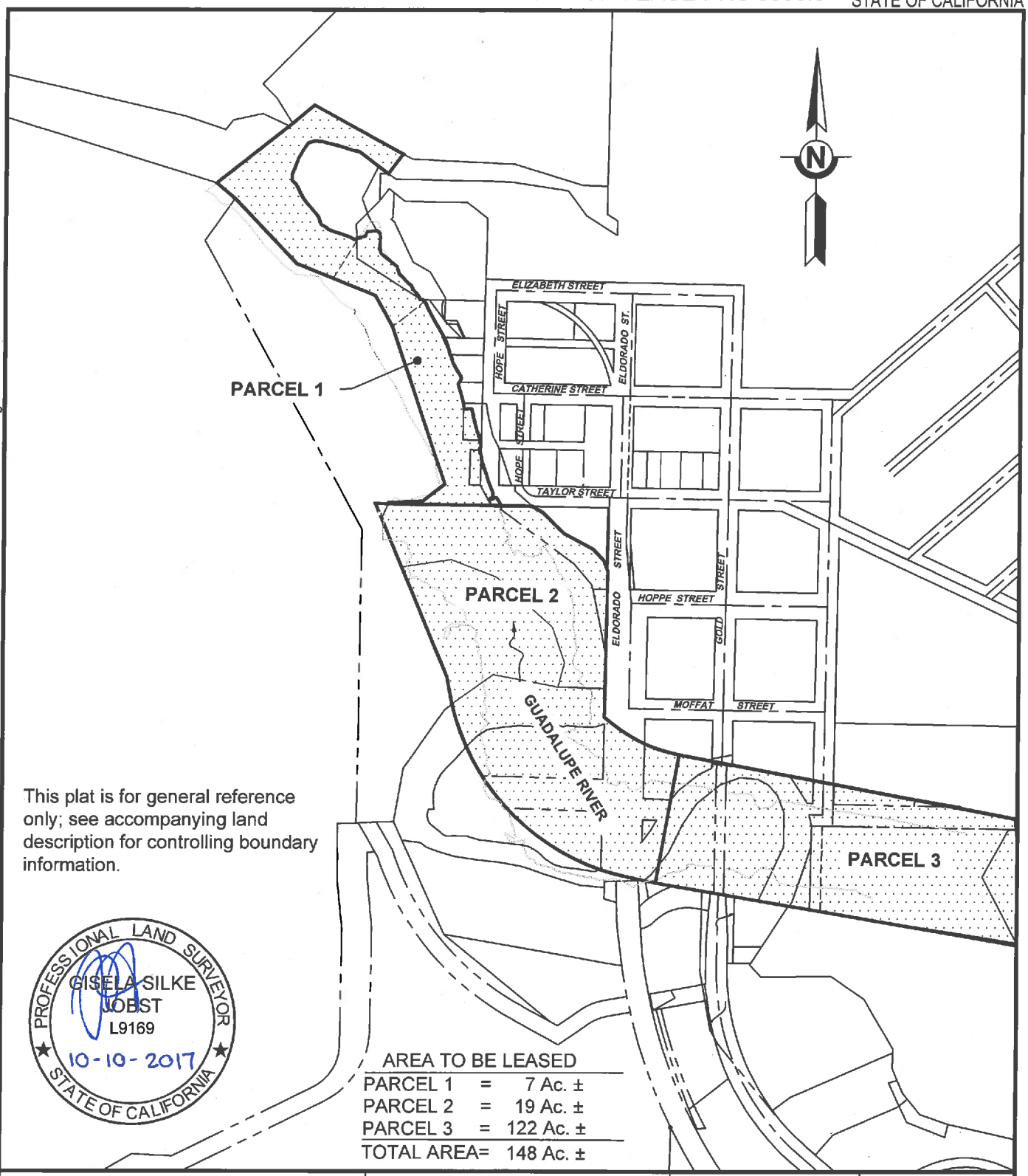
THE DESCRIPTION WAS PREPARED BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE LAND SURVEYOR'S ACT.

GISELA SILKE JOBST, L9169

10-10-2017
Date

PLAT TO ACCOMPANY LAND DESCRIPTION FOR LEASE PRC 3968.9

STATE OF CALIFORNIA



This plat is for general reference only; see accompanying land description for controlling boundary information.

PROFESSIONAL LAND SURVEYOR
GISELA SILKE JOBST
L9169
10-10-2017
STATE OF CALIFORNIA

AREA TO BE LEASED

PARCEL 1	=	7 Ac. ±
PARCEL 2	=	19 Ac. ±
PARCEL 3	=	122 Ac. ±
TOTAL AREA=		148 Ac. ±

Santa Clara Valley Water District

SCALE: 1" = 500'

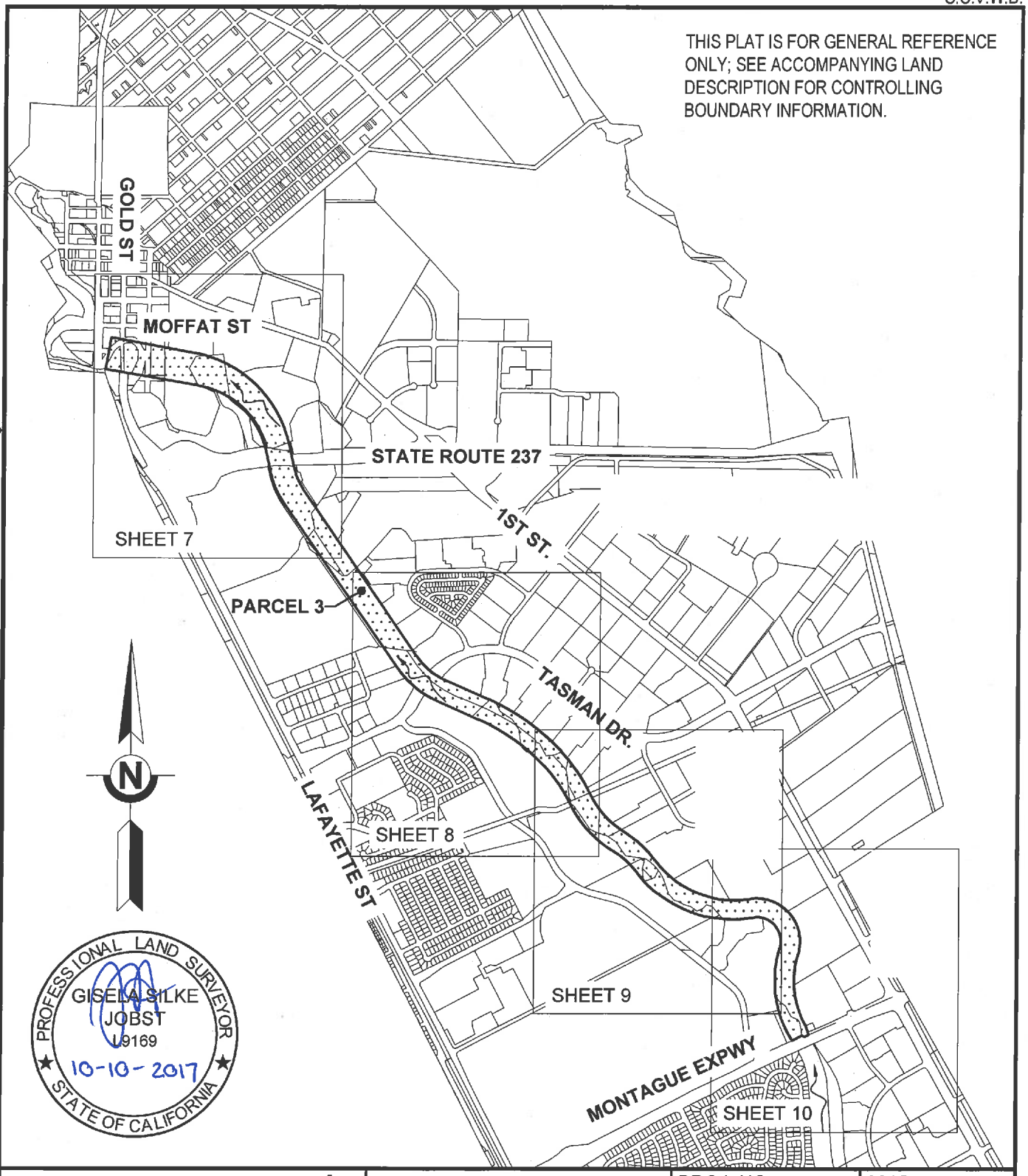
PROJ. NO.	3015
FILE NO.	
APN	MULTIPLE
TITLE REPORT NO.	
DRAWN	
DATE	10/3/2017

REV.	APPR.	DATE	DESCRIPTION
1			
2			

SCVWD S:\REQUESTS\GUADALUPE RIVER\2017_119\ROW\AUTOCAD\CURRENT\2017_119_3015_PRC3968_9_PRCL 1 &2.dwg

PLAT TO ACCOMPANY LAND DESCRIPTION FOR LEASE PRC 3968.9

S.C.V.W.D.



PROFESSIONAL LAND SURVEYOR
GISELA A. SILKE
JOBST
L9169
10-10-2017
STATE OF CALIFORNIA

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Santa Clara Valley Water District

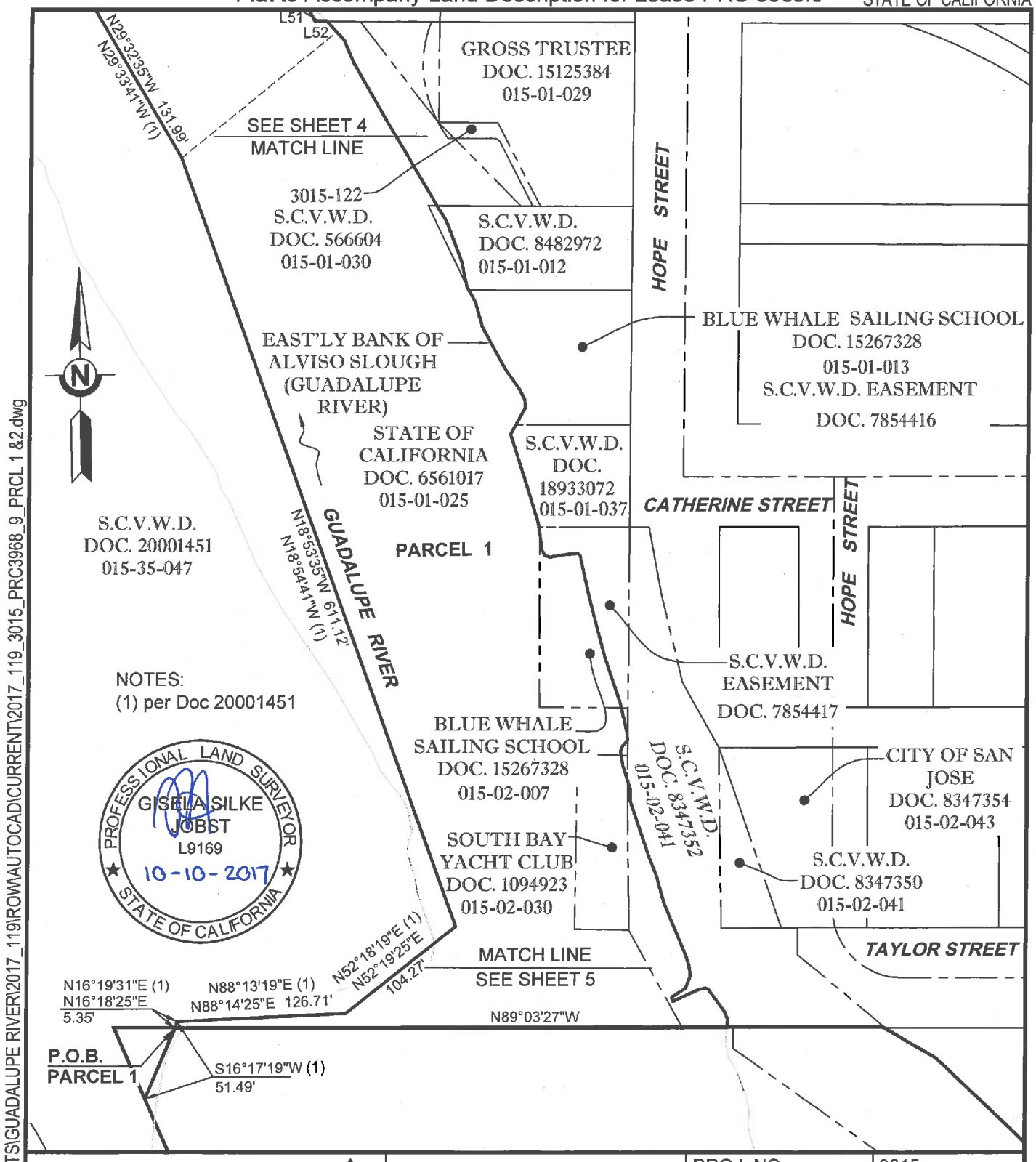
SCALE: 1" = 2000'

REV.	BY	DATE	DESCRIPTION
1			
2			

PROJ. NO.	3015
FILE NO.	
APN	
TITLE REPORT NO.	
DRAWN	
DATE	10/3/2017

Plat to Accompany Land Description for Lease PRC 3968.9

STATE OF CALIFORNIA



Santa Clara Valley Water District				SCALE: 1" = 100'	PROJ. NO. 3015
					FILE NO.
					APN MULTIPLE
REV.	APPR.	DATE	DESCRIPTION		TITLE REPORT NO.
1					DRAWN
2					DATE 10/3/2017

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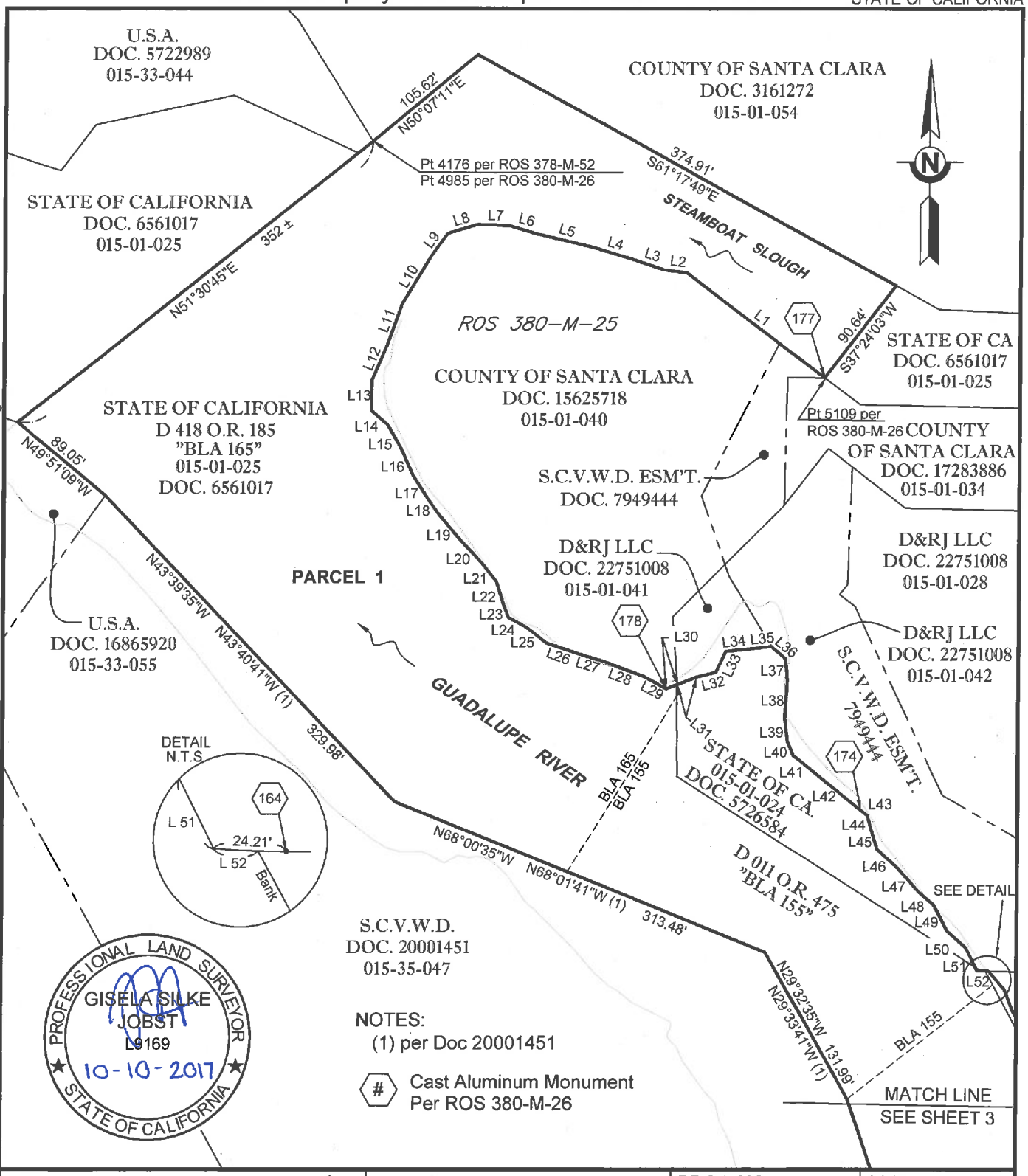
Plat to Accompany Land Description for Lease PRC 3968.9

STATE OF CALIFORNIA



PROFESSIONAL LAND SURVEYOR
GISELA SILKE JOBST
L9169
10-10-2017
STATE OF CALIFORNIA

NOTES:
(1) per Doc 20001451

(#) Cast Aluminum Monument
Per ROS 380-M-26

Santa Clara Valley Water District

SCALE: 1" = 100'

REV.	APPR.	DATE	DESCRIPTION
1			
2			

PROJ. NO.	3015
FILE NO.	
APN	MULTIPLE
TITLE REPORT NO.	
DRAWN	
DATE	10/3/2017

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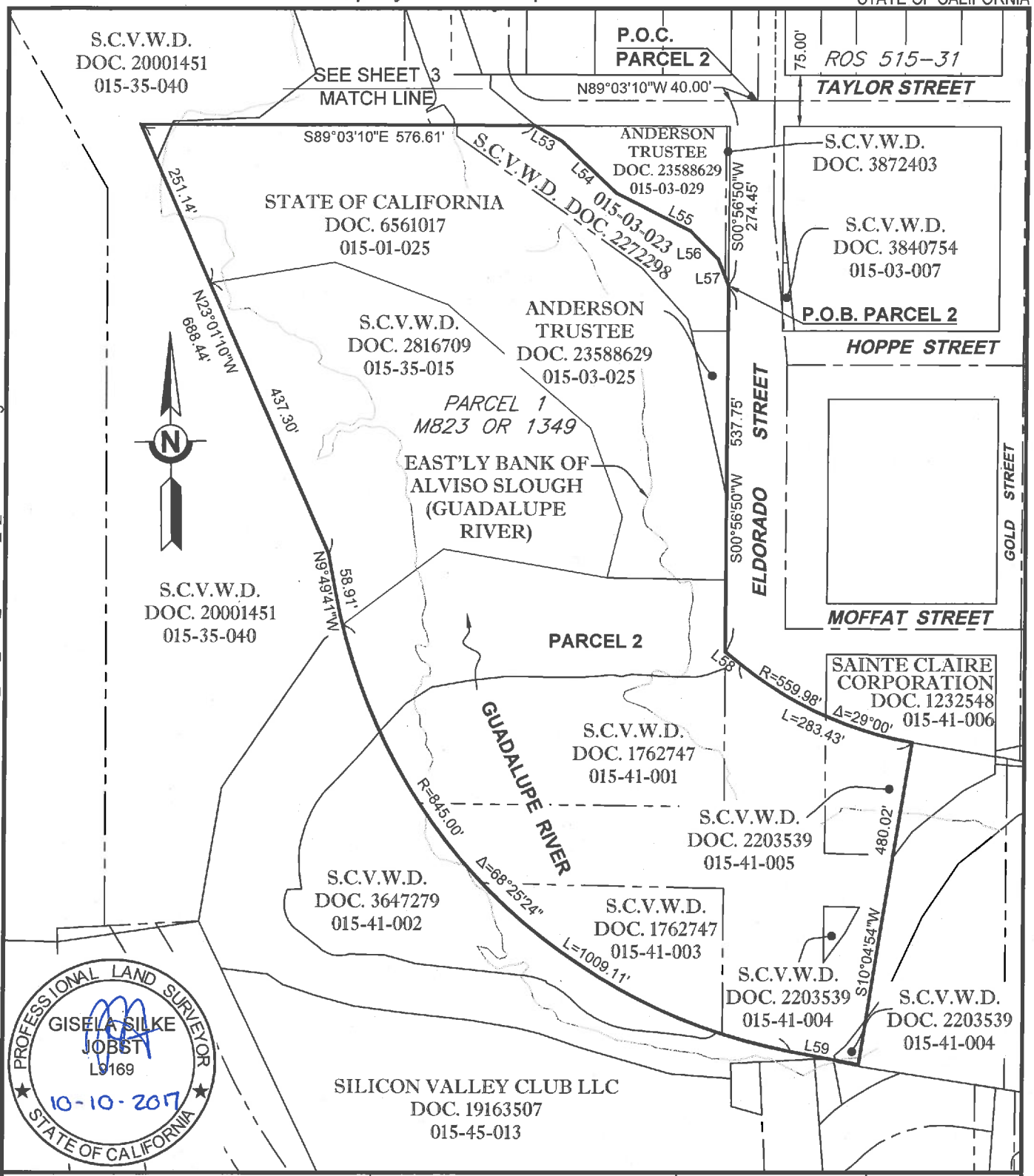
Plat to Accompany Land Description for Lease PRC 3968.9



Santa Clara Valley Water District				SCALE: 1" = 200'	PROJ. NO. 3015
					FILE NO.
					APN MULTIPLE
REV.	APPR.	DATE	DESCRIPTION		TITLE REPORT NO.
1					DRAWN HZ
2					DATE 10/3/2017

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LINE TABLE		
LINE	BEARING	LENGTH
L1	N53°00'00"W	135.89'
L2	N82°15'15"W	17.98'
L3	N71°49'34"W	27.77'
L4	N73°25'39"W	32.41'
L5	N76°21'19"W	45.01'
L6	N73°42'02"W	20.93'
L7	N87°46'07"W	25.05'
L8	S73°40'35"W	24.26'
L9	S35°37'51"W	23.70'
L10	S30°35'55"W	42.37'
L11	S19°53'05"W	32.96'
L12	S22°42'31"W	30.32'
L13	S00°00'39"W	24.04'
L14	S48°38'58"E	16.38'
L15	S29°41'12"E	22.89'
L16	S24°06'04"E	21.27'
L17	S31°48'41"E	20.54'
L18	S35°48'21"E	16.04'
L19	S40°35'33"E	26.52'
L20	S42°27'56"E	25.32'
L21	S38°10'38"E	17.33'
L22	S17°22'46"E	18.23'
L23	S21°28'38"E	11.34'
L24	S61°57'25"E	16.01'
L25	S51°52'24"E	20.06'
L26	S71°14'14"E	23.94'
L27	S72°55'41"E	24.01'
L28	S69°49'21"E	32.59'
L29	S61°16'10"E	20.38'

LINE TABLE		
L30	N69°17'40"E	9.44'
L31	N69°17'40"E	16.35'
L32	N75°45'50"E	15.63'
L33	N25°36'20"E	17.95'
L34	N84°01'34"E	19.01'
L35	N83°30'12"E	16.78'
L36	S49°33'29"E	15.06'
L37	S05°32'14"E	16.59'
L38	S04°00'31"W	29.17'
L39	S06°19'08"E	18.93'
L40	S22°12'47"E	11.93'
L41	S51°02'27"E	20.91'
L42	S50°58'59"E	47.15'
L43	S53°27'57"E	6.41'
L44	S15°49'04"E	11.83'
L45	S17°09'41"E	15.84'
L46	S47°22'31"E	20.50'
L47	S42°03'07"E	25.81'
L48	S49°50'17"E	15.82'
L49	S27°07'28"E	22.96'
L50	S48°33'54"E	19.84'
L51	S26°36'12"E	19.96'
L52	S88°47'06"E	
L53	S59°02'10"E	46.95'
L54	S45°44'04"E	110.32'
L55	S62°23'36"E	123.00'
L56	S43°36'10"E	58.00'
L57	S20°51'16"E	41.74'
L58	S50°24'28"E	28.61'
L59	N78°15'05"W	105.13'

PROFESSIONAL LAND SURVEYOR
GISELA SILKE JOBST
L9169
10-10-2017
STATE OF CALIFORNIA

SCVWD S:\REQUESTS\GUADALUPE RIVER\2017_119\ROW\AUTOCAD\CURRENT\2017_119_3015_PRC3968_9_PRCL 1 &2.dwg

Santa Clara Valley Water District

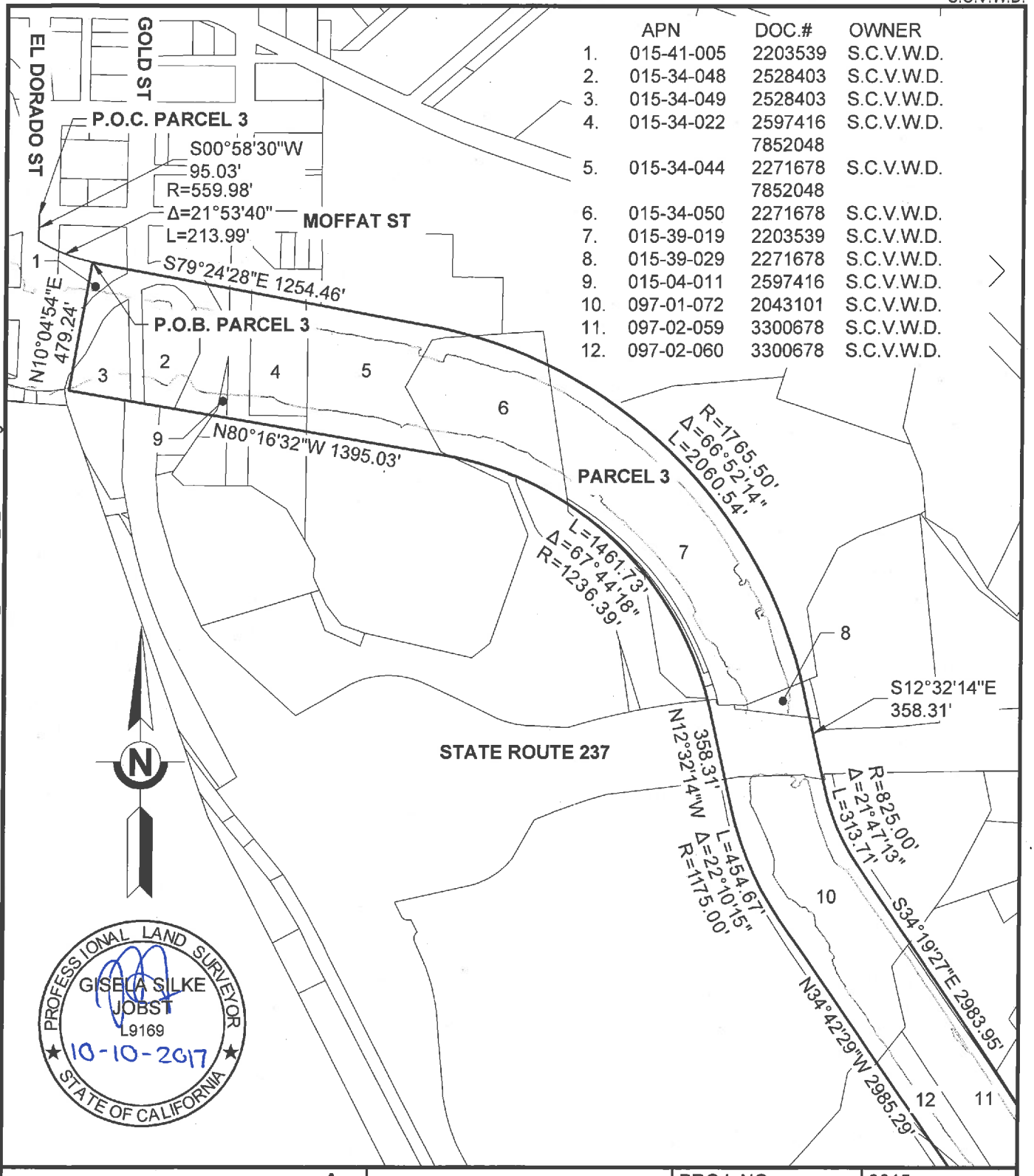
SCALE: N/A

PROJ. NO.	3015
FILE NO.	
APN	MULTIPLE
TITLE REPORT NO.	
DRAWN	
DATE	10/3/2017

REV.	APPR.	DATE	DESCRIPTION
1			
2			

PLAT TO ACCOMPANY LAND DESCRIPTION FOR LEASE PRC 3968.9

S.C.V.W.D.



	APN	DOC.#	OWNER
1.	015-41-005	2203539	S.C.V.W.D.
2.	015-34-048	2528403	S.C.V.W.D.
3.	015-34-049	2528403	S.C.V.W.D.
4.	015-34-022	2597416 7852048	S.C.V.W.D.
5.	015-34-044	2271678 7852048	S.C.V.W.D.
6.	015-34-050	2271678	S.C.V.W.D.
7.	015-39-019	2203539	S.C.V.W.D.
8.	015-39-029	2271678	S.C.V.W.D.
9.	015-04-011	2597416	S.C.V.W.D.
10.	097-01-072	2043101	S.C.V.W.D.
11.	097-02-059	3300678	S.C.V.W.D.
12.	097-02-060	3300678	S.C.V.W.D.

PROFESSIONAL LAND SURVEYOR
GISELA SILKE JOBST
L9169
10-10-2017
STATE OF CALIFORNIA

Santa Clara Valley Water District

SCALE: 1" = 500'

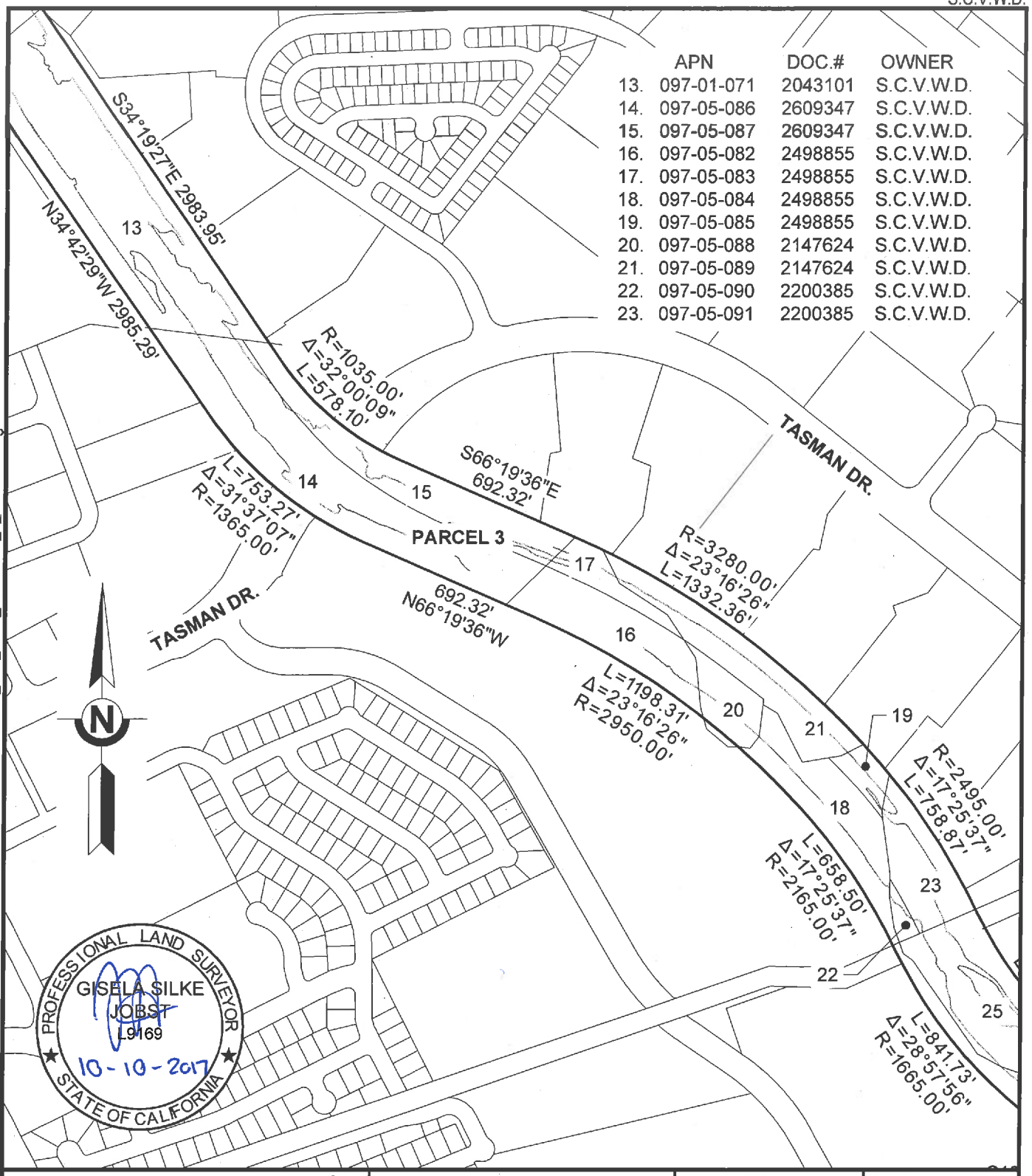
REV.	BY	DATE	DESCRIPTION
1			
2			

PROJ. NO.	3015
FILE NO.	
APN	MULTIPLE
TITLE REPORT NO.	
DRAWN	HZ
DATE	10/3/2017

SCVWD S:\REQUESTS\GUADALUPE RIVER\2017_119\ROW\AUTOCAD\CURRENT\2017_119_3015_PRC3968_9_PRCL 3.dwg

PLAT TO ACCOMPANY LAND DESCRIPTION FOR LEASE PRC 3968.9

S.C.V.W.D.



	APN	DOC.#	OWNER
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14.	097-05-086	2609347	S.C.V.W.D.
15.	097-05-087	2609347	S.C.V.W.D.
16.	097-05-082	2498855	S.C.V.W.D.
17.	097-05-083	2498855	S.C.V.W.D.
18.	097-05-084	2498855	S.C.V.W.D.
19.	097-05-085	2498855	S.C.V.W.D.
20.	097-05-088	2147624	S.C.V.W.D.
21.	097-05-089	2147624	S.C.V.W.D.
22.	097-05-090	2200385	S.C.V.W.D.
23.	097-05-091	2200385	S.C.V.W.D.

PROFESSIONAL LAND SURVEYOR
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Santa Clara Valley Water District

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REV.	BY	DATE	DESCRIPTION
1			

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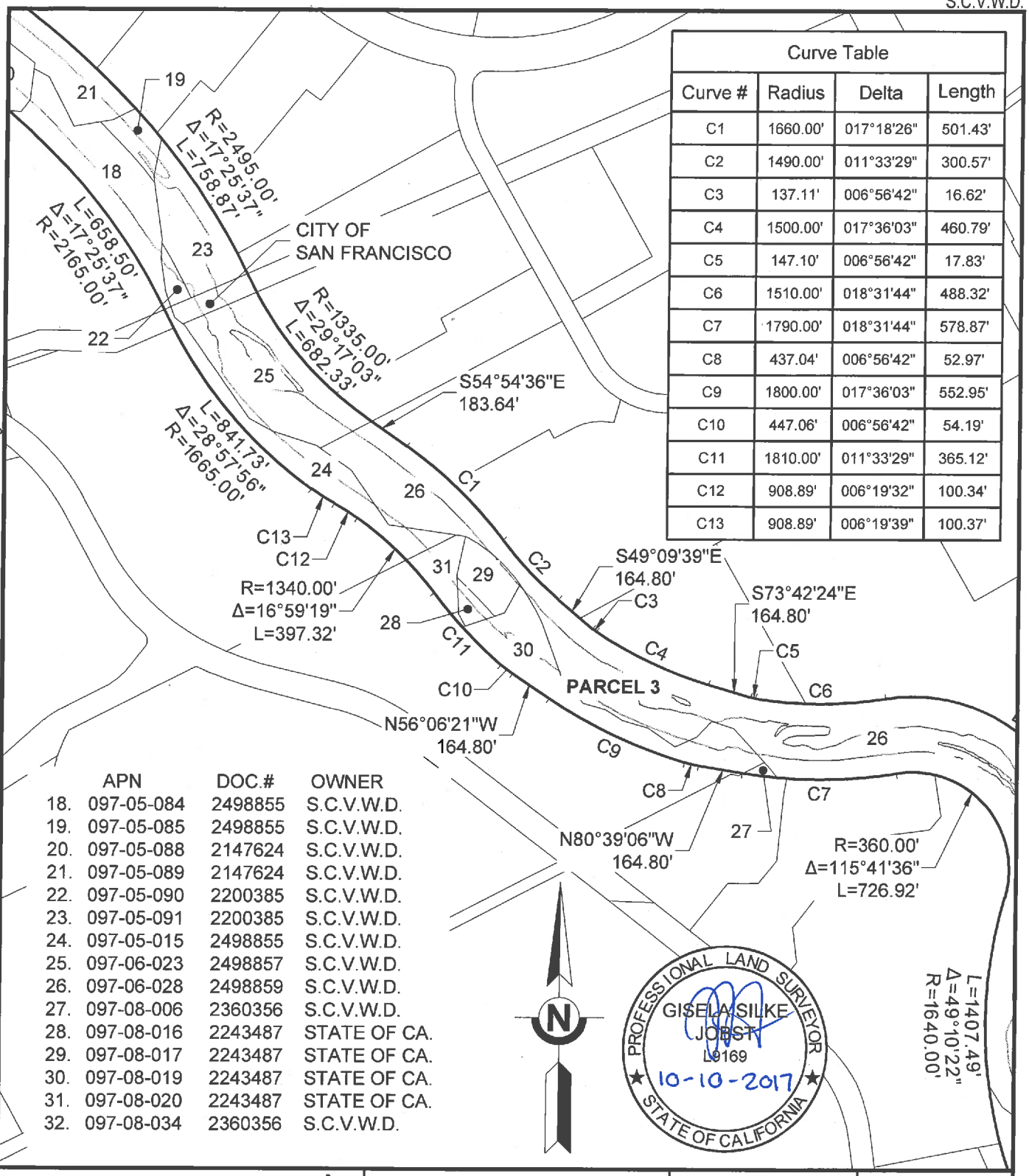
PLAT TO ACCOMPANY LAND DESCRIPTION FOR LEASE PRC 3968.9

S.C.V.W.D.



Curve Table			
Curve #	Radius	Delta	Length
C1	1660.00'	017°18'26"	501.43'
C2	1490.00'	011°33'29"	300.57'
C3	137.11'	006°56'42"	16.62'
C4	1500.00'	017°36'03"	460.79'
C5	147.10'	006°56'42"	17.83'
C6	1510.00'	018°31'44"	488.32'
C7	1790.00'	018°31'44"	578.87'
C8	437.04'	006°56'42"	52.97'
C9	1800.00'	017°36'03"	552.95'
C10	447.06'	006°56'42"	54.19'
C11	1810.00'	011°33'29"	365.12'
C12	908.89'	006°19'32"	100.34'
C13	908.89'	006°19'39"	100.37'

	APN	DOC.#	OWNER
18.	097-05-084	2498855	S.C.V.W.D.
19.	097-05-085	2498855	S.C.V.W.D.
20.	097-05-088	2147624	S.C.V.W.D.
21.	097-05-089	2147624	S.C.V.W.D.
22.	097-05-090	2200385	S.C.V.W.D.
23.	097-05-091	2200385	S.C.V.W.D.
24.	097-05-015	2498855	S.C.V.W.D.
25.	097-06-023	2498857	S.C.V.W.D.
26.	097-06-028	2498859	S.C.V.W.D.
27.	097-08-006	2360356	S.C.V.W.D.
28.	097-08-016	2243487	STATE OF CA.
29.	097-08-017	2243487	STATE OF CA.
30.	097-08-019	2243487	STATE OF CA.
31.	097-08-020	2243487	STATE OF CA.
32.	097-08-034	2360356	S.C.V.W.D.

Santa Clara Valley Water District

SCALE: 1" = 500'

REV.	BY	DATE	DESCRIPTION
1			

PROJ. NO.	3015
FILE NO.	
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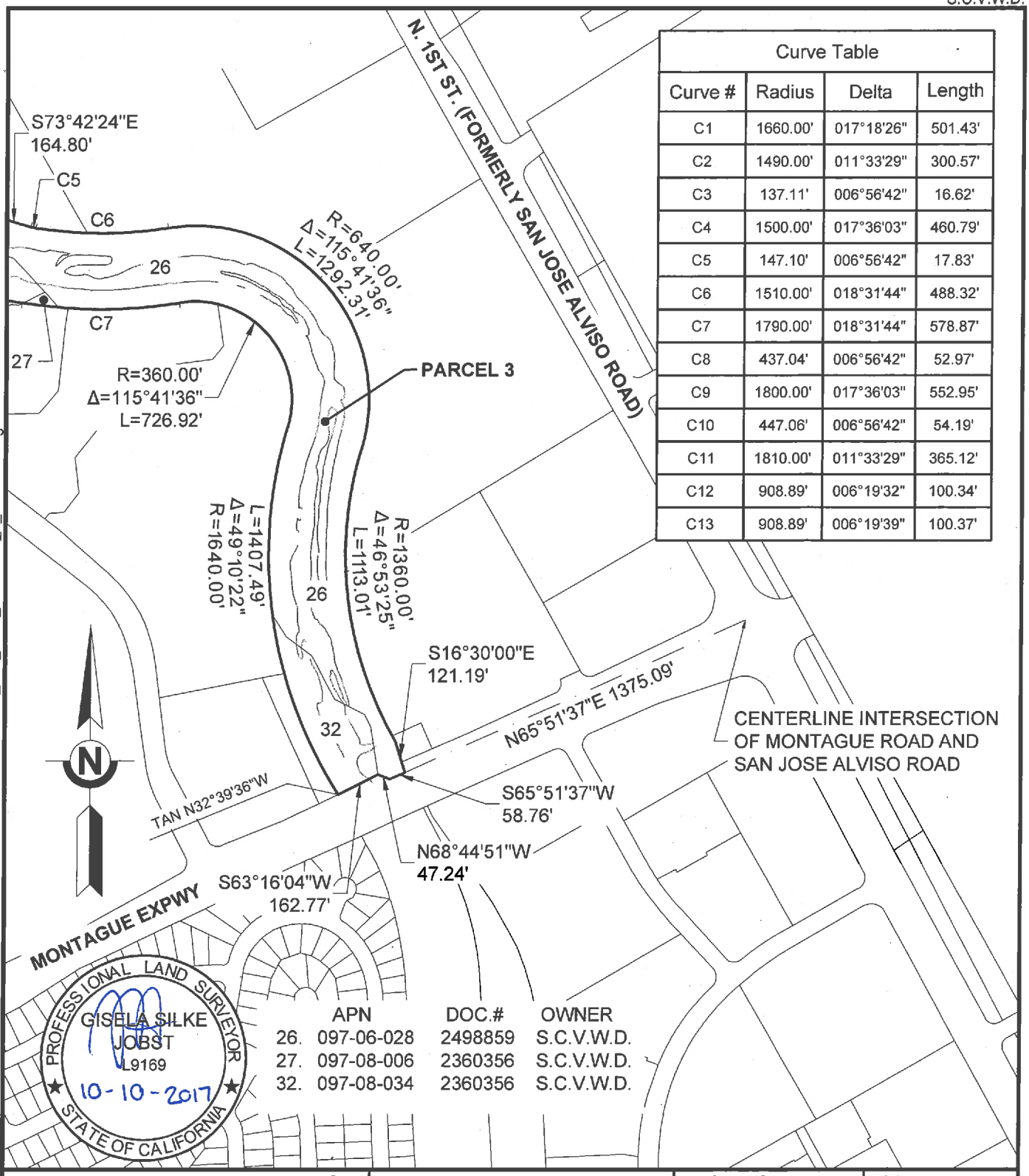
SCVWD S:\REQUESTS\GUADALUPE RIVER\2017_119\ROW\AUTOCAD\CURRENT\2017_119_3015_PRC3968_9_PRCL 3.dwg

PLAT TO ACCOMPANY LAND DESCRIPTION FOR LEASE PRC 3968.9

S.C.V.W.D.



Curve Table			
Curve #	Radius	Delta	Length
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C9	1800.00'	017°36'03"	552.95'
C10	447.06'	006°56'42"	54.19'
C11	1810.00'	011°33'29"	365.12'
C12	908.89'	006°19'32"	100.34'
C13	908.89'	006°19'39"	100.37'

	APN	DOC.#	OWNER
26.	097-06-028	2498859	S.C.V.W.D.
27.	097-08-006	2360356	S.C.V.W.D.
32.	097-08-034	2360356	S.C.V.W.D.

PROFESSIONAL LAND SURVEYOR
GISELA SILKE JOBST
L9169
10-10-2017
STATE OF CALIFORNIA

Santa Clara Valley Water District

SCALE: 1" = 500'

REV.	BY	DATE	DESCRIPTION
1			

PROJ. NO.	3015
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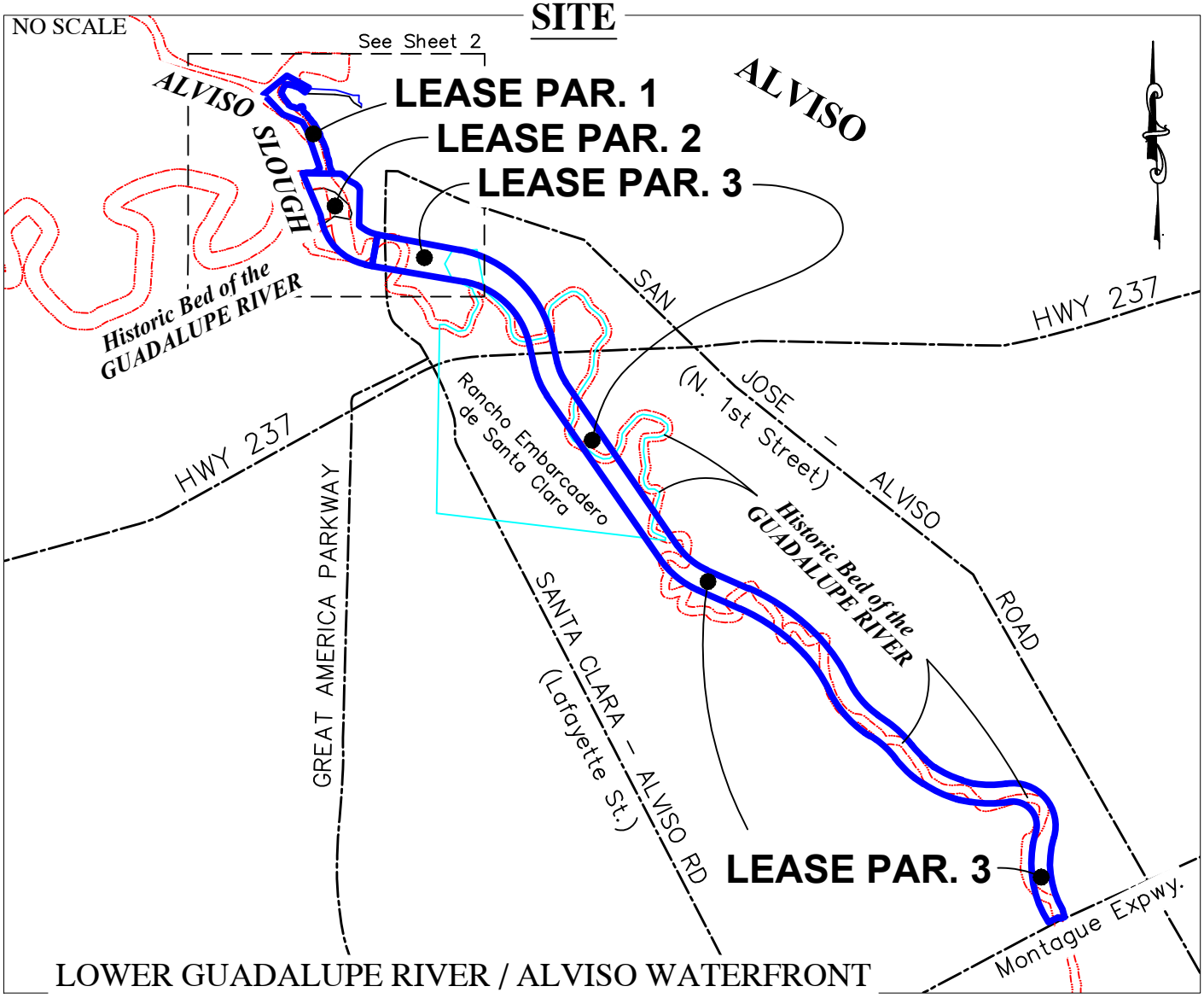
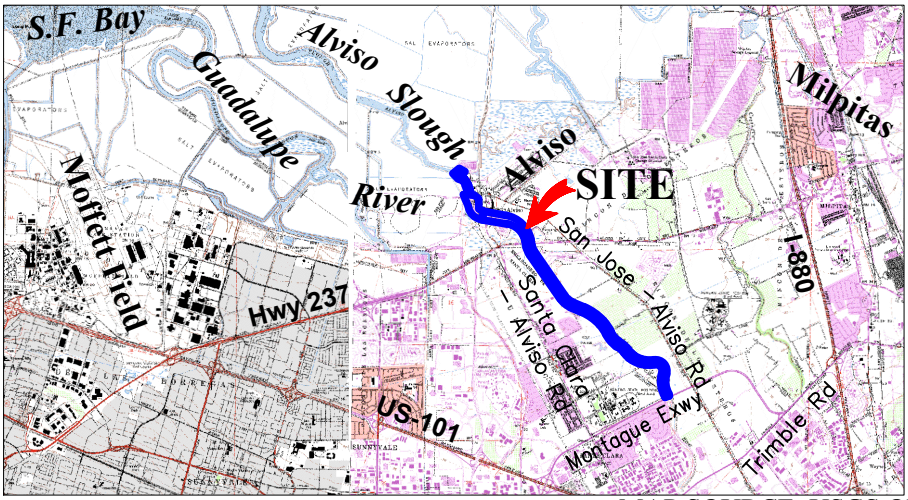
SITE



LOWER GUADALUPE RIVER / ALVISO WATERFRONT

NO SCALE

LOCATION



MAP SOURCE: USGS QUAD

This Exhibit is solely for purposes of generally defining the lease premises, is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.

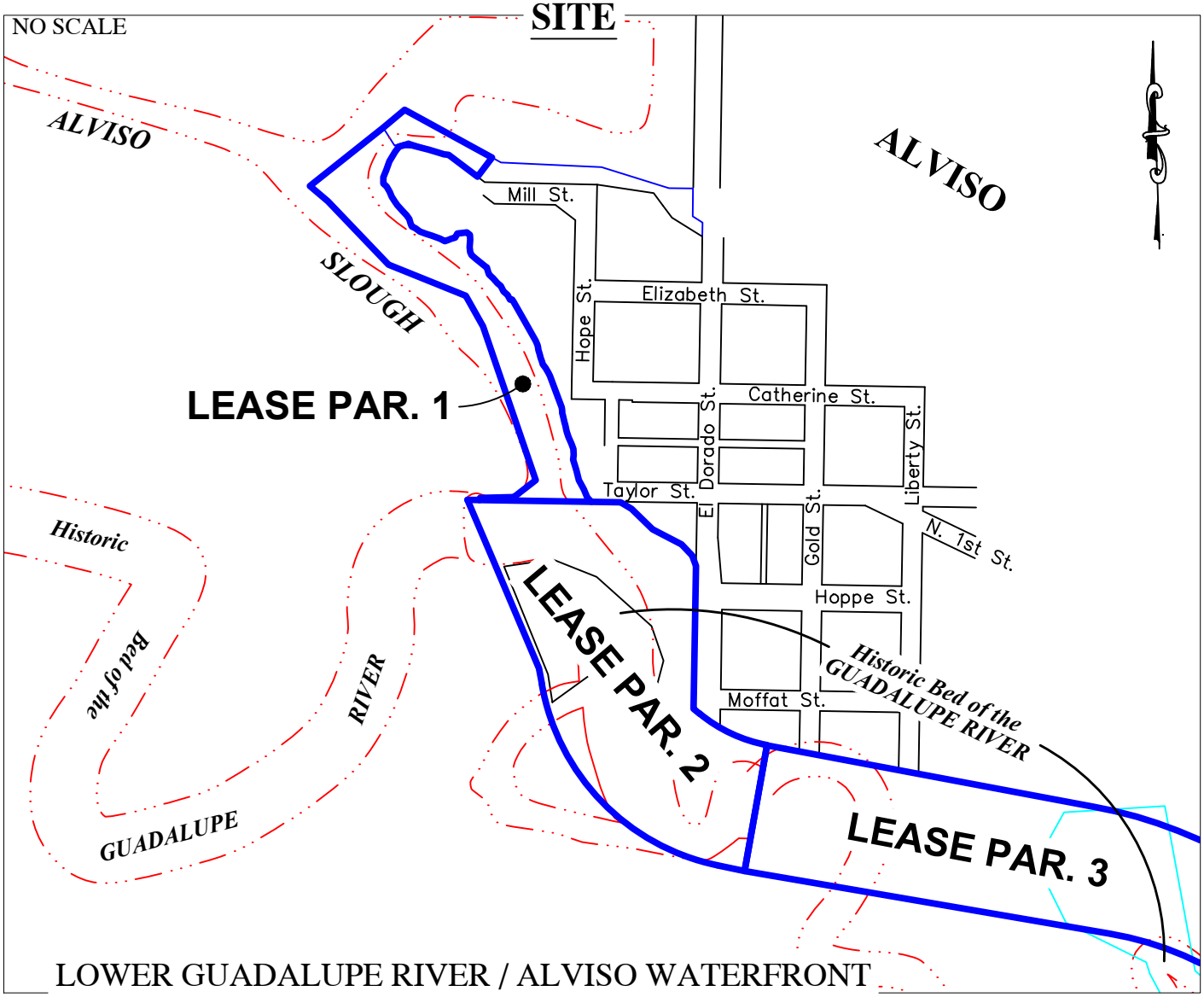
Exhibit B
Sheet 1 of 2

PRC 3968.9
GENERAL LEASE
PUBLIC AGENCY USE
SAN JOSE - ALVISO AREA
SANTA CLARA COUNTY

EAP 09/2017

NO SCALE

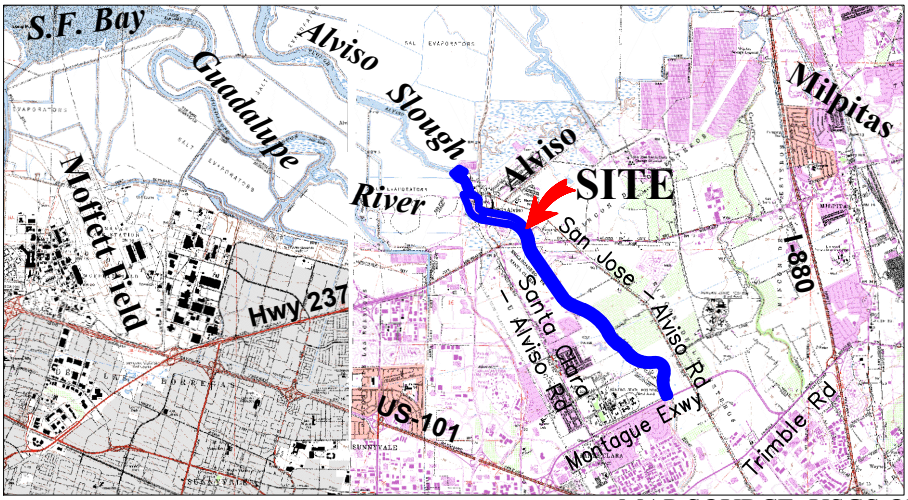
SITE



LOWER GUADALUPE RIVER / ALVISO WATERFRONT

NO SCALE

LOCATION



MAP SOURCE: USGS QUAD

This Exhibit is solely for purposes of generally defining the lease premises, is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.

Exhibit B
Sheet 2 of 2

PRC 3968.9
GENERAL LEASE
PUBLIC AGENCY USE
SAN JOSE - ALVISO AREA
SANTA CLARA COUNTY

EAP 09/2017

EXHIBIT C
CALIFORNIA STATE LANDS COMMISSION
MITIGATION MONITORING PROGRAM

SANTA CLARA VALLEY WATER DISTRICT STREAM MAINTENANCE PROGRAM UPDATE

(PRC 3968, State Clearinghouse No. 2000102055)

The California State Lands Commission (Commission) is a responsible agency under the California Environmental Quality Act (CEQA) for the Santa Clara Valley Water District Stream Maintenance Program Update (Project). The CEQA lead agency for the Project is Santa Clara Valley Water District (District).

In conjunction with approval of this Project, the Commission adopts this Mitigation Monitoring Program (MMP) for the implementation of mitigation measures for the portion(s) of the Project located on Commission lands. The purpose of a MMP is to discuss feasible measures to avoid or substantially reduce the significant environmental impacts from a project identified in an Environmental Impact Report (EIR) or a Mitigated Negative Declaration (MND). State CEQA Guidelines section 15097, subdivision (a), states in part:[1]

> *In order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.*

The lead agency has certified an EIR; State Clearinghouse No. 2000102055, and adopted a MMP for the whole of the Project (see Exhibit C, Attachment C-1) and remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with its program. The Commission's action and authority as a responsible agency apply only to the mitigation measures listed in Table C-1 below. The full text of each mitigation measure, as set forth in the MMP prepared by the CEQA lead agency and listed in Table C-1, is incorporated by reference in this Exhibit C. Any mitigation measures adopted by the Commission that differ substantially from those adopted by the lead agency are shown as follows:

- Additions to the text of the mitigation measure are <u>underlined</u>; and
- Deletions of the text of the mitigation measure are shown as ~~strikeout~~ or as otherwise noted.

[1] The State CEQA Guidelines are found at California Code of Regulations, title 14, section 15000 et seq.

Table C-1. Project Impacts and Applicable Mitigation Measures

Potential Impact	Mitigation Measure (MM)[2]	Difference Between CSLC MMP and Lead Agency MMP
AES-3: Temporary Alteration of Visual Character or Quality from Maintenance Activities	MM BIO-1	None
AIR-1: Temporary Increase in ROG, NO_x, PM_{10}, and PM_{25}	MMs AIR-1A, AIR-1B, AIR-1C	None
BIO-1: Loss or Disturbance of Wetlands and Other Waters	MM BIO-1	None
BIO-5: Impacts to Non-Serpentine Special-Status Plant Species	MM BIO-5	None
BIO-8: Impacts on Steelhead	MMs BIO-8, and BIO-9	None
BIO-9: Impacts on the Pacific Lamprey and Monterey Roach	MMs BIO-1 and BIO-9	None
BIO-10: Impacts on the Loner Smelt and Green Sturgeon	MM BIO-1	None
BIO-12: Impacts on the California Red-Legged Frog	MMs BIO-1 and BIO-11	None
BIO-14: Impacts on Non-Special-Status Fish and Amphibians	MMs BIO-1 and BIO-9	None
BIO-16: Impacts on the Western Pond Turtle	MMs BIO-1 and BIO-9	None
BIO-20: Impacts on the California Clapper Rail and Alameda Song Sparrow	MM BIO-1	None
BIO-27: Impacts on the Yellow Warbler	MM BIO-14	None
BIO-28: Impacts on the Yellow-Breasted Chat	MM BIO-12 (MMs BIO-12A or BIO-12B)	None
BIO-35: Impacts on the Salt Marsh Harvest Mouse and Salt Marsh Wandering Shrew	MM BIO-1	None
BIO-44: Introduction of Invasive Species	MMs BIO-16 and BIO-17	See CSLC addition (MM BIO-17) below
GCC-1: Temporary Increase in GHGs during Maintenance Activities	MMs AIR-1A and GCC-1A or 1B	None
C-AIR-1: Emissions of ROG, NO_x, PM_{10}, and PM_{25}	MMs AIR-1A and AIR-1B or AIR-1C	None
C-AIR-2: Emissions of Greenhouse Gases	MMs AIR-1A, and GCC-1A or MM GCC-1B	None
Additional Best Management Practices (BMPs) are outlined in Attachment C-2		

MM BIO-17: Aquatic Invasive Invertebrates. As a precaution against invasive quagga and zebra mussels, if waterborne vessels are used in maintenance activities, crews shall wash and dry them off-site prior to using them in another creek or tributary.

[2] See Attachment C-1 for the full text of each MM taken from the MMP prepared by the CEQA lead agency.

ATTACHMENT C-1

Mitigation Monitoring Program Adopted by the

Santa Clara Valley Water District

MITIGATION AND MONITORING REPORTING PROGRAM

Santa Clara Valley Water District
Stream Maintenance Program Update
Administrative Final
Subsequent Environmental Impact Report

Introduction

This Mitigation Monitoring and Reporting Program (MMRP) has been prepared pursuant to State of California Public Resources Code Section 21081.6, which requires adoption of a MMRP for projects in which the lead agency has required changes or adopted mitigation to avoid significant environmental effects. The Santa Clara Valley Water District (SCVWD) is the lead agency for the proposed Stream Maintenance Program (SMP) Update (SMP Update or Proposed Project) and, therefore, responsible for administrating and implementing the MMRP. The decision-makers must define specific reporting and/or monitoring requirements to be enforced during SMP Update implementation, before final approval of the Proposed Project. The primary purpose of the MMRP is to ensure that the mitigation measures identified in SCVWD's Final Subsequent Environmental Impact Report (FSEIR) are implemented to reduce or avoid identified environmental effects.

The purpose of discussing the MMRP in the ~~Draft SEIR (DSEIR)~~ FSEIR is to appropriately assign the mitigation responsibilities for implementing the Proposed Project. The mitigation measures listed in the MMRP are required by law or regulation and will be adopted by SCVWD as a condition of the primary SMP Update approval.

Mitigation is defined by the California Environmental Quality Act (CEQA), Section 15370 as a measure that:

- avoids the impact altogether by not taking a certain action or parts of an action;
- minimizes impacts by limiting the degree or magnitude of the action and its implementation;
- rectifies the impact by repairing, rehabilitating, or restoring the impacted environment;
- reduces or eliminates the impact over time by preservation and maintenance activities during the life of the action; and
- compensates for the impacts by replacing or providing substitute resources or environments.

Mitigation measures provided in this MMRP were initially identified in Chapter 3, Environmental Setting and Impact Analysis of the ~~DSEIR~~Draft Subsequent Environmental Impact Report (DSEIR), as feasible and effective in mitigating Proposed Project-related environmental impacts. As a result of comments received during public review of the DSEIR, these mitigation measures ~~will be~~ have been revised as necessary.

Basis for the Mitigation Monitoring and Reporting Program

The legal basis for the development and implementation of the MMRP lies within CEQA (including the California Public Resources Code). Sections 21002 and 21002.1 of the California Public Resources Code state:

- Public agencies are not to approve projects as proposed if there are feasible alternatives or feasible mitigation measures available that would substantially lessen the significant environmental effects of such projects; and

- Each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.

Section 21081.6 of the California Public Resources Code further requires that the public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance with mitigation measures during project implementation. The monitoring program must be adopted when a public agency makes its findings under CEQA so that the program can be made a condition of project approval in order to mitigate significant effects on the environment.

Mitigation Monitoring and Reporting Program Procedures

The MMRP for the Proposed Project will be in place through all phases of the SMP Update. SCVWD shall have primary responsibility for administrating the MMRP activities of staff, consultants, or contractors. SCVWD has the responsibility of ensuring that monitoring is documented through periodic reports and that deficiencies are promptly corrected. SCVWD's designated environmental monitor will track and document compliance with mitigation measures, note any problems that may result, and take appropriate action to remedy problems. Specific responsibilities of SCVWD will include:

- coordination of all mitigation monitoring activities;

- management of the preparation, approval, and filing of monitoring or permit compliance reports;

- maintenance of records concerning the status of all approved mitigation measures;

- quality control assurance of field monitoring personnel;

- coordination with other agencies regarding compliance with mitigation or permit requirements;

- reviewing and recommending acceptance and certification of implementation documentation; and

- acting as a contact for interested parties or surrounding property owners who wish to register complaints, observations of unsafe conditions, or environmental violations; verifying any such circumstances and developing any necessary corrective actions.

Resolution of Noncompliance Complaints

Any person or agency may file a complaint about noncompliance with the mitigation measures that are adopted as part of the approval process for the SMP Update. The complaint shall be directed to SCVWD (5750 Almaden Expressway, San Jose, CA 95118-3686, or e-mail smp_update@valleywater.org) in written form, providing detailed information on the purported violation. SCVWD will investigate any complaints filed to determine the validity of the complaint. If noncompliance with a mitigation measure is verified, SCVWD shall take the necessary action(s) to remedy the violation. The complaint shall receive written confirmation indicating the results of the investigation or the final corrective action that was implemented in response to the specific noncompliance issue.

Mitigation Monitoring and Reporting Plan Matrix

The MMRP is organized in a matrix format. The first column identifies the mitigation measure number. The second column describes each mitigation measure. The third column, "Time Frame for Implementation," refers to when monitoring will occur. The timing for implementing mitigation measures and the definition of the approval process has been provided to assist staff from SCVWD to plan for monitoring activities. The fourth column, "Responsible Monitoring Entity," refers to the entity responsible for ensuring that the mitigation measure is implemented. The fifth column, "Verification of Compliance," has subcolumns for Initials, Date, and Remarks. This last column will be used by SCVWD, as lead agency, to document the person who verified the implementation of the mitigation measure, the date on which this verification occurred, and any other notable remarks.

MITIGATION AND MONITORING REPORTING PROGRAM

Santa Clara Valley Water District
Stream Maintenance Program Update
Administrative Final Subsequent Environmental Impact Report

No.	Mitigation Measure[1]	Time Frame for Implementation	Responsible Monitoring Entity	Verification of Compliance		
				Initials	Date	Remarks
Air Quality						
AIR-1A	**Reduction in Fleet Emissions**	Prior to implementing NOx-generating activities under the Proposed Project	District			
AIR-1B	**Off-site NOx Emissions Mitigation Program**	Prior to implementing NOx-generating activities under the Proposed Project	District			
AIR-1C	**NOx Emissions Offsets[2]**	Prior to implementing NOx-generating activities under the Proposed Project	District			
Biology						
BIO-1	**Implement Compensatory Mitigation for Wetlands and Other Waters**	Annually in accordance with the annual work plan	District			
BIO-2	**Implement Compensatory Mitigation for Woody Riparian Vegetation**	Annually in accordance with the annual work plan	District			

No.	Mitigation Measure[1]	Time Frame for Implementation	Responsible Monitoring Entity	Verification of Compliance		
				Initials	Date	Remarks
BIO-3	**Implement Compensatory Mitigation for Serpentine Communities**	Annually in accordance with the annual work plan	District			
BIO-4	**Implement Compensatory Mitigation for Serpentine-Associated Special-Status Plant Species**	Annually in accordance with the annual work plan	District			
BIO-5	**Implement Compensatory Mitigation for Impacts to Non-Serpentine Special-Status Plant Species**	Annually in accordance with the annual work plan	District			
BIO-6	**Implement Compensatory Mitigation for Impacts to Serpentine-Associated Special-Status Invertebrates**	Annually in accordance with the annual work plan	District			
BIO-7	**Tree Replacement**	Annually in accordance with the annual work plan	District			
BIO-8	**Augmentation of Spawning Gravel**	Annually in accordance with the annual work plan	District			
BIO-9	**Augmentation of Instream Complexity for Non-Tidal Stream Fish**	Annually in accordance with the annual work plan	District			
BIO-10	**Implement Compensatory Mitigation for the California Tiger Salamander**	Annually in accordance with the annual work plan	District			

No.	Mitigation Measure[1]	Time Frame for Implementation	Responsible Monitoring Entity	Verification of Compliance		
				Initials	Date	Remarks
BIO-11	**Implement Compensatory Mitigation for the California Red-Legged Frog**	Annually in accordance with the annual work plan	District			
BIO-12	**Implement Compensatory Mitigation for the Least Bell's Vireo**	Annually in accordance with the annual work plan	District			
BIO-13	**Implement Compensatory Mitigation for the Burrowing Owl**	Annually in accordance with the annual work plan	District			
BIO-14	**Implement Compensatory Mitigation for the Yellow Warbler**	Annually in accordance with the annual work plan	District			
BIO-15	**Provide Alternative Bat Roost**	Annually in accordance with the annual work plan	District			
BIO-16	**Invasive Plant ~~Species~~ Management Program**	Annually in accordance with the annual work plan	District			
Global Climate Change						
GCC-1A	**On-site or Off-site GHG Emissions Mitigation Program**	Prior to implementing GHG-generating activities under the Proposed Project	District			

No.	Mitigation Measure[1]	Time Frame for Implementation	Responsible Monitoring Entity	Verification of Compliance		
				Initials	Date	Remarks
GCC-1B	**Greenhouse Gas Emissions Offsets**	Prior to implementing GHG-generating activities under the Proposed Project	District			

1 See full text on the following pages.

2 Source: Allen, Donald. Cantor Co2e (http://www.cantorco2e.com/Environment/?page=USAComp_ERC-BAAQMD). May 6 and May 7, 2011—telephone conversations with Ryan Jolley of Horizon Water and Environment regarding NOx credits.

Mitigation Measure AIR-1A Reduction in Fleet Emissions

The District will develop a plan to demonstrate that the off-road equipment (more than 50 horsepower) to be used in the SMP Update (i.e., owned, leased, and subcontractor vehicles) would achieve a project–wide, fleet-average 20 percent NOx reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices (such as particulate filters), and/or other options as they become available.

Mitigation Measure AIR-1B Off-site NOx Emissions Mitigation Program

SCVWD may establish a program to implement off-site NOx emissions reduction projects within the SFBAAB to reduce those NOx emissions from the SMP Update in exceedance of BAAQMD operational significance thresholds. The total reduction will be 9 tons (the average annual exceedance anticipated over the lifetime of the SMP Update, based on the average between estimated 2012 and 2020 emissions), as adjusted based on the emissions reductions to be achieved by Mitigation Measure AIR-1A. The NOx emission reductions projects will be from sources of emissions that are not required by any existing law to reduce their NOx emissions. Offsetting annual emissions inherently includes offsetting daily emissions. Therefore, no additional reductions will be required for daily NOx emissions. Documentation of off-site NOx reductions will be provided to the BAAQMD.

Mitigation Measure AIR-1C NOx Emissions Offsets

As an alternative to Mitigation Measure AIR-1B, SCVWD will purchase NOx emission reduction credits to reduce or offset those NOx emissions in exceedance of BAAQMD operational significance thresholds. The total reduction (or credits) will be 9 tons, as adjusted based on the emissions reductions achieved by Mitigation Measure AIR-1A. Offsetting annual emissions inherently includes offsetting daily emissions. Therefore, no additional offsets will be required for daily NOx emissions.

SCVWD will engage a private broker to facilitate the purchase of credits through the BAAQMD emissions bank. Purchase of these credits from the BAAQMD emissions bank will ensure that NOx offsets occur in the SFBAAB. Once NOx emission reduction credits are purchased for a given quantity, that amount of NOx will be offset in perpetuity. Therefore, a one-time purchase of 9 tons of credits will mitigate for the duration of the SMP Update (2012-2022) as well as for future SMP-related emissions beyond 2022, assuming emissions will not have increased.

Documentation of purchased NOx offsets will be provided to the BAAQMD.

Mitigation Measure BIO-1: Implement Compensatory Mitigation for Wetlands and Other Waters

The compensatory mitigation package, which is detailed in Appendix C, 2012–2022 SMP Update Mitigation Approach Memorandum, shall be implemented to compensate for new impacts (i.e., work areas not included in the 2002–2012 work projections) on wetlands (both jurisdictional and non-jurisdictional) and on jurisdictional “other waters”; no mitigation is necessary for impacts to non-jurisdictional “other waters”, which are limited to unvegetated areas of inoperable canals. For work areas included in the 2002–2012 work projections, previously provided mitigation would continue to serve as mitigation in perpetuity, as no new significant environmental effects or a substantial increase in the severity of previously identified significant effects are anticipated under the SMP Update.

Following the procedure described in Appendix C, the SCVWD would refine the quantification of impacts to wetlands and other waters that occur during a specific year, tallying the impact totals at the end of the year, and compensatory mitigation will be implemented the following year, in many cases. Exceptions will occur in cases in which compensatory mitigation is incorporated directly into Proposed Project work areas; in those cases, compensatory mitigation may be implemented during the same year in which impacts occur. Details regarding performance criteria for mitigation, as well as for monitoring and reporting, are described in Appendix C.

According to the mitigation package, SCVWD will have several options for satisfying mitigation requirements for impacts to wetlands and other waters by the SMP. The two main types of mitigation that can be applied for impacts to non-tidal wetlands and other waters resulting from sediment removal, vegetation

management, canal maintenance, and minor maintenance are "in perpetuity" mitigation and "pay as you go" mitigation.

In perpetuity mitigation. For permanent impacts and, at the discretion of SCVWD, repetitive impacts to wetlands or other waters in a specific area, SCVWD will provide mitigation in perpetuity via one or more of the following methods:

- *In-kind restoration/creation*: SCVWD will restore, preserve, and manage wetlands and aquatic habitats, or substantially improve the quality of highly degraded wetlands and aquatic habitats at a ratio of 1.5:1, meaning 1.5 acres of wetlands or other waters shall be restored/created for every 1 acre of wetlands and other waters impacted by Proposed Project activities.

- *In-kind preservation and enhancement:* SCVWD will acquire, preserve, enhance, and manage lands that provide similar ecologic functions and values to the wetlands and other waters impacted by SMP maintenance activities. The acquisition and preservation/enhancement of these higher quality lands will occur at a ratio of 3:1, meaning 3 acres of wetlands or other waters shall be acquired, preserved, and enhanced for every 1 acre of wetlands and other waters impacted by Proposed Project activities. Enhancement may include modification of existing management, limited planting, or invasive plant removal, or other activities to enhance wetland/aquatic habitat functions and values.

- *Out-of-kind preservation of watershed lands:* SCVWD will acquire, preserve, enhance, and manage watershed lands. These lands provide more general conservation, open space, and habitat values. Although acquired lands would not be specifically tied or matched in-kind to wetland impacts, as they can include a variety of non-wetland/aquatic habitats, their preservation and management will help to maintain the quality or wetlands and aquatic habitats through management focused on benefits to the aquatic environment, such as management to reduce erosion and sedimentation. The acquisition of more general watershed conservation lands will occur at a ratio of 8:1, meaning 8 acres of land shall be acquired and restored for every 1 acre of impacted habitats resulting from Proposed Project activities.

- *Enhancement or management of land that is owned by other agencies:* SCVWD may collaborate with owners of land that is currently managed for open space or passive recreation. In such cases, SCVWD would not acquire the mitigation lands but would enter into an agreement with the landowners to provide management and financial support toward preserving or improving the lands toward beneficial outcomes, including improved habitats. In these cases, a detailed management plan for species or habitats would be SCVWD's responsibility and would not necessarily be managed by the landowner. The mitigation accounting for such "partnership projects" and how much mitigation would be provided to account for SMP Update activities would be reviewed and developed with regulatory staff on a case-by-case basis.

For any of the three mitigation options above, the mitigation areas will be preserved and managed in perpetuity by SCVWD. Mitigation could occur on lands acquired or owned by SCVWD, or on permanently protected lands not owned by SCVWD but by another entity (e.g., an open space district or park lands). These options would reduce impacts to wetlands and aquatic habitats to less-than significant levels by directly replacing wetlands (in-kind restoration/creation); directly improving the functions and values of existing wetlands and maintaining those resources through long-term management (in-kind preservation and enhancement); or indirectly enhancing and/or protecting wetland and aquatic functions and values by protecting watershed lands that contribute to wetland and aquatic habitat ecology and integrity (out-of-kind preservation of watershed lands). The mitigation ratios for these three options were selected to reflect the relative value of each type of mitigation, with in-kind restoration/creation having the lowest mitigation ratio to reflect its direct compensation for lost wetlands, and out-of-kind preservation of watershed lands having the highest mitigation ratio to reflect its more indirect value in protecting and enhancing wetlands and aquatic habitats. Because acquisition lands will be conserved in perpetuity, the mitigation they provide will also serve the SMP in perpetuity. As a result, if in-perpetuity mitigation were applied to impacts to wetlands and other waters in a certain area, no further mitigation would be needed if repetitive impacts to that area were to occur, in perpetuity.

Pay as you go mitigation. Unless it specifically decides to use in perpetuity mitigation to compensate for impacts to wetlands and aquatic habitats in a certain area (e.g., an area where sediment removal or vegetation management will have frequent, repetitive impacts), SCVWD will use two programs (invasive

plant management and riparian planting) to provide incremental "pay as you go" habitat mitigation to compensate for annual impacts to wetlands and aquatic habitats from sediment removal and vegetation management activities. A mitigation ratio of 1.2:1 (area mitigated to area impacted) shall be applied for habitat impacts from sediment removal and vegetation management activities. SCVWD can use either the invasive plant management program or the riparian planting program (or a combination of the programs) to achieve this net mitigation target for annual activities.

Invasive plant management. The primary goal of the invasive plant management program (IPMP) element of the SMP's compensatory mitigation package is to preserve and improve habitat within Santa Clara County streams and riparian corridors by reducing the population of invasive plant species. The IPMP will have a two-pronged approach:

- a systematic program with the longer-term objective of identifying, prioritizing, and controlling invasive plants throughout the Project Area; and

- an opportunistic, site-specific approach with the objective to remove invasive plants from individual SMP work sites. (As mitigation for vegetation management activities, each of the SMP maintenance sites will be evaluated for on-site invasive plant removal and control. Invasive plant management will focus on controlling species that are invasive at individual SMP work sites.)

Riparian planting. The primary goal of the riparian planting component of the SMP mitigation package is to compensate for the loss of quality and quantity of native-dominated riparian habitat because of maintenance activities. Riparian planting will enhance habitat for birds, amphibians, and other wildlife using terrestrial riparian areas while providing shading, sources of organic matter and coarse woody debris, and water quality benefits to aquatic species.

Opportunities for riparian planting and restoration will be evaluated at all vegetation management maintenance locations. SCVWD's preference will be to first prioritize riparian planting at maintenance sites, and in this way provide direct on-site mitigation for maintenance activities. Riparian planting and restoration will provide mitigation that directly addresses impacts associated with vegetation management activities. Where opportunities for onsite riparian planting and restoration are unavailable or highly constrained, SCVWD will identify offsite locations that can provide suitable mitigation opportunities. Off-site riparian planting restoration sites will be prioritized to:

- stream reaches with riparian restoration opportunities for sensitive fish and/or wildlife species;

- stream reaches where riparian restoration of existing riparian canopy gaps will improve connectivity between existing patches of high-quality riparian habitat; and

- stream reaches with riparian habitat gaps where invasive plant species have been treated to accelerate native riparian plant establishment and inhibit re-colonization by invasive plant species.

Although invasive species management and riparian planting do not result in the direct replacement of lost or degraded wetland habitat, they do contribute substantially to the protection and enhancement of aquatic functions. As a result, riparian buffer plantings have been recognized as an appropriate component of programs to mitigate impacts to jurisdictional wetlands and other waters of the U.S. by the USACE (2002).

The "pay as you go" mitigation areas will not be preserved and managed in perpetuity. However, several factors were considered in determining that these components of the mitigation plan will reduce residual impacts to wetlands and aquatic habitats to less-than-significant levels:

- These "pay as you go" mitigation options will benefit wetlands and aquatic habitats indirectly, by increasing the functions and values of existing wetland and aquatic habitats.

- Any riparian planting area used as pay as you go mitigation for impacts to wetlands or aquatic habitats will remain unimpacted for at least 10 years; or, if the mitigation area is impacted within 10 years, it will then be replaced elsewhere.

- Pay as you go mitigation will be provided each time a specific area of wetlands or other waters is impacted. For example, if the same 1-acre area were impacted three times during the 10-year SMP

Update period, then 3.6 acres of pay as you go mitigation will be provided for impacts to that area during the 10-year period.

- Impacts to any specific area will degrade, but will not entirely remove, wetland and aquatic functions and values within the impact area.

Mitigation for Bank Stabilization Impacts. Impacts to non-tidal wetlands and aquatic habitats resulting from bank stabilization will be provided via the methods described in Appendix C and using the mitigation ratios identified in Table 2-4. ~~Softscape repairs will be self mitigating because they will not result in long-term adverse effects.~~ Mitigation may occur through a combination of replacement of "hard" stabilization measures with soft, biotechnical measures (either on the stabilization site or off-site) or out-of-kind via riparian revegetation as determined by a Mitigation Feasibility Assessment, as described in Appendix C. These measures will reduce impacts to wetlands and aquatic habitats resulting from bank stabilization by increasing the functions and values of existing wetland and aquatic habitats.

Mitigation for Impacts to Tidal Wetlands and Other Waters. SCVWD will continue to implement mitigation measures adopted to reduce impacts for the SMP. Although the 2012 project description has changed, this FSEIR has examined the Proposed Project changes and determined that the existing tidal marsh restoration mitigation measures will continue to reduce the Proposed Project impacts to less than significant. The 2012 SMP Update will be a continuation from the 2002 SMP, with some program modifications; although the work activities are updated, the original mitigation remains, along with the resulting benefits.

As mitigation for impacts to tidal habitats and tidal marsh species predicted to result from the 2002–2012 SMP work activities, SCVWD restored the "Island Ponds" (Ponds A19, A20, and A21), located between Coyote Slough and Mud Slough near Alviso, to tidal action. Restoring these ponds provided 30 acres of tidal habitat that is used by a variety of tidal marsh species. Monitoring has documented achievement of all performance criteria appropriate for the development of both vegetated tidal salt/brackish marsh and tidal aquatic habitat, ~~including~~with the formation of nascent tidal marsh habitat, including extensive channel networks, within these ponds.

The 2002 SMP work projections provided the basis for determining the SMP's initial, upfront compensatory mitigation. As a result of those projections, impacts to tidal habitats for the 2002-2012 SMP Update were calculated with a mitigation requirement of 30 acres of tidal restoration. SCVWD already has met this obligation by restoring 30 acres of tidal habitat with the "Island Ponds." ~~Thirty acres of tidal restoration within the Island Ponds was intended to serve as mitigation for impacts to tidal habitats for the 2002–2012 SMP.~~ However, not all of the 2002 projected work has actually been performed. Thus, the 2002 mitigation of 30 acres of restored tidal habitat paid for more work than was conducted. Based on the actual impacts from activities conducted between 2002–2012 ~~Proposed Project activities~~, only 9 acres of tidal mitigation ~~will be~~is needed to compensate for those impacts.

The 2002–2012 SMP created an upfront compensatory mitigation package to account for SMP impacts in perpetuity. The 2012–2022 SMP Update has modified the project description to refine maintenance work activity needs. The updated project description in this FSEIR is a continuation, with modifications, of the 2002–2012 SMP.

SCVWD will remove the 2002 work activity projections that would have resulted in the need for 21 tidal habitat mitigation acres. The removal of these projections, therefore, will equate to having 21 acres of tidal habitat mitigation that is not attributed to ongoing SMP impacts. ~~Therefore, SCVWD created 21 acres of excess tidal habitats.~~ SCVWD will use the 21 acres of ~~excess~~ tidal ~~marsh~~habitat restoration as available mitigation for impacts to tidal wetlands and aquatic habitats, as well as tidal marsh species, that may occur under the 2012–2022 SMP Update. ~~Physical breaching of the Island Pond levees and other physical work required for this tidal restoration has already occurred, and no further activities (other than continued monitoring of marsh development per the 2002–2012 SMP monitoring requirements) are proposed by SCVWD.~~

It is possible that these mitigation measures may be refined during permitting with the USACE, RWQCB, and CDFG, in which case the refinements required by these resource agencies would be implemented.

MM BIO-1 will mitigate impacts to wetlands and other waters, including jurisdictional waters of the U.S./state, to less-than-significant levels by replacing lost wetlands and aquatic habitats through restoration or by replacing the lost functions and values provided by these habitats through other means, such as non-native plant removal and watershed protection. Thus, MM BIO-1 will assure that the SMP does not result in a substantial adverse effect on federally protected wetlands or on sensitive wetland and aquatic communities.

Mitigation Measure BIO-2: Implement Compensatory Mitigation for Woody Riparian Vegetation

The compensatory mitigation package, which is incorporated into the Proposed Project and detailed in Appendix C, shall be implemented to compensate for new impacts (i.e., work areas not included in the 2002–2012 work projections) on woody riparian vegetation. For work areas included in the 2002–2012 work projections, previously provided mitigation would continue to serve as mitigation in perpetuity, as no new significant environmental effects or a substantial increase in the severity of previously identified significant effects are anticipated under the updated program.

Following the procedure described in Appendix C, the SCVWD would refine the quantification of impacts to riparian vegetation that occur during a specific year, tallying the impact totals at the end of the year, and compensatory mitigation will be implemented the following year, in many cases. Exceptions will occur in cases in which compensatory mitigation is incorporated directly into the SMP work areas; in those cases, compensatory mitigation may be implemented during the same year in which impacts occur. Details regarding performance criteria for mitigation, as well as for monitoring and reporting, are described in Appendices C and Appendix L.

According to the mitigation package, SCVWD will have several options for satisfying mitigation requirements for impacts to riparian vegetation by the SMP. The two main types of mitigation that can be applied for impacts to riparian vegetation resulting from sediment removal, vegetation management, canal maintenance, and minor maintenance are “in perpetuity” mitigation and “pay as you go” mitigation. These mitigation options would be applied to riparian vegetation as described in Mitigation Measure BIO-1 for wetlands and other waters.

For any of the three “in perpetuity” mitigation options, the mitigation areas will be preserved and managed in perpetuity by SCVWD or a land management agency. These options will reduce impacts to riparian vegetation to less-than significant levels by directly replacing such vegetation (in-kind restoration/creation); directly improving the functions and values of existing riparian vegetation and maintaining those resources through long-term management (in-kind preservation and enhancement); or indirectly enhancing and/or protecting riparian functions and values by protecting watershed lands that contribute to riparian habitat ecology and integrity (out-of-kind preservation of watershed lands). The mitigation ratios for these three options were selected to reflect the relative value of each type of mitigation, with in-kind restoration/creation having the lowest mitigation ratio to reflect its direct compensation for lost riparian vegetation, and out-of-kind preservation of watershed lands having the highest mitigation ratio to reflect its more indirect value in protecting and enhancing riparian vegetation. Because acquisition lands will be conserved in perpetuity, the mitigation they provide also will serve the SMP in perpetuity. As a result, if in-perpetuity mitigation is applied to impacts to riparian vegetation in a certain area, no further mitigation will be needed if repetitive impacts to that area occurs, in perpetuity.

“Pay as you go” mitigation via invasive plant management and riparian planting will directly compensate for impacts to riparian vegetation. In many areas, invasive plant management will remove invasive species that occupy areas that otherwise can support riparian vegetation, and that threaten further to invade riparian areas. Riparian planting obviously will provide in-kind mitigation for impacts to riparian vegetation.

Mitigation for bank stabilization impacts also will be provided, as described in Mitigation Measure BIO-1 for wetlands and other waters.

Two components of the mitigation package that are directly applicable to the compensation for impacts to riparian vegetation, but that were not applicable to (and thus not discussed in) Mitigation Measure BIO-1, are mitigation for pruning and mitigation for removal of trees 6-12 inches dbh (removal of trees greater than 12 inches dbh is not included in the SMP).

The mitigation requirement for pruning is the same as the riparian replanting mitigation ratio of 1.2:1. Based on the International Society of Arboriculture pruning standards, and the SMP Manual (Appendix A), no more than 25 percent of a tree would be pruned, unless greater pruning is necessary for safety or specific ecological purposes (e.g., codominant stem species). Applying the degree of impact (25 percent of any given tree) to the mitigation ratio of 1.2:1, the resulting mitigation factor is 0.3. Up to 40 acres of pruning may occur, and thus the resulting mitigation acreage necessary is 12 acres (40 acres x 0.3). Whereas other mitigation will be calculated on an annual basis, these 12 acres of mitigation will be provided for the entire program, and a maximum (or "cap") of 40 acres of hand pruning will be established for the entire program for the period 2012–2022.

Removal of trees up to 6 inches dbh will not require mitigation on a tree-by-tree basis; rather, impacts to woody riparian vegetation comprised of trees or shrubs less than 6 inches dbh will be mitigated (as described above) via in perpetuity or pay as you go mitigation. However, removal of trees sized 6-12 inches dbh will be mitigated through the individual planting of replacement trees. Appendix B in the 2012–2022 SMP Update Mitigation Approach Memorandum (Appendix C), Tree Scoring for Removal of Trees and Shrubs ≤ 12"DBH provides a specific tree appraisal and evaluation protocol to determine how replacement planting occurs. The protocol involves carefully assessing targeted tree removals for their existing conditions and functions, including their canopy cover, local area value, ecosystem benefits, and ecosystem detriments. Using a cumulative ranking method, tree replacement mitigation ratios for removed trees (6-12 inches dbh) occurs at either 1:1, 2:1, or 3:1 (replacement tree to removed tree), depending on the overall quality and function of the removed tree.

Impacts to riparian vegetation containing trees 6-12 inches dbh are, therefore, mitigated in two ways—mitigation on an acreage basis via in perpetuity or pay as you go mitigation, plus mitigation via replacement of trees 6-12 inches dbh. The two mitigation areas will be non-overlapping. As a result, the extent of mitigation for impacts to more mature woody riparian vegetation will be greater, as is appropriate based on the greater functions and values to wildlife, than impacts to less mature riparian vegetation.

As part of the riparian mitigation component, SCVWD will mitigate impacts to sensitive riparian communities, including sycamore alluvial woodland and oak woodland, in-kind. For a specific extent of impact to sycamore alluvial woodland or oak woodland, the in perpetuity or pay as you go mitigation that is applied to that impact will focus on enhancement, preservation, and/or restoration of that sensitive community type; removal of invasives will not be considered appropriate mitigation for these sensitive community types unless accompanied by restoration that targets that community type. Similarly, when impacts to high-quality occurrences of cottonwood-dominated forest occur, SCVWD will mitigate by providing cottonwood-dominated mitigation sites. "High-quality" occurrences will be determined by a qualified botanist based on criteria such as evidence of natural regeneration and the presence of multi-layered and multi-aged stands.

It is possible that these mitigation measures may be refined during permitting with the USACE, RWQCB, and CDFG, in which case the refinements required by these resource agencies would be implemented.

MM BIO-2 will mitigate impacts to riparian habitats to less-than-significant levels by replacing lost riparian vegetation through restoration or by replacing the lost functions and values provided by these habitats through other means, such as non-native plant removal and watershed protection. Thus, MM BIO-2 will assure that the SMP does not result in a substantial adverse effect on sensitive riparian communities.

Mitigation Measure BIO-3: Implement Compensatory Mitigation for Serpentine Communities

SCVWD will provide mitigation for unavoidable impacts to high-quality serpentine communities, including grassland, rock outcrops, seeps, and chaparral. SCVWD would refine the quantification of impacts to high-quality serpentine habitat on an annual basis. Along SCVWD's canals, where most or all SMP impacts to serpentine species and communities are expected to occur, high-quality serpentine communities were mapped by SCVWD using data gathered during surveys in 2004 and 2008. Serpentine communities are considered to be of "high quality" if they are in a semi-natural or natural/undisturbed state and meet one or both of the following criteria:

- Presence of multiple special-status plant occurrences
- Relatively high abundance of natives or serpentine obligates vs. non-natives

Before Proposed Project activities that can impact serpentine communities and species, an SCVWD botanist will conduct a review of potential serpentine impact areas using existing data, such as SCVWD's mapping, and field verification as needed, to identify high-quality serpentine communities. At the end of that year's maintenance period, SCVWD will determine the extent of impacts to high-quality serpentine communities that have occurred during the year.

Compensation for unavoidable effects to high-quality serpentine communities will be provided via the protection, enhancement, and management of serpentine communities outside SMP work sites at a 2:1 (mitigation:impact~~:mitigation~~) ratio, on an acreage basis. SCVWD will acquire land supporting serpentine communities via fee title or purchase of a conservation easement. Compensatory mitigation may be carried out through one or both of the following methods, in order of preference:

- The preservation and management of existing serpentine communities
- The restoration or enhancement of previously existing or degraded serpentine communities

SCVWD will develop a Habitat Mitigation and Management Plan (HMMP), describing the measures that will be taken to enhance and manage the mitigation lands and to monitor the effects of management on serpentine communities. That plan will include, at a minimum, the following:

- A summary of impacts to high-quality serpentine communities and the proposed mitigation
- A description of the location and boundaries of the mitigation site and description of existing site conditions
- A description of measures to be undertaken if necessary to enhance (e.g., through focused management) the mitigation site for serpentine communities
- Proposed management activities, such as managed grazing and management of invasive plants, to maintain high-quality serpentine communities
- A description of community monitoring measures on the mitigation site, including specific, objective goals and objectives (including maintaining or increasing native plant species diversity), performance indicators and success criteria (including maintaining or increasing the relative abundance of native vs. non-native species), monitoring methods (including vegetation sampling for plant species composition), data analysis, reporting requirements, and monitoring schedule

  (Determining other specific performance/success criteria requires information regarding the specific mitigation site, its conditions, the biological resources present on the site, and the specific enhancement and management measures tailored to that site and its conditions. As a result, additional~~those~~ specific criteria will be defined in the HMMP rather than in this SEIR. Nevertheless, the performance/success criteria described in the HMMP will guide the mitigation for management and protection of high-quality serpentine communities to adequately compensate for the functions and values of the impacted communities.)
- A description of the management plan's adaptive component, including potential contingency measures for mitigation elements that do not meet performance criteria
- A description of the funding mechanism for the long-term maintenance and monitoring of the mitigation lands

After mitigation has been provided for impacts to a specific area supporting high-quality serpentine communities and/or special-status species from a specific year's activities, future (i.e., repetitive) impacts to that area will not require additional mitigation.

The HMMP will be provided to the USFWS for review because some of the serpentine-associated special-status species that would benefit from this mitigation are federally listed species regulated by the USFWS. It is possible that this mitigation measure may be refined during the Section 7 consultation process with the

USFWS (e.g., in the Biological Opinion covering Project effects on federally listed, serpentine-associated species), in which case the refinements required by the USFWS would be implemented.

MM BIO-3 will mitigate impacts to sensitive serpentine communities to less-than-significant levels by replacing the functions and values provided by such communities through the enhancement, management, and protection of serpentine communities. Thus, MM BIO-3 will assure that the SMP does not result in a substantial adverse effect on sensitive serpentine communities or threaten to eliminate this plant community.

Mitigation Measure BIO-4: Implement Compensatory Mitigation for Serpentine-Associated Special-Status Plant Species

SCVWD will provide mitigation for unavoidable impacts to serpentine-associated special-status plant populations. Before Proposed Project activities that can impact serpentine communities and species, an SCVWD botanist will conduct a review of potential serpentine impact areas using existing data, such as SCVWD's mapping, and field verification as needed, to identify high-quality serpentine communities. The botanist also will conduct a pre-activity survey for special-status plants. At the end of that year's maintenance period, SCVWD would refine the quantification of impacts to populations of special-status serpentine-associated plants.

Compensation for unavoidable impacts to populations of special-status serpentine-associated plants will be provided by a combination of preservation and enhancement of those species' populations outside SMP work sites. For impacts to populations (including partial populations) of a specific special-status serpentine plant species, compensatory mitigation will include preservation, enhancement, and management of lands that (a) already support equal or greater numbers (and health) of individuals of that species and (b) contain sufficient unoccupied habitat to allow for an increase in populations, the increase being at least equivalent to the number impacted, through habitat enhancement and management. For determining the number of individuals impacted, the highest number of individuals known to be present within the impact area (if the impact area has undergone multiple surveys) will be used to determine the magnitude of the impact.

Compensatory mitigation for impacts to high-quality serpentine communities (as discussed in Mitigation Measure BIO-3) and special-status serpentine-associated plants may occur on the same lands, provided that the conditions pertaining to special-status plant species are satisfied for each species for which mitigation is required. The HMMP that will be prepared by SCVWD to describe the measures that will be taken to enhance, manage, and monitor the mitigation lands (as discussed in Mitigation Measure BIO-3) also will include consideration of focal special-status species. For example, in addition to the measures described in Mitigation Measure BIO-3, the HMMP also will include the following:

- A summary of impacts to special-status plant populations and the proposed mitigation
- A description of measures to be undertaken if necessary to enhance (e.g., through focused management) the mitigation site for special-status species
- A description of measures to transplant individual plants or seeds from the impact area to the mitigation site, if determined by a qualified botanist to be appropriate and to have a high likelihood of success
- Proposed management activities, such as managed grazing and management of invasive plants, to maintain high-quality habitat conditions for the focal species
- A description of species monitoring measures on the mitigation site, including specific, objective goals and objectives (including enhancement of populations of focal special-status species on the mitigation site), performance indicators and success criteria (including increasing the abundance of the focal species by at least as many individuals as were impacted), monitoring methods (including sampling for the focal species), data analysis, reporting requirements, and monitoring schedule. Determining other specific performance/success criteria requires information regarding the specific mitigation site, its conditions, the biological resources present on the site, the specific plant species for which mitigation is being provided, and the specific enhancement and management measures tailored to the mitigation site and its conditions. As a result, ~~those~~ additional specific criteria will be defined in the HMMP rather than in this SEIR. Nevertheless, the

performance/success criteria described in the HMMP will guide mitigation to manage and protect high-quality serpentine habitat for, and populations of, the impacted species. The HMMP will include monitoring for non-native plant species and remediation measures in the event that such species are detected on the site.

After mitigation has been provided for impacts to special-status plant populations in a specific area from a specific year's activities, future (i.e., repetitive) impacts to that area will not require additional mitigation.

The HMMP will be provided to the USFWS for review because some of the serpentine-associated special-status species for which the HMMP will be prepared are federally listed species regulated by the USFWS. It is possible that this mitigation measure may be refined during the Section 7 consultation process with the USFWS (e.g., in the Biological Opinion covering Project effects on federally listed, serpentine-associated species), in which case the refinements required by the USFWS would be implemented.

MM BIO-4 will mitigate impacts to special-status serpentine-associated plants to less-than-significant levels by enhancing, managing, and protecting populations of these species so that the SMP does not substantially reduce the number or restrict the range of rare or endangered serpentine-associated plants or have a substantial adverse effect on special-status serpentine-associated plants.

Mitigation Measure BIO-5: Implement Compensatory Mitigation for Impacts to Non-Serpentine Special-Status Plant Species

If Proposed Project activities result in the loss of individual non-serpentine special-status plants, other than the Santa Clara red ribbons, Hospital Canyon larkspur, western leatherwood, Hall's bush-mallow, and robust Monardella, compensatory mitigation will be provided. Before Proposed Project activities that can impact these special-status species, an SCVWD botanist will conduct a review of potential impact areas using existing data, and field verification as needed, to identify areas of potential occurrence of these species. The botanist also will conduct a pre-activity survey for special-status plants in areas where occurrence is possible. At the end of that year's maintenance period, SCVWD will determine the extent of impacts to populations of these special-status plants.

Compensation for unavoidable impacts to populations of special-status non-serpentine plants will be provided by a combination of preservation and enhancement of those species' populations outside SMP work sites. For impacts to populations (including partial populations) of a specific special-status plant species, compensatory mitigation will include preservation, enhancement, and management of lands that (a) already support equal or greater numbers (and health) of individuals of that species and (b) contain sufficient unoccupied habitat to allow for an increase in populations, the increase being at least equivalent to the number impacted, through habitat enhancement and management. For determining the number of individuals impacted, the highest number of individuals known to be present within the impact area (if the impact area has undergone multiple surveys) will be used to determine the magnitude of the impact.

SCVWD will develop an HMMP describing the measures that will be taken to enhance and manage the mitigation lands and to monitor the effects of management on the focal special-status plant species. That plan will include, at a minimum, the following:

- A summary of impacts to special-status plant populations, and the proposed mitigation
- A description of the location and boundaries of the mitigation site and description of existing site conditions
- A description of measures to be undertaken if necessary to enhance (e.g., through focused management) the mitigation site for special-status species
- A description of measures to transplant individual plants or seeds from the impact area to the mitigation site, if determined by a qualified botanist to be appropriate and to have a high likelihood of success
- Proposed management activities to maintain high-quality habitat conditions for the focal species

- A description of species monitoring measures on the mitigation site, including specific, objective goals and objectives (including enhancement of populations of focal special-status species on the mitigation site), performance indicators and success criteria (including increasing the abundance of the focal species by at least as many individuals as were impacted), monitoring methods (including sampling for the focal species), data analysis, reporting requirements, and monitoring schedule. Determining other specific performance/success criteria requires information regarding the specific mitigation site, its conditions, the biological resources present on the site, the specific plant species for which mitigation is being provided, and the specific enhancement and management measures tailored to the mitigation site and its conditions. As a result, additional~~those~~ specific criteria will be defined in the HMMP rather than in this SEIR. Nevertheless, the performance/success criteria described in the HMMP will guide the mitigation to manage and protect high-quality habitat for, and populations of, the impacted species. The HMMP will include monitoring for non-native plant species and remediation measures in the event that such species are detected on the site.

- A description of the management plan's adaptive component, including potential contingency measures for mitigation elements that do not meet performance criteria

- A description of the funding mechanism for the long-term maintenance and monitoring of the mitigation lands

After mitigation has been provided for impacts to a specific area supporting special-status species from a specific year's activities, future (i.e., repetitive) impacts to that area will not require additional mitigation.

MM BIO-5 will mitigate impacts to special-status non-serpentine plants to less-than-significant levels by enhancing, managing, and protecting populations of these species so that the SMP does not substantially reduce the number or restrict the range of rare or endangered non-serpentine plants or have a substantial adverse effect on special-status non-serpentine plants.

Mitigation Measure BIO-6: Implement Compensatory Mitigation for Impacts to Serpentine-Associated Special-Status Invertebrates

SCVWD will compensate for its impacts to populations and habitat of serpentine-associated special-status invertebrates through the preservation and management of serpentine communities as described for Mitigation Measure BIO-3. The procedures for identifying impacts to potential habitat of these species will occur as described for serpentine communities under Mitigation Measure BIO-3. Mitigation lands will be preserved and managed as described for Mitigation Measure BIO-3 as well, with the qualification that for any impacts to high-quality serpentine communities within Bay checkerspot butterfly critical habitat, the compensatory mitigation lands also must be in Bay checkerspot critical habitat. The management and monitoring of mitigation lands, as described in the HMMP, will include measures specifically targeting the Bay checkerspot butterfly, which will serve as a proxy for the other special-status invertebrates.

The HMMP will be provided to the USFWS for review because one of the serpentine-associated special-status species (Bay checkerspot butterfly) for which this HMMP will be prepared is a federally listed species regulated by the USFWS. It is possible that this mitigation measure may be refined during the Section 7 consultation process with the USFWS (e.g., in the Biological Opinion covering Project effects on the Bay checkerspot butterfly), in which case the refinements required by the USFWS would be implemented.

MM BIO-6 will mitigate impacts to serpentine-associated special-status invertebrates to less-than-significant levels by enhancing, managing, and protecting populations of these species so that the SMP does not substantially reduce the number or restrict the range of rare or endangered serpentine-associated invertebrates or have a substantial adverse effect on special-status serpentine-associated invertebrates.

Mitigation Measure BIO-7: Tree Replacement

The SCVWD will replace ordinance trees as follows. As discussed under Mitigation Measure BIO-2, removal of trees sized 6-12 inches dbh will be mitigated through the individual planting of replacement trees. Section 5.5 in Appendix C (Mitigation for Tree and Shrub Removals 6–12 inches dbh) provides a specific tree appraisal and evaluation protocol to determine how replacement planting should occur. The protocol in Section 5.5 of Appendix C will involve carefully assessing targeted tree removals for their existing conditions and functions, including their canopy cover, local area value, ecosystem benefits, and ecosystem

detriments. Using a cumulative ranking method, tree replacement mitigation ratios for removed trees (6-12 inches dbh) will occur at either 1:1, 2:1, or 3:1 (replacement tree to removed tree), depending on the overall quality and function of the removed tree. Therefore, if any trees 6-12 inches dbh that are removed are ordinance trees (depending on the locality in which tree removal occurs), then mitigation will be provided as described in Section 5.5 of Appendix C.

It is possible that this mitigation measure may be refined during the permitting process by the USACE, CDFG, or RWQCB, in which case the refinements required by these agencies would be implemented.

MM BIO-7 will mitigate impacts to ordinance trees to less-than-significant levels by replacing trees that are removed so that the SMP does not conflict with the provisions of local tree ordinances.

Mitigation Measure BIO-8: Augmentation of Spawning Gravel

SCVWD will implement gravel augmentation as mitigation for SMP impacts to CCC and SCCC steelhead spawning habitat. If more than ~~500~~ 100 square feet of sediment removal is proposed along steelhead streams, an SCVWD fisheries ecologist will assess the sediment removal site for spawning and rearing habitat quality before the initiation of work. The biologist will determine the extent of sediment that is proposed for removal and that is considered to be "high-quality" spawning gravel, based on the following criteria:

- Less than 25-30 percent fines less than 6.35 mm (Kondolf 2000, Kondolf and Wolman 1993)
- Less than 12-14 percent fines less than 0.85 mm (Kondolf 2000)
- D50 (median particle size) of 12.5 to 22.0 mm, based on D50 of rainbow trout and steelhead from 30 to 65 cm length (Kondolf and Wolman 1993), corresponding to a range of 275 to 640 cm of steelhead adults recovered in streams of the San Francisco estuary (Leidy et al. 2005)
- Minimum patch size greater than 1.1 m2 (Trush 1991)

The habitat needs to be accessible under typical flows for when the appropriate life stages are present. Suitable depths and velocities must be available during flows typical of spawning season. Factors related to accessibility include depth and velocity criteria, which for spawning, are:

- Depth: 10–150 cm (Moyle 2002)
- Velocity: 20–155 cm/s (Moyle 2002)

If more than ~~500~~ 100 square feet of high-quality gravel will be removed along steelhead streams, compensatory mitigation will be provided by the installation of suitable spawning gravel along the affected creek at a 1:1 (mitigation:impact) ratio on a square footage or acreage basis. Locations where sediment removal is performed at fish ladders will not require gravel augmentation. The mitigation site will be as close to the impacted reach as is feasible, and will be located within a steelhead-accessible reach of the same creek. The site will be selected with input from the fisheries ecologist, taking channel capacity and other SMP-related factors into account. The fisheries ecologist will prepare specifications for the mitigation, including size, type, depth, and configuration of gravel. The mitigation will be implemented within 1 year following the impact.

Mitigation Measure BIO-9: Augmentation of Instream Complexity for Non-Tidal Stream Fish

SCVWD will provide mitigation for loss of instream complexity, which provides habitat heterogeneity, cover, and refugia during high flows, by in-kind installation of structures that provide such complexity. Before sediment removal, bank stabilization, or large woody debris removal activities, the affected area will be surveyed by an SCVWD fisheries ecologist to identify any features that provide high-quality instream complexity for fish. The ecologist will determine that such features are of "high quality" based on a ~~combination~~the presence of one or more of the following criteria:

- Large woody debris providing cover and refugia from high flow velocities

- Deep pools providing rearing habitat and refugia from high flow velocities
- Cobble/boulder features providing cover, refugia from high flow velocities, and velocities suitable for good invertebrate drift

If such high-quality features must be removed during Proposed Project activities, compensatory mitigation will be provided by the installation of instream complexity features on a 0.~~5~~1:1 (impact:mitigation~~:impact~~) basis, on the basis of either the number of complexity features or the area that is affected hydraulically by the features that are removed; the fisheries ecologist will determine which of these two metrics is appropriate based on the values to fish provided by the impacted features. Thus, one instream complexity feature will be installed for every ~~two~~ one that ~~are~~ is removed, or an instream complexity feature hydraulically affecting roughly ~~half~~ the same area of the feature(s) removed will be installed. ~~This ratio is less than 1:1 under the understanding that erosion, deposition, tree falls, and debris mobilization within a few years following the removal of instream complexity will naturally reintroduce some complexity to the stream.~~

As examples, enhancing instream complexity may involve:

- enlarging an existing large woody debris feature;
- anchoring a large woody debris feature;
- geomorphically shaping an instream bar or bed feature for improved habitat;
- enhancing a pool feature threatened by sedimentation; or
- enhancing streambed conditions to increase the range of flow velocity and habitat conditions.

Priority for these mitigation activities will be given to SMP sites where instream features cannot be retained during construction because of conflicting objectives. For example, if a channel pool configuration cannot be retained during a bank protection job and the area is devoid of other complex pool features, then this area will be evaluated for the addition of an instream complexity feature.

In addition to enhancing existing features, new instream features may be developed to achieve several habitat objectives, including: increasing pool habitat in homogenized stream reaches, providing escape cover for rearing and spawning fish, deepening feeding areas in riffle habitat, creating a variety of stream flow velocities for cover, sorting gravel, and providing resting areas for upstream migration. Additionally, improving instream function can benefit other aquatic flora and fauna by improving the overall stream complexity for which these species depend on for survival. If effective, such new instream complexity features (particularly in highly modified, urban streams) can augment or replace existing structural features required for successful reproduction and rearing of native fish and amphibians in the freshwater environment.

Newly developed instream habitat improvements may use log structures, boulder structures, or a combination of both log and boulder structures to achieve more complex habitats. Possible configurations of boulders or logs include weirs, clusters, single and opposing wing deflectors, spider logs, and digger logs. The construction materials selected for each instream complexity feature will depend on the target objective and site conditions.

The selected mitigation site will be as close to the impacted reach as is technically feasible. For instream complexity features that are removed by sediment removal or bank stabilization activities, mitigation will be incorporated into the same reach where complexity was removed to the extent feasible. The site will be selected with input from the fisheries ecologist, taking channel capacity and other SMP-related factors into account. The fisheries ecologist will prepare specifications for the mitigation, including size, type, and configuration of the feature. The mitigation will be implemented within 1 year following the impact. The fisheries ecologist will then inspect the completed complexity feature to assure that it meets the criteria for “high quality” instream complexity listed above.

It is possible that MM BIO-8 and MM BIO-9 may be refined during the Section 7 consultation process with the NMFS (e.g., in the Biological Opinion covering Project effects on steelhead) or by the USACE, CDFG, or

RWQCB in permits issued by these agencies, in which case the refinements required by these agencies would be implemented.

MM BIO-8 and BIO-9 together will mitigate impacts to steelhead to less-than-significant levels by enhancing habitat for this species so as to protect its populations, thereby ensuring that the SMP does not substantially reduce the number or restrict the range of this threatened species, have a substantial adverse effect on this special-status species, or impede the use of its nursery sites.

Mitigation Measure BIO-10: Implement Compensatory Mitigation for the California Tiger Salamander

SCVWD will provide mitigation to compensate for unavoidable impacts to California tiger salamanders and their habitat. SCVWD would refine the quantification of impacts to California tiger salamander habitat on an annual basis. At the end of each year's maintenance period, SCVWD will determine the extent of impacts to lands that are both within the potential range of the California tiger salamander and within potentially suitable habitat for the species. To determine whether the SMP impacts are within the potential range of the species, SCVWD will rely on the mapping in Figure 3.3-10 (which may be as modified over the course of 2012–2022, based on any new information that may modify the understanding of the species' potential range in the Project Area). To determine habitat suitability, an SCVWD biologist will determine whether the impact areas support land uses that are not conducive to California tiger salamander use, such as developed lands; all other land uses will be considered potential California tiger salamander habitat.

Compensation for these effects will be provided via the protection, enhancement, and management of habitat that currently supports, or can support, this species at a 2:1 (mitigation:impact~~:mitigation~~) ratio, on an acreage basis. Compensatory mitigation may be carried out through one or both of the following methods, in order of preference:

- The preservation, management, and enhancement (e.g., through long-term management targeted toward this species) of high-quality habitat that is already occupied by California tiger salamanders

- The restoration or enhancement of degraded habitat or habitat that is unsuitable for use by California tiger salamanders, but that (a) is in close proximity to areas of known occurrence and (b) can be made more suitable for use via construction of one or more breeding ponds or management to improve the quality and availability of burrows in upland habitat

Because most, if not all, impacts to California tiger salamander habitat will consist of modification of upland refugial/dispersal habitat (rather than aquatic breeding habitat), mitigation lands will also consist of upland habitat for this species. All mitigation lands for this species must be located within Santa Clara County and within the area where the species is thought to be extant as shown in Figure 3.3-10 (or as otherwise modified over the course of 2012–2022, based on any new information that may modify the understanding of the species' potential range in the Project Area). SCVWD will develop an HMMP describing the measures that will be taken to manage the property and to monitor the effects of management on the California tiger salamander. That plan will include, at a minimum, the following:

- a summary of impacts to California tiger salamander habitat and populations, and the proposed mitigation;

- a description of the location and boundaries of the mitigation site and description of existing site conditions;

- a description of measures to be undertaken if necessary to enhance (e.g., through focused management) the mitigation site for California tiger salamanders;

- proposed management activities, such as managed grazing, management of invasive plants, measures targeted at sustaining populations of burrowing mammals, or other measures to maintain high-quality habitat for California tiger salamanders;

- a description of species monitoring measures on the mitigation site, including specific, objective goals and objectives (including maintaining or improving habitat suitability for California tiger salamanders), performance indicators and success criteria (including maintaining or increasing the abundance of upland refugia for California tiger salamanders), monitoring methods (such as

sampling of the abundance of upland refugia), data analysis, reporting requirements, and monitoring schedule. Determining other specific performance/success criteria requires information regarding the specific mitigation site, its conditions, and the specific enhancement and management measures tailored to the mitigation site and its conditions. For example, performance criteria for a mitigation site providing only upland habitat for California tiger salamanders would include the maintenance of grassland habitat of a suitable height and density for burrowing mammals, and maintenance of suitable burrowing mammal populations, whereas a mitigation site providing salamander breeding habitat would also include criteria related to adequate depth and hydroperiod of breeding habitat. As a result, ~~those~~ additional specific criteria will be defined in the HMMP rather than in this SEIR. Nevertheless, the performance/success criteria described in the HMMP will guide the mitigation to manage and protect high-quality habitat for the California tiger salamander, adequate to compensate for impacts.

- a description of the management plan's adaptive component, including potential contingency measures for mitigation elements that do not meet performance criteria; and

- a description of the funding mechanism for the long-term maintenance and monitoring of the mitigation lands.

If lands that SCVWD currently owns, such as mitigation lands acquired for the California red-legged frog for the 2002–2012 SMP, can be enhanced (e.g., via the construction of breeding ponds) in such a way as to substantially improve their value to California tiger salamanders, then SCVWD may use those lands as mitigation for the California tiger salamander. After mitigation has been provided for impacts to a specific area supporting the California tiger salamander from a specific year's SMP Update activities, future (i.e., repetitive) impacts to that area will not require additional mitigation.

The HMMP will be provided to the USFWS and CDFG for review because this species is both state and federally listed. It is possible that this mitigation measure may be refined during the Section 7 consultation process with the USFWS (e.g., in the Biological Opinion covering Project effects on the California tiger salamander) or the Section 2081 consultation process with the CDFG (e.g., in an Incidental Take Permit), in which case the refinements required by these agencies would be implemented.

MM BIO-10 will mitigate impacts to the California tiger salamander to less-than-significant levels by enhancing, managing, and protecting habitat for this species so as to protect its populations, thereby ensuring that the SMP does not substantially reduce the number or restrict the range of this threatened/endangered species, have a substantial adverse effect on this special-status species, or impede the use of its nursery sites.

Mitigation Measure BIO-11: Implement Compensatory Mitigation for the California Red-Legged Frog

SCVWD will provide mitigation to compensate for unavoidable impacts to California red-legged frogs and their habitat. SCVWD would refine the quantification of impacts to California red-legged frog habitat on an annual basis. At the end of each year's maintenance period, SCVWD will determine the extent of impacts to lands that are both within the potential range of the California red-legged frog and within potentially suitable habitat for the species. To determine whether the SMP impacts are within the potential range of the species, SCVWD will rely on the mapping in Figure 3.3-13 (which may be as modified over the course of 2012–2022, based on any new information that may modify the understanding of the species' potential range in the Project Area). To determine habitat suitability, an SCVWD biologist will determine whether the impact areas support land uses that are not conducive to California red-legged frog use, such as developed lands; all other land uses will be considered potential California red-legged frog habitat.

Compensation for these effects will be provided via the protection, enhancement, and management of habitat that currently supports, or could support, this species at a 2:1 (mitigation:impact~~:mitigation~~) ratio, on an acreage basis. Compensatory mitigation may be carried out through one or both of the following methods, in order of preference:

- The preservation, management, and enhancement (e.g., through long-term management targeted toward this species) of high-quality habitat that is already occupied by California red-legged frogs

- The restoration or enhancement of degraded habitat or habitat that is unsuitable for use by

California red-legged frogs, but that (a) is in close proximity to areas of known occurrence and (b) could be made more suitable for use via construction of one or more breeding ponds, enhancement of breeding and non-breeding aquatic habitat via improvements to emergent vegetation or other cover, or management to improve the quality of upland habitat

Because much of the impact to California red-legged frog habitat will consist of modification of upland refugial/dispersal habitat (rather than aquatic breeding or foraging habitat), the mitigation lands will include upland habitat for this species. All mitigation lands for this species must be located within Santa Clara County and within the area where the species is thought to be extant as shown in Figure 3.3-13 (or as otherwise modified over the course of 2012–2022, based on any new information that may modify the understanding of the species' potential range in the Project Area). SCVWD will develop an HMMP describing the measures that will be taken to manage the property and to monitor the effects of management on the California red-legged frog; the HMMP will include components similar to those described for California tiger salamanders, including the maintenance or improvement of habitat conditions and components (i.e., refugia in dispersal habitat). Determining other specific performance/success criteria for this mitigation requires information regarding the specific mitigation site, its conditions, and the specific enhancement and management measures tailored to the mitigation site and its conditions. For example, performance criteria for a mitigation site providing only upland habitat for California red-legged frogs would include the maintenance of grassland habitat of a suitable height and density for use by dispersing frogs, whereas a mitigation site providing red-legged frog breeding habitat would also include criteria related to adequate depth and hydroperiod of breeding habitat and suitable vegetative cover. As a result, ~~those~~ additional specific criteria will be defined in the HMMP rather than in this SEIR. Nevertheless, the performance/success criteria described in the HMMP will guide the mitigation to manage and protect high-quality habitat for the California red-legged frog, adequate to compensate for impacts.

After mitigation has been provided for impacts to a specific area supporting the California red-legged frog from a specific year's activities, future (i.e., repetitive) impacts to that area will not require additional mitigation.

The HMMP will be provided to the USFWS for review because the California red-legged frog is a federally listed species regulated by the USFWS. It is possible that this mitigation measure may be refined during the Section 7 consultation process with the USFWS (e.g., in the Biological Opinion covering Project effects on the California red-legged frog), in which case the refinements required by the USFWS would be implemented.

MM BIO-11 will mitigate impacts to the California red-legged frog to less-than-significant levels by enhancing, managing, and protecting habitat for this species so as to protect its populations, thereby ensuring that the SMP does not substantially reduce the number or restrict the range of this threatened species, have a substantial adverse effect on this special-status species, or impede the use of its nursery sites.

Mitigation Measure BIO-12: Implement Compensatory Mitigation for the Least Bell's Vireo

One of the following two measures will be implemented so that adequate willow-dominated riparian habitat with adjacent shrubs and tall forbs is maintained in extreme southern Santa Clara County, in light of proposed activities, to provide potential nesting habitat for least Bell's vireos. Simultaneous with (i.e., within the same maintenance year as) performance of SMP activities that adversely affect least Bell's vireo habitat, the SCVWD will make the decision as to which of these measures will be applied.

- Mitigation Measure BIO-12A: The projected vegetation management regime for lower Llagas Creek, from Southside Drive downstream to the confluence with the Pajaro River, will be modified so that vegetation management in any specific area will occur no more frequently than every 3 years to allow for the regrowth of shrubs and taller forbs, which will provide foraging habitat for least Bell's vireos and other riparian birds. The levee tops and lower maintenance roads will be excluded from this requirement (i.e., vegetation management can occur on the levee tops and lower maintenance roads as needed), but no other vegetation management will occur more frequently than every 3 years. Furthermore, in any specific year, vegetation management will occur along no more than half (measured longitudinally along the creek) of the reach of lower Llagas Creek downstream from Southside Drive. This will assure that at any specific time, at least half of this reach will support vegetation that has not been managed (with the exception of levee top roads

and lower maintenance roads) for at least 3 years, thus providing ample suitable nesting and foraging habitat for the low-level, irregular use of this reach by Bell's vireos that occurs. These limitations may need to be adapted if they do not maintain sufficient tall, weedy habitat along the edges of the woody riparian corridor to provide suitable least Bell's vireo foraging habitat, or if they produce abnormally dense, stunted growth of willows that is not suitable for use by nesting vireos. This measure is preferred by the District over Mitigation Measure 12B. However, if this measure cannot be implemented feasibly, or if SCVWD elects not to implement this measure, Mitigation Measure BIO-12B will be implemented.

- Mitigation Measure BIO-12B: SCVWD will create or restore conditions similar to those currently present along lower Llagas Creek by acquiring land, an easement on land, or permission from landowners along the Pajaro River, or along Carnadero Creek downstream from Highway 25, and managing a strip 50 feet wide outside of the woody riparian canopy so that tall forbs and shrubs are able to grow. This strip will be managed so that portions of it are disturbed (via mowing or herbicide use) every 3–4 years, with no more than half disturbed in a specific year, so that early successional conditions are maintained (with the caveat that this management regime may need to be adapted, as described in the preceding paragraph, so that suitable conditions are maintained). The linear footage of habitat that will be required to be managed in this way will equal the linear footage of lower Llagas Creek (on each side of the creek, downstream from Southside Drive, that is actually subjected to the proposed non-instream vegetation management activities and not managed as described in Mitigation Measure BIO-12A. If this mitigation option is selected, the SCVWD will prepare a HMMP for the mitigation site that includes the following:

  — a summary of impacts to least Bell's vireo habitat and populations, and the proposed mitigation;

  — a description of the location and boundaries of the mitigation site and description of existing site conditions;

  — a description of measures to be undertaken if necessary to enhance (e.g., through focused management) the mitigation site for the least Bell's vireo;

  — proposed management activities to maintain high-quality habitat for least Bell's vireos;

  — a description of species monitoring measures on the mitigation site, including specific, objective goals and objectives (including maintaining or restoring suitable habitat for the least Bell's vireo), performance indicators and success criteria (including maintenance or improvement of habitat structure suitable for use by least Bell's vireos), monitoring methods (including least Bell's vireo surveys), data analysis, reporting requirements, and monitoring schedule. Determining other specific performance/success criteria requires information regarding the specific mitigation site, its conditions, and the specific enhancement and management measures tailored to the mitigation site and its conditions. As a result, additional ~~those~~ specific criteria will be defined in the HMMP rather than in this SEIR. Nevertheless, the performance/success criteria described in the HMMP will guide the mitigation to manage and protect habitat at least as suitable for use by the least Bell's vireo as the habitat that is impacted.

  — a description of the management plan's adaptive component, including potential contingency measures for mitigation elements that do not meet performance criteria; and

  — a description of the funding mechanism for the long-term maintenance and monitoring of the mitigation lands.

The HMMP will be provided to the USFWS and CDFG for review because this species is both state and federally listed. It is possible that this mitigation measure may be refined during the Section 7 consultation process with the USFWS (e.g., in the Biological Opinion covering Project effects on the least Bell's vireo) or by the CDFG during the Section 2081 consultation process (e.g., in an Incidental Take Permit), in which case the refinements required by these agencies would be implemented.

MM BIO-12 will mitigate impacts to the least Bell's vireo to less-than-significant levels by managing and protecting habitat suitable for use by this species, thereby ensuring that the SMP does not substantially reduce the number or restrict the range of this endangered species, have a substantial adverse effect on this special-status species, or impede the use of its nursery sites.

Mitigation Measure BIO-13: Implement Compensatory Mitigation for the Burrowing Owl

If a burrow that has been used for nesting by burrowing owls within the prior 3 years cannot be avoided (e.g., an occupied burrow is located on an eroding bank that must be repaired to maintain public safety), then the CDFG will be consulted to determine an appropriate relocation plan for the owl(s) in accordance with BMP GEN-7 and habitat compensation will be provided. If the habitat surrounding the burrow from which the owl is evicted remains suitable for use by burrowing owls following completion of the SMP activity (based on an assessment by a qualified biologist), SCVWD will have the option of either providing habitat mitigation off-site, as described below, or monitoring the work site to determine whether it is re-occupied by burrowing owls. If SCVWD documents nesting by burrowing owls within 2 years of completion of the maintenance activity in the vicinity of the impact site indicating that the activity did not have a long-term impact on the owls' use of the site, no further mitigation would be required.

If the maintenance activity will degrade habitat quality to the extent that maintaining owl use of the site is not feasible or ecologically preferable, in the opinion of a qualified SCVWD biologist, then off-site mitigation will be provided to compensate for the loss of occupied burrowing owl nesting habitat. California burrowing owl mitigation guidelines recommend that 9.75–19.5 acres of habitat be preserved and managed per occupied burrowing owl nest burrow (whether by a pair or singly) in mitigation sites (California Burrowing Owl Consortium 1993). The amount of mitigation habitat provided will depend on whether the mitigation habitat is occupied by burrowing owls (9.75 acres), adjacent to occupied habitat (13.0 acres), or suitable but unoccupied (19.5 acres). SCVWD will use these guidelines in determining the extent of mitigation habitat to be provided. The mitigation site must be located in Santa Clara County, or in areas of San Mateo or Alameda counties adjacent to San Francisco Bay, so that the mitigation supports the maintenance of South Bay burrowing owl populations.

This mitigation may be provided via the management of suitable habitat on SCVWD lands (either existing lands or lands that are acquired), purchase of credits in a mitigation bank (if one is available), or contribution of funds toward the management of the required amount of suitable habitat owned by another entity. If SCVWD provides habitat mitigation on its own lands, either on existing SCVWD lands or on lands that are acquired for mitigation purposes, an HMMP will be prepared detailing the areas to be preserved for owls; the methods for managing on-site habitat for owls and their prey (including vegetation management to maintain low-statured herbaceous vegetation); methods for enhancing burrow availability within the mitigation site (potentially including the provision of artificial burrows, although long-term management for ground squirrels will be important as well); measures to minimize adverse effects of development on owls on-site; and a monitoring program and adaptive management program. The monitoring program will include performance indicators and success criteria, including maintenance of short vegetation supporting California ground squirrels and maintenance of increase in burrowing owl numbers on the mitigation site. Determining other specific performance/success criteria requires information regarding the specific mitigation site, its conditions, and the specific enhancement and management measures tailored to the mitigation site and its conditions. For example, performance criteria for a site where burrowing owls are known to occur (including maintaining or increasing burrowing owl abundance) may differ from those for an unoccupied site adjacent to occupied burrowing owl habitat (including attracting owls to use the mitigation site). As a result, those specific criteria will be defined in the HMMP rather than in this SEIR. Nevertheless, the performance/success criteria described in the HMMP will guide the mitigation to manage and protect high-quality habitat for burrowing owls, adequate to compensate for impacts.

~~The HMMP will be submitted to the CDFG for review.~~ If a mitigation bank providing credits for burrowing owls is established within the aforementioned mitigation area (i.e., in Santa Clara County, or in areas of San Mateo or Alameda counties adjacent to San Francisco Bay), then mitigation may take the form of the purchase of credits equivalent to the number of acres of mitigation required.

MM BIO-13 will mitigate impacts to the burrowing owl to less-than-significant levels by managing and protecting habitat suitable for use by this species, thereby ensuring that the SMP does not substantially reduce the number or restrict the range of this rare species, have a substantial adverse effect on this special-status species, or impede the use of its nursery sites.

Mitigation Measure BIO-14: Implement Compensatory Mitigation for the Yellow Warbler

For impacts to occupied yellow warbler breeding habitat (i.e., riparian habitat known to have been occupied in recent years by the species) in areas for which mitigation has not already been provided for the 2002–2012 SMP, implementation of Mitigation Measure BIO-2 will be required to occur in areas where riparian habitat creation, restoration, and preservation will benefit yellow warblers (e.g., in relatively undeveloped reaches of creeks rather than in creeks surrounded closely on both sides by development), such that mitigation according to these measures occurs at a ratio of no less than 1:1 (on an acreage basis). SCVWD will determine whether impacted riparian habitat is suitable for this species on the basis of breeding-season surveys or comparison of habitat conditions to those in known occupied areas.

MM BIO-14 will mitigate impacts to the yellow warbler to less-than-significant levels by restoring habitat suitable for use by this species, thereby ensuring that the SMP does not substantially reduce the number or restrict the range of this rare species, have a substantial adverse effect on this special-status species, or impede the use of its nursery sites.

Mitigation Measure BIO-15: Provide Alternative Bat Roost

If a tree or structure containing a pallid bat maternity roost is to be removed by the Proposed Project, a qualified biologist will design and determine an appropriate location for an alternative roost structure. If a tree containing a maternity roost of this species is not removed, but SMP-related disturbance causes the abandonment of the roost site (even during the non-breeding season), then SCVWD may either monitor the roost site to determine whether the affected species returns to the roost, or construct an alternative roost. If SCVWD elects to monitor the roost and bats do not return within 1 year, then an alternative roost will be constructed.

A qualified biologist will determine the appropriate location for the alternative roost structure, based on the location of the original roost and habitat conditions in the vicinity. The roost structure will be built to specifications as determined by a qualified biologist, or it may be purchased from an appropriate vendor. The structure will be placed as close to the impacted roost site as feasible. SCVWD will monitor the roost for up to 3 years (or until occupancy is determined, whichever occurs first) to determine use by bats. If by Year 3 pallid bats are not using the structure, a qualified bat biologist, in consultation with the CDFG, will identify alternative roost designs or locations for placement of the roost, and monitoring of the new roost will occur for an additional 3 years (or until occupancy has been verified).

MM BIO-15 will mitigate impacts to the pallid bat to less-than-significant levels by providing alternative roosting habitat suitable for use by this species, thereby ensuring that the SMP does not substantially reduce the number or restrict the range of this rare species, have a substantial adverse effect on this special-status species, or impede the use of its nursery sites.

Mitigation Measure BIO-16: Invasive <u>Plant</u> ~~Species~~ Management Program

The primary goal of the IPMP element of the SMP's compensatory mitigation package is to preserve and improve habitat within Santa Clara County streams and riparian corridors by reducing the population of invasive plant species. Controlling the spread of invasive plant species is a critical element in improving the ecological health of our streams and watersheds. Invasive plants thrive and spread aggressively negatively altering resource allocation regimes, wildlife patterns, soil stability and water quality thus degrading habitat quality and the overall ecological value of a site. In addition, invasive plants can exacerbate flooding and fire danger, undermine structural assets, and impact access to roads, levees and trails.

The IPMP will provide compensatory mitigation for SMP vegetation impacts to upland, riparian, freshwater and tidal wetlands by eliminating or significantly reducing the population of invasive plant species from these affected habitats. The IPMP will have a two-pronged approach:

- A systematic program to identify, prioritize, and control invasive plants throughout the Project Area
- An opportunistic, site-specific approach to remove invasive plants from individual work sites

The intent is that these two programs, operating at different yet complimentary spatial scales will enhance the overall ecological health of the SMP's creek ecosystems. For the opportunistic portion of the program,

invasive plant management will focus on controlling species that are highly invasive at individual SMP work sites.. For example, species such as giant reed, Cape ivy, Himalayan blackberry, tree of heaven, English ivy, and perennial pepperweed will be targeted for removal or control.

At the systematic program-area scale, the IPMP will develop a priority matrix of invasive plant species which integrates and weighs a variety of factors including: the 2006 CAL-IPC ratings, the anticipated rate of spread without management intervention, the feasibility of effective control, impacts to fish and wildlife, impacts to sensitive plant communities, increases in flood threat, increases to fire danger, aggressive growth patterns known to cause structural damage, and impediments to maintenance access. Priority target species will be selected annually from this matrix. The IPMP will then prioritize locations for control work where:

- the target species are degrading habitat for sensitive fish and/or wildlife species;
- invasive plant removal and subsequent native habitat colonization will improve connectivity between existing patches of high-quality habitat;
- the upstream extents of invasive plant species distribution (in the Project Area) will be targeted to reduce the potential for re-invasion of control sites via propagules dispersal from upstream source populations; and
- invasive plant control is technically feasible (e.g., because of access constraints) and can be accomplished while minimizing impacts to adjacent aquatic, wetland, and riparian habitats.

The targeted invasive species, and the location and extent of invasive species management, will be tied directly to the SMP's impacts in each habitat type, i.e., upland, riparian, freshwater and tidal wetland, so that the benefits of invasive species management will directly offset the adverse effects in these habitats. Integrated Vegetation Management techniques will be employed including mechanical, chemical, biological, and/or a combination of techniques to utilize the most effective method for each target species while providing the greatest amount of protection to environmental resources.

Invasive Plant Management Mitigation Requirement

Invasive plant management mitigation will be targeted at both on-site and off-site locations. For the larger systematic program, mitigation needs and credit will be determined annually, dependent on the proposed work for the year and the associated impacts expected to be incurred in each habitat type, i.e., upland, riparian, freshwater, and tidal wetland impacts. A proposal for mitigation credit and the associated acreage to be treated for this program will be submitted with the annual "Notice of Proposed Work."

The opportunistic effort will be variable each year dependent on the number of work sites where invasive plant removal is feasible. Mitigation credit accrued for this portion of the Program will be used to compensate for on-site vegetation impacts or for ongoing vegetation maintenance activities. Proposed mitigation credit for each project site will be submitted with the annual "Notice of Proposed Work."

Determining specific performance/success criteria would require specific information regarding the invasive plant management sites and the invasive species being managed. As a result, those specific criteria will be defined in the IPMP rather than in this EIR. Nevertheless, the performance/success criteria described in the IPMP will guide the mitigation to manage invasive plants, adequate to compensate for impacts.

MM BIO-16 will mitigate impacts resulting from invasive plant species to less-than-significant levels by avoiding and controlling such invasions, thereby ensuring that the SMP does not substantially degrade the quality of the environment; reduce the number or restrict the range of endangered or threatened species; have a substantial adverse effect on special-status species, wetlands, or other sensitive natural communities; impede the use of nursery sites; or conflict with local or regional conservation plans as a result of such invasions.

Mitigation Measures: GCC-1A On-site or Off-site GHG Emissions Mitigation Program

In recent years, SCVWD has reduced its GHG emissions on several projects, including production of energy from SCVWD-owned renewable sources. As a result, SCVWD has GHG emissions credits that have not been previously applied as reductions/offsets for GHG emissions. SCVWD also may establish a new

program to implement off-site GHG emissions reduction projects within the SFBAAB to obtain the new emissions credits. SCVWD will use existing or new emissions credits to reduce/offset GHG emissions from the SMP in exceedance of BAAQMD operational significance thresholds.

The total credits will be equal to the average emissions above the threshold over the lifetime of the SMP Update, or 30,402 metric tons (the average exceedance between the 2012 and 2020 estimated emissions, multiplied by 10 years), as adjusted based on the emissions reductions achieved by Mitigation Measure AIR-1A. The GHG emission reductions credits/projects will be from sources of emissions that are not required by any existing law to reduce their GHG emissions. Offsetting annual emissions inherently includes offsetting daily emissions. Therefore, no additional reductions/offsets will be required for daily GHG emissions. Documentation of any existing or new GHG reductions/offsets will be provided to the BAAQMD. In addition, any existing or new SCVWD GHG offset credits accounted for under this mitigation measure will be verified by the Climate Action Reserve so that the offsets are real, permanent, and verifiable.

This mitigation measure may not be feasible, based on costs, logistics, or other factors. Regarding logistics, whether the District could develop a new on-site or off-site mitigation program to effectively reduce emissions to less-than-significant levels in a timely manner is uncertain.

Mitigation Measures: GCC-1B: GHG Emissions Offsets

As an alternative to Mitigation Measure GCC-1A, or if SCVWD does not have sufficient GHG credits, SCVWD may purchase additional GHG emissions credits. The total credits will be equal to the average emissions above the threshold over the lifetime of the SMP Update, or 30,402 metric tons, as adjusted based on the emissions reductions achieved by Mitigation Measure AIR-1A.

For purchased credits, SCVWD will open a Climate Action reserve account or engage a private broker to facilitate the purchase of carbon offset credits from a voluntary market. Carbon offset credits purchased by SCVWD will be banked by the Climate Action Reserve, so that carbon offset credits purchased are real, permanent, and verifiable. Carbon offset credits will be measured in metric tons of CO2e. Documentation of existing and/or purchased GHG offsets will be provided to the BAAQMD.

ATTACHMENT C-2

Santa Clara Valley Water District

Best Management Practices

Best Management Practices

A. SECTION A –Pre-Project Planning and General BMPs

General BMPs are applicable program-wide, for most routine SMP maintenance activities. These measures include standard construction practices and impact avoidance measures that will minimize potential environmental impacts. These BMPs will be implemented by the stream maintenance crew, as appropriate and as overseen by site managers, for all activities associated with the maintenance program. The majority of these BMPs are implemented prior to and during maintenance operations, though the level of activity varies depending on the work type.

Other General BMPs are conducted prior to implementing maintenance activities on site. This group of measures includes procedures to identify site or maintenance constraints, such as biological or cultural resource surveys which coincide with permit compliance requirements. Site design constraints for sediment and bank stabilization activities in particular are also identified as part of the pre-project planning process.

BMP Number	BMP Title	BMP Description
GEN-1	In-Channel Work Window	All ground-disturbing maintenance activities (i.e., sediment removal, bank stabilization, tree removal, and mechanized vegetation management) occurring in the channel (below bankfull) will take place between June 15 and October 15. Requests for work window extensions must be submitted to the regulatory agencies by October 1st, listing the creek names and reaches where a work extension will occur. Work extensions vary per work activity. The agencies will provide a single response within one week. Significant rainfall applies after October 15. An extension through December 31 may apply if the following requirements are met and regulatory agency approval is received: For ground-disturbing activities: ▪ Work may continue if no significant rainfall, defined as greater than 0.5 inches per 24 hours within a local watershed, is either forecasted[1] or observed. Following October 15th, maintenance work shall cease for the season if such a rain event is forecasted or observed. ▪ In the Pajaro Basin, winterized sites will be visually inspected prior to, and within 48 hours following, each significant rain event (defined as rainfall 0.5 inch or greater within a 24-hour period in the subject watershed) to ensure that winterization measures are properly implemented and maintained. Sediment removal ▪ Extended Work Window: 1. Creeks supporting anadromous fish: An extended work window may occur from October 15 through October 31, or until local rainfall of 0.5 inches or greater falls within the subject watershed within a 24-hour period, whichever occurs first. 2. Creeks not supporting anadromous fish: An extended work window may occur from October 15 through November 30th, or until local rainfall of 0.5 inches or greater falls within the subject watershed within a 24-hour period, whichever occurs first. ▪ Extended Work Window in Lower Quality Areas:

[1] Weather Forecasts. No phase of the project may be started if that phase and its associated erosion control measures cannot be completed prior to the onset of a storm event if that construction phase may cause the introduction of sediments into the stream. Seventy-two-hour weather forecasts from the National Weather Service or other localized and more detailed weather forecast service will be consulted prior to start up of any phase of the project that may result in sediment runoff to a stream.

BMP Number	BMP Title	BMP Description
		1. Sediment removal work may occur until December 31. 2. Work will only occur on Berryessa Creek (0-88+80; 232+70-236+00; 284+30-288+00), Lower Silver Creek (Reach 3 between Stations 37+40 and 381+19), Thompson Creek (0+00-10+00), Canoas Creek (0+00-390+00), Ross Creek (0+00-86+30), Calabazas Creek (35+00-105+00), and San Tomas Aquino Creek (80+00-100+00) with the following conditions: o site conditions are dry and access for all construction equipment and vehicles will not impact waterways; and o all work will stop if any rainfall is forecast for the next 72 hour period. 3. Work may occur after a significant rainfall event but no later than December 31. 4. Sites must be maintained in a rapidly winterizable[2] state (implement control measures BMP GEN-20). Bank stabilization projects may continue until the approved date stated below. Prior to a forecasted significant rainfall event (0.5 in/24 hrs), all incomplete bank stabilization projects must be winterized. 1. In Creeks Supporting Anadromous Fish o An extended work window may occur until October 31st for bank stabilization projects that will be 50% complete by October 15th. 2. In Creeks Not Supporting Anadromous Fish o An extended work window may occur until November 30th for projects that will be 50% complete by October 15th or until significant rainfall. o An extended work window may occur until November 30th for new bank stabilization projects that will be completed in five (5) days or less, or until significant rainfall. ▪ Instream hand pruning and hand removal of vegetation will occur year round, except when: o Wheeled or tracked equipment needs to access the site by crossing a creek, ponded area, or secondary channel; or o Work occurs in streams that support steelhead. In these streams instream vegetation maintenance will cease on December 31 or when local rainfall greater than 0.5 inches is predicted within a 24-hour period of planned activities, whichever happens first. Modification and removal of instream large woody debris will occur at any time of the year, and as further described in the NMFS Biological Opinion.
GEN-2	Instream Herbicide Application Work Window	Instream herbicide applications will take place between June 15 and October 15, or until the first occurrence of any of the following conditions; whichever happens first: ▪ local rainfall greater than 0.5 inches is forecasted within a 24-hour period from planned application events; or ▪ when steelhead begin upmigrating and spawning in the 14 anadromous steelhead creeks, as determined by a qualified biologist (typically in November/December), o A qualified biologist will determine presence/absence of sensitive resources in designated herbicide use areas and develop site-specific control methods (including the use of approved herbicide and surfactants). Proposed herbicide use would be limited to the aquatic formulation of glyphosate (Rodeo or equal). Surfactant use would be limited to non-ionic products, such as Agri-

[2] Winterization is the process to maintain work sites with the appropriate BMP's to prevent erosion, sediment transport, and protect water quality. Winterization occurs upon completion of bank repairs or on incomplete projects after October 15 and prior to the forecast of significant rainfall, 0.5 inches or greater of local watershed rainfall within 24 hours. Winterization shall be completed prior to the occurrence of such actual significant rainfall.

BMP Number	BMP Title	BMP Description
		dex, Competitor, or another brand name using the same ingredients. Any modifications to these materials would require review and approval by NMFS and CDFW. o A qualified fisheries biologist will review proposed herbicide application methods and stream reaches. The fisheries biologist would conduct a pre-construction survey (and any other appropriate data research) to determine whether the proposed herbicide application is consistent with SMP approvals concerning biological resources and determine which BMPs would be instituted for work to proceed. In addition, herbicide application requirements are as follows: ▪ no direct application into water; ▪ herbicide application shall not occur when wind conditions may result in drift; ▪ herbicide solution shall be applied only until there is a "wet" appearance on the target plants in order to avoid run off; and ▪ where permitted, surfactants shall be added to the spray solution prior to application.
GEN-3	Avoid Exposing Soils with High Mercury Levels	Sediment removal and bank stabilization projects in portions of the Guadalupe River watershed affected by historic mercury mining may expose soils containing mercury. 1. In Basin Plan identified creeks in the Guadalupe River Basin, soils that are likely to be disturbed or excavated shall be tested for mercury (Hg). Soils shall be remediated if disturbed or excavated soils exposed to streamflow have a residual sample test exceeding 0.2 mg mercury per kg erodible sediment (dry wt., median). 2. Remediation may be accomplished either by: a. treating the site so that contaminated soils excavated for the purpose of bank stabilization shall not be susceptible to erosion; or b. further excavating contaminated soils and replacing them with clean fill or other bank stabilization materials that are free from contaminants. c. Soils with residual sample mercury concentrations exceeding 0.2 mg mercury per kg erodible sediment (dry wt., median) shall be removed and disposed of in a Class I landfill following established work practices and hazard control measures. Soils with residual sample mercury concentrations less than 0.2 mg mercury per kg erodible sediment (dry wt., median) will remain at the project site. 3. To ensure worker safety during sediment removal and bank stabilization projects with elevated mercury concentrations in the exposed surfaces, personal protective equipment will be required during project construction to maintain exposure below levels established by the Occupational Safety and Health Agency (OSHA).

Biological Resources

GEN-4	Minimize the Area of Disturbance	To minimize impacts to natural resources, soil disturbance will be kept to the minimum footprint necessary to complete the maintenance operation.
GEN-5	Mitten Crab Control Measure	Sediment from the San Francisco Bay Watershed, including that for reuse, cannot be moved to areas any farther south than Coyote Creek Golf Drive in south San Jose, and the intersection of McKean and Casa Loma Roads.
GEN-6	Minimize Impacts to Nesting Birds via Site	1. For activities occurring between January 15 and August 31, project areas will be checked by a qualified biologist or Designated Individuals (DI – for limited ground nesting species surveys) for nesting birds within 2

BMP Number	BMP Title	BMP Description
	Assessments and Avoidance Measures	weeks prior to starting work. If a lapse in project-related work of 2 weeks or longer occurs, another focused survey will be conducted before project work can be reinitiated. 2. If nesting birds are found, a buffer will be established around the nest and maintained until the young have fledged. Appropriate buffer widths are 0.5 mile for bald and golden eagles; 250 feet for other raptors and the least Bell's vireo, herons, and egrets; 25 feet for ground-nesting non-raptors; 700 feet for the California clapper rail; 600 feet for the California least tern and western snowy plover; and 50 feet for non-raptors nesting on trees, shrubs and structures. Mowing and weed whacking will have a 25 feet buffer. A qualified biologist may identify an alternative buffer based on a site specific-evaluation. No work within the buffer will occur without written approval from a qualified biologist, for as long as the nest is active. 3. All vegetation management, sediment reuse, road grading, or other SMP activities in or immediately adjacent to suitable California clapper rail or Alameda song sparrow nesting habitat, as determined by a qualified biologist, shall not be conducted prior to September 1 (the non-nesting season). 4. If a pre-activity survey in high-quality San Francisco common yellowthroat breeding habitat (as determined by a qualified biologist) identifies more singing male San Francisco common yellowthroats than active nests, then the inconspicuous nests of this species might have been missed. In that case, maintenance activities in that area shall be delayed until the San Francisco common yellowthroat non-breeding season (i.e., August 16–March 14). 5. The boundary of each buffer zone will be marked with fencing, flagging, or other easily identifiable marking if work will occur immediately outside the buffer zone. 6. All protective buffer zones will be maintained until the nest becomes inactive, as determined by a qualified biologist. 7. If monitoring shows that disturbance to actively nesting birds is occurring, buffer widths will be increased until monitoring shows that disturbance is no longer occurring. If this is not possible, work will cease in the area until young have fledged and the nest is no longer active.
GEN-6.5	Protection of Nesting Least Bell's Vireos	1. To the extent feasible, SMP activities within those areas mapped as vireo habitat in the Santa Clara Valley Habitat Plan shall be scheduled to occur outside of the least Bell's vireo nesting season (March 15 – July 31). If it is not feasible for maintenance activities along these reaches to be scheduled during the non-nesting season, the following measures will be implemented. 2. For activities within woody riparian habitat mapped as vireo habitat in the Santa Clara Valley Habitat Plan that will occur between March 15 and July 31, any work will be preceded by a focused survey for least Bell's vireos. Pre-activity surveys will consist of two site visits, conducted on separate days within 14 days before the initiation of maintenance activities in the given area, with at least one of these surveys occurring within 5 calendar days before the initiation of such activities. Surveys will be conducted between dawn and 11:00 a.m., during mild weather conditions (i.e., not during excessive cold, heat, wind, or rain), within all riparian habitat in and within 250 feet of any proposed maintenance location along these reaches. The surveys will be conducted by a qualified biologist who is familiar with the visual and auditory identification of this species. 3. To minimize impacts to nesting least Bell's vireos and other birds, the biologist will not initially be looking for Bell's vireo nests during these surveys. Rather the biologist will look and listen for individual vireos. If a least Bell's vireo is detected, it will be observed to determine whether it is actively nesting. The biologist will note the nest location, or if finding the actual nest could result in excessive disturbance or risk damaging the nest, the biologist will determine the approximate location, based on observation of birds carrying nesting material,

BMP Number	BMP Title	BMP Description
		carrying food, or repeatedly visiting a certain area. 4. If an active nest is found, a minimum 250-foot no-activity buffer will be established around the nest. If a territorial male is found but no nest can be detected, then the approximate centroid of the bird's area of activity will be the point from which the buffer will be applied. The required buffer may be reduced in areas where dense riparian forest occurs between the construction activities and the active nest or where sufficient barriers or topographic relief exists to protect the nest from excessive noise or other disturbance. The biologist will coordinate with the USFWS and CDFW to evaluate exceptions to the minimum no-activity buffer distance on a case-by-case basis. 5. No work will occur within the buffer without verification by a biologist that the nest is inactive and until any fledged young are no longer dependent on adults for food. 6. If a least Bell's vireo and/or its nest is detected during pre-activity surveys, the District will contact the USFWS and CDFG within two working days regarding the presence and location of the bird/nest.
GEN-7	Protection of Burrowing Owls	1. If occupied burrows are identified, a 250 foot radius no work buffer zone will be established around the burrow. The buffer may be modified, with CDFW approval, to take into consideration of paved roads, intervening riparian corridors and levees. 2. No construction work will occur within the 250 foot buffer zone until after the nesting season. 3. After the nesting season work may occur within the 250 foot buffer zone provided: a. A qualified biologist monitors the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction) b. The same qualified biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities. c. If there is any change in owl foraging behavior as a result of construction activities, these activities will cease within the 250-foot buffer. d. If the owls are gone for at least one week, the project proponent may request approval from the Santa Clara County Habitat Agency that a qualified biologist excavate the usable burrows to prevent owls from re-occupying the site. After the usable burrows are excavated, the buffer zone will be removed and construction may continue. e. Monitoring must continue as described above for the non-breeding season as long as the burrow remains active. 5. Routine use of existing District maintenance roads within the 250 foot buffer will be allowed. However, no construction traffic will be allowed to use the maintenance road during the active nesting period. 6. Exceptions. a. Mowing on levees may occur during the nesting season and within 250 feet of active burrows provided the burrows are marked by a qualified biologist. b. No vehicle mounted mowers will be used within 10 ft of occupied burrows. c. A qualified biologist will monitor the mowing within the buffer zone and stop the mowing if burrowing owls are observed on the surface at the nest or another burrow. d. Areas within 10 feet of the burrows may be mowed using hand equipment when no owls are visible on the surface. e. All mowing activities within the buffer zone will be completed within 30 minutes.
GEN-8	Protection of Sensitive	Approved herbicides and adjuvants may be applied in habitat areas for sensitive wildlife species (including

BMP Number	BMP Title	BMP Description
	Fauna Species from Herbicide Use	steelhead, California red-legged frog, California tiger salamander, salt marsh harvest mouse, and Bay checkerspot butterfly); all applications will occur in accordance with federal and state regulations. For sprayable or dust formulations: when the air is calm or moving away from sensitive wildlife habitat, applications will commence on the side nearest the habitat and proceed away from the habitat. When air currents are moving toward habitat, applications will not be made within 200 yards by air or 40 yards by ground upwind from occupied habitat. However, these distances may be modified for the control of invasive species on salmonid streams if the following measures are implemented: ▪ A qualified biologist will determine presence/absence of sensitive resources in designated herbicide use areas and develop site-specific control methods (including the use of approved herbicide and surfactants). Proposed herbicide use would be limited to the aquatic formulation of glyphosate (Rodeo or equal). Surfactant use would be limited to non-ionic products, such as Agri-dex, Competitor, or another brand name using the same ingredients. Any modifications to these materials would require review and approval by NMFS and CDFW. ▪ A qualified fisheries biologist will review proposed herbicide application methods and stream reaches. The fisheries biologist would conduct a pre-construction survey (and any other appropriate data research) to determine whether the proposed herbicide application is consistent with SMP approvals concerning biological resources and determine which BMPs would be instituted for work to proceed.
GEN-9	Avoid Impacts to Special-Status Plant Species and Sensitive Natural Vegetation Communities	A qualified botanist will identify special status plant species and sensitive natural vegetation communities and clearly map or delineate them as needed in order to avoid and/or minimize disturbance, using the CDFW protocols and the *CNPS Botanical Survey Guidelines* to formulate the following protocols: 1. A qualified botanist will use the GIS database, CNDDB, and/or other suitable tools to identify special status plants and sensitive natural vegetation communities located within or near work areas. 2. Surveys of areas identified as sensitive natural communities or suitable habitat for special status plant species will be conducted by a qualified botanist prior to commencement of work. 3. Surveys will be conducted during the appropriate time of the year to adequately identify special-status plants that could occur on the site of proposed maintenance activities. 4. The qualified botanist will ensure avoidance and/or minimize impacts by implementing one or more of the following, as appropriate, per the botanist's recommendation: a) Flag or otherwise delineate in the field the special status plant populations and/or sensitive natural community to be protected; b) Allow adequate buffers around plants or habitat; the location of the buffer zone will be shown on the maintenance design drawings and marked in the field with stakes and/or flagging in such a way that exclusion zones are visible to maintenance personnel without excessive disturbance of the sensitive habitat or population itself (e.g., from installation of fencing). c) Time construction or other activities during dormant and/or non-critical life cycle period; d) Store removed sediment off site; and e) Limit the operation of maintenance equipment to established roads whenever possible. 5. No herbicides, terrestrial or aquatic, will be used in areas identified as potential habitat for special status plants species or containing sensitive natural communities, until a qualified botanist has surveyed the area and determined the locations of special status plant species present. 6. If special status plant species or sensitive communities are present, then a qualified botanist will determine if a given type of vegetation management method is ecologically appropriate for a given area. Alternative

BMP Number	BMP Title	BMP Description
		strategies based on the botanist's recommendations will be coordinated with appropriate staff. 7. All impacts to sensitive natural communities and special status plants identified by the qualified botanist will be avoided and/or minimized
GEN-10	Avoid Impacts to Bay Checkerspot Butterfly and Associated Critical Habitat	1. Areas supporting Bay checkerspot larval host plants will be identified by a qualified botanist and protected from disturbance to the extent feasible, by establishing buffer zones around individual plants or populations. The size of the buffer will be determined by a qualified botanist; the actual distance will depend on the plant species potentially affected and the type of disturbance. No herbicide will be applied to the buffer area, and to the extent feasible, maintenance personnel and equipment will not operate within such areas. 2. Herbicides may be used in serpentine areas that do not contain Bay checkerspot butterfly larval host plants or sensitive plant species and habitat when approved by a qualified botanist and for the following maintenance purposes: a) To protect sensitive species and habitat; b) To manage for control of invasive and non-native plants; and/or c) To maintain access to a facility.
GEN-11	Protection of Salt Marsh Harvest Mouse and California Clapper Rail	1. A District qualified biologist will conduct a desk audit to determine whether suitable Salt Marsh Harvest Mouse (SMHM) or California Clapper Rail (CCR) habitat is present in or adjacent to a maintenance activity. 2. Within 7 days prior to work within the range of the Salt Marsh Harvest Mouse (SMHM) or California Clapper Rail (CCR), as depicted on the District's GIS layers, the proposed project area will be surveyed by a qualified biologist to identify specific habitat areas. Surveyed areas will include work locations and access routes. The range of the salt marsh harvest mouse and California clapper rail is based on the SCVWD's GIS mapping reflecting occurrence information and potential habitat. If this mapping is revised, it will be provided to the Service for review. 3. To minimize or avoid the loss of individuals, activities within or adjacent to California clapper rail and salt marsh harvest mouse habitat will not occur within two hours before or after extreme high tides (6.5 feet or above) when the marsh plain is inundated, because protective cover for those species is limited and activities could prevent them from reaching available cover. 4. Specific habitat areas are vegetated areas of cordgass (*Spartina* spp), marsh gumplant (*Grindelia* spp.), pickleweed (*Sarcocornia pacifica*), alkali heath, (*Frankenia* sp.), and other high marsh vegetation, brackish marsh reaches of creek with heavy accumulations of bulrush thatch (old stands), and high water refugia habitat that may include annual grasses, and shrubs immediately adjacent to channels. 5. Within the identified specific habitat areas, vegetation will be removed by hand from areas to be directly impacted by the work activities if possible (hand removal of vegetation is some channels may not be possible). If within the mapped range of the mouse but outside of areas identified as specific habitat areas, then other methods may be possible. 6. Prior to the initiation of work each day for all vegetation management work, ground or vegetation disturbance, operation of large equipment, grading, sediment removal, and bank stabilization work and prior to expanding the work area, if suitable habitat occurs within the immediate work area, a qualified biologist will conduct a pre-construction survey of all suitable habitat that may be directly or indirectly impacted by the day's activities (work area, access routes, staging areas). a. If during the initial daily survey or during work activities a CCR is observed within or immediately

BMP Number	BMP Title	BMP Description
		adjacent to the work area (50 feet), initiation of work will be delayed until the CCR leaves the work area. b. If during the initial daily survey or during work activities a SMHM or similar rodent is observed within or immediately adjacent to the work area (50 feet), initiation of work will be delayed until a *Site Specific Species Protection Form* can be developed and implemented by a qualified biologist to protect the SMHM or similar rodent is developed and implemented by the qualified biologist. Acceptable plan activities may include one or more of the following activities: 1) establishment of a buffer zone at least 50 feet in radius from the rodent; 2) ongoing active monitoring, 3) construction of silt fence barrier between maintenance work and location of the rodent, 4) delay of work activity until the qualified biologist can provide CDFW and the Service a suggested course of action and seek concurrence. 7. Mowing using heavy equipment (tractors, boom mowers, rider mowers) will not be conducted in habitat areas or within 50 feet of habitat areas. If mowing with hand equipment is necessary within 50 feet of habitat areas, an on-site monitor will observe the area in front of the mower from a safe vantage point while it is in operation. If SMHM are detected within the area to be mown, no mowing will occur in that area. If CCR are detected within the area to be mown, the mowing will stop until the individual(s) have left the work area. 8. See ANI-2 for additional restrictions. 9. If visual observation cannot confirm California clapper rail left the work area then it is assumed that the individual(s) remains in the work area and the work will not resume until the area has been thoroughly surveyed (and absence confirmed) or the Service has been contacted for guidance.
GEN-12	Protection of Special-Status Amphibian and Reptile Species	1. A District qualified biologist will conduct a desk audit to determine whether suitable special-status amphibian or reptile habitat is present in or adjacent to a maintenance activity based on all available information including the habitats modeled in the Valley Habitat Plan. 2. If the District Wildlife or Fisheries Biologist determines that a special-status amphibian or reptile could occur in the activity area, a qualified biologist will conduct one daytime and one nighttime survey within a 7 day period preceding the onset of maintenance activities. a. If a special-status amphibian or reptile, or the eggs or larvae of a special status amphibian or reptile, are found within the activity area during a pre-activity survey or during project activities, the qualified biologist shall notify the project proponent about the special-status species and conduct the following work specific activities: i. For minor maintenance activities and for vegetation removal activities that will take less than 1 day, a qualified biologist shall conduct a special status species survey on the morning of and prior to the scheduled work. A. If no special status species is found, the work may proceed. B. If eggs or larvae of a special status species are found, a buffer will be established around the location of the eggs/larvae and work may proceed outside of the buffer zone. No work will occur within the buffer zone. Work within the buffer zone will be rescheduled until the time that eggs have hatched and/or larvae have metamorphosed. C. If an active western pond turtle nest is detected within the activity area, a 50-foot buffer zone around the nest will be established and maintained during the breeding and nesting season (April 1 – August 31). The buffer zone will remain in place until the young have left the nest, as determined by a qualified biologist. D. If adults or non-larval juveniles of a special status species are found, one of the following two

BMP Number	BMP Title	BMP Description
		procedures will be implemented: i. If, in the opinion of the qualified biologist, capture and removal of the individual to a safe place outside of the work area is less likely to result in adverse effects than leaving the individual in place and rescheduling the work (e.g., if the species could potentially hide and be missed during a follow-up survey), the individual will be captured and relocated by a qualified biologist (with USFWS and/or CDFW approval, depending on the listing status of the species in question), and work may proceed. ii. If, in the opinion of the qualified biologist, the individual is likely to leave the work area on its own, and work can be feasibly rescheduled, a buffer will be established around the location of the individual(s) and work may proceed outside of the buffer zone. No work will occur within the buffer zone. Work within the buffer zone will be rescheduled. ii. For minor maintenance and vegetation removal activities that will take more than 1 day, the qualified biologist shall conduct a special-status species survey on each morning of and prior to the scheduled work commencing. E. If eggs or larvae of a special status species are found, a buffer will be established around the location of the eggs/larvae and work may proceed outside of the buffer zone. No work will occur within the buffer zone. Work within the buffer zone will be rescheduled until the time that eggs have hatched and/or larvae have metamorphosed. F. If an active western pond turtle nest is detected within the activity area, a 50 ft-buffer zone around the nest will be established and maintained during the breeding and nesting season (April 1 – August 31). The buffer zone will remain in place until the young have left the nest, as determined by a qualified biologist. G. If adults or non-larval juveniles of a special status species are found, the individual will be captured and relocated by a qualified biologist (with USFWS and/or CDFW approval, depending on the listing status of the species in question), and work may proceed. iii. For Sediment Removal and Bank Stabilization Projects the wildlife or fisheries biologist in cooperation with the project proponent shall complete a *Site Specific Species Protection Form for the project*. Elements of the form include: work rescheduling, training work crews, daily surveys, establishment of buffers and buffer fencing, on-site monitoring, habitat modification in advance of work activities, capture and relocation of individual special-status species, methods of documentation, and reporting of results. b. If no special status amphibian or reptile is found within the activity area during a pre-activity survey, the work may proceed. c. During animal conflict management activities, if special status species are found within a burrow proposed for destruction, a qualified biologist will determine an appropriate buffer distance around that burrow to ensure adequate protection of the habitat. The buffer area may include not destroying adjacent burrows as that may damage subterranean networks of the occupied burrow or produce substrate vibrations which could interfere with prey detection mechanisms. If two consecutive follow up surveys are conducted (spaced 30 days apart) in which the burrow is found to be unoccupied, work can proceed as planned. A naturally found back filled burrow known to have been inhabited by a special-status species will be presumed to still be occupied by that species and a clearly delineated buffer demarcation of the burrow area will be in place for the duration of nearby work activities. In rare instances in which destruction of the burrow is not avoidable during animal conflict management, the animal will be relocated to a safe burrow outside the

BMP Number	BMP Title	BMP Description
		impact area, with USFWS and/or CDFW approval, depending on the listing status of the species in question. A biologist will observe the relocated animal until it is certain that the animal is not in immediate danger of desiccation or predation.
GEN-13	Protection of Bat Colonies	1. A District Wildlife Biologist will conduct a desk audit to determine whether suitable habitat (appropriate roost trees or anthropogenic structures) is present for bat colonies within 100 feet of the work site, staging areas, or access routes. 2. If potential bat colony habitat is determined to be present, within two weeks prior to the onset of work activities a qualified biologist will conduct a survey to look for evidence of a bat use. If evidence is observed, or if potential roost sites are present in areas where evidence of bat use might not be detectable (such as a tree cavity), an evening survey and/or nocturnal acoustic survey may be necessary to determine if the bat colony is active and to identify the specific location of the bat colony. 3. If an active bat colony is present then the qualified biologist will make the following determinations: a. The work can proceed without unduly disturbing the bat colony b. There is a need for a buffer zone to prevent disturbance to the bat colony, and implementation of the buffer zone (determined on a case-by-case basis by a qualified biologist) will reduce or eliminate the disturbance to an acceptable level. 4. If a bat colony is found in a tree or structure that must be removed or physically disturbed the qualified biologist will consult with DFW prior to initiating any removal or exclusion activities.
GEN-14	Protection of San Francisco Dusky-footed Woodrat	1. Prior to work within riparian, oak woodland, or coyote brush scrub habitat, or the removal of any oak trees outside these habitats, a District Wildlife Biologist will conduct a desk audit to determine whether woodrats could be present within suitable habitat for San Francisco dusky-footed woodrat or is known to be present in or adjacent to a maintenance activity site. 2. If the District Wildlife Biologist determines that no San Francisco dusky-footed woodrat habitat is present, or there is habitat present but it will not be affected by the maintenance activity, then no further action is required. 3. If the District Wildlife Biologist determines that suitable San Francisco dusky-footed woodrat habitat is present and may be affected by the maintenance activity, a qualified biologist shall conduct a pre-activity survey within 2 weeks prior to the start of work to determine if woodrat nests are present, or within 5 feet of, the immediate activity area. If woodrat nests are determined to be present, the following measures shall be implemented: a. To the extent feasible, impacts to woodrat nests will be avoided by maintaining a minimum 5-ft buffer between maintenance activities and nests. Even if a 5-ft buffer cannot be maintained, the District will minimize impacts to nests by avoiding the direct destruction or modification of the nests to the extent feasible. b. If one or more woodrat nests are determined to be present and physical disturbance or destruction of the nests cannot be avoided, then the woodrats shall be evicted from their nests and the nest material relocated outside of the disturbance area, prior to onset of activities that would disturb the nest, to avoid injury or mortality of the woodrats. First, an alternate location for the nest material shall be chosen by a qualified biologist based on the following criteria: 1) proximity to current nest location; 2) safe buffer distance from planned work; 3) availability of food resources; and 4) availability of cover. An alternate nest structure will then be built at the chosen location. The structure will be made up of small logs (e.g., available materials 2 inches in diameter or greater) stacked to provide a foundation

BMP Number	BMP Title	BMP Description
		on which the woodrats can add nest material. Subsequently, during the evening hours (i.e., within 2 hours prior to sunset), a qualified biologist will slowly dismantle the existing woodrat nest to allow any woodrats to flee and seek cover. All sticks from the nest will be collected and spread over the alternate structure. If young woodrats that are still dependent on their mother are discovered, relocation efforts will cease for the evening and the California Department of Fish and Wildlife will be contacted for guidance on how to proceed.
GEN-15	Salvage Native Aquatic Vertebrates from Dewatered Channels	If fisheries or native aquatic vertebrates are present when cofferdams, water bypass structures, and silt barriers are to be installed, a fish and native aquatic vertebrate relocation plan shall be implemented to ensure that fish and native aquatic vertebrates are not stranded. Relocation efforts will be based on the District's Fish Relocation Guidelines (Attachment B). Streams that support a sensitive species (i.e. steelhead) will require a relocation effort and/ or initial onsite monitoring by a qualified biologist depending on seasonal conditions: 1. In non-tidal channels, where water is to be diverted, prior to the start of work or during the installation of water diversion structures, native aquatic vertebrates shall be captured in the work area and transferred to another reach as determined by a qualified biologist. Timing of work in streams that supports a significant number of amphibians will be delayed until metamorphosis occurs to minimize impacts to the resource. Capture and relocation of aquatic native vertebrates is not required at individual work sites when site conditions preclude reasonably effective operation of capture gear and equipment. 2. Aquatic invertebrates will not be transferred (other than incidental catches) because of their anticipated abundance and colonization after completion of the repair work.
GEN-15.5	Avoidance of Impacts on the San Joaquin Kit Fox	1. A qualified District biologist will conduct a desk audit to determine whether an SMP activity will occur in an area where the San Joaquin kit fox could potentially occur (i.e., roughly east of Frazier Lake Road and south of Bloomfield Avenue), and in potential habitat for the species. 2. If the District biologist determines that an SMP activity could occur in an area that could potentially support a kit fox, the SCVWD will implement applicable pre-activity surveys and other measures in accordance with the USFWS's *San Joaquin Kit Fox Survey Protocol for the Northern Range*, as follows: a) Conduct a preconstruction/pre-activity survey no less than 14 days and no more than 30 days prior to the beginning of project implementation. Surveys shall identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, and assess the potential impacts to the kit fox by the proposed activity. The status of all dens shall be determined and mapped in accordance with the survey protocol. b) If a natal/pupping den is discovered within the project area or within 200 feet of the project boundary, the USFWS shall be immediately notified. Disturbance to all San Joaquin kit fox dens should be avoided to the maximum extent possible. Destruction of any known or natal/pupping kit fox den would require take authorization from the USFWS. c) The project proponent will establish exclusion zones around the kit fox dens, if determined to be present. The configuration of the exclusion should have a radius measured outward from the entrance or cluster of entrances. The following radii are minima to be applied: ▪ Potential den: 50 feet ▪ Known den: 100 feet ▪ Natal/pupping den: Service must be contacted (occupied and unoccupied) ▪ Atypical den: 50 feet.

BMP Number	BMP Title	BMP Description
		3. If take of the San Joaquin kit fox will occur, take authorization from the USFWS and CDFW will be necessary.

General Maintenance Practices

GEN-16	In-Channel Minor Activities	For in-channel minor work activities, work will be conducted from the top of the bank if access is available and there are flows in the channel.
GEN-17	Employee/Contractor Training	All appropriate District staff and contractors will receive annual training on Stream Maintenance Program BMPs. The training will also include an overview of special-status species identification and habitat requirements. District staff and contractors will receive fact sheets to assist with in-the-field identification of special-status species and their habitats.
GEN-18	Paperwork Required On-site	1. Copies of regulatory permits related to the Stream Maintenance Program will be kept on-site and available for review, if requested by regulatory personnel. 2. Copies of the Stream Maintenance Program Manual and this BMP Manual will be kept on-site.
GEN-19	Work Site Housekeeping	1. District employees and contractors will maintain the work site in neat and orderly conditions on a daily basis, and will leave the site in a neat, clean, and orderly condition when work is complete. 2. Slash, sawdust, cuttings, etc. will be removed to clear the site of vegetation debris. As needed, paved access roads and trails will be swept and cleared of any residual vegetation or dirt resulting from the maintenance activity. 3. For activities that last more than one day, materials or equipment left on the site overnight will be stored as inconspicuously as possible, and will be neatly arranged. Any materials and equipment left on the site overnight will be stored to avoid erosion, leaks, or other potential impacts to water quality (see BMPs GEN-24). 4. The District's maintenance crews are responsible for properly removing and disposing of all debris incurred as a result of construction within 72 hours of project completion. 5. All trash that is brought to a project site during maintenance activities (e.g., plastic water bottles, plastic lunch bags, cigarettes) will be collected at the site daily.
GEN-20	Erosion and Sediment Control Measures	1. Soils exposed due to maintenance activities will be seeded and stabilized using hydroseeding, straw placement, mulching, and/or erosion control fabric. These measures will be implemented such that the site is stabilized and water quality protected prior to significant rainfall. The channel bed and areas below the Ordinary High Water Mark (OHWM) are exempt from this BMP. 2. The preference for erosion control fabrics will be to consist of natural fibers; however, steeper slopes and areas that are highly erodible may require more structured erosion control methods. No non-porous fabric will be used as part of a permanent erosion control approach. Plastic sheeting may be used to temporarily protect a slope from runoff, but only if there are no indications that special-status species would be impacted by the application. 3. Erosion control measures will be installed according to manufacturer's specifications. 4. Appropriate measures include, but are not limited to, the following: o Silt Fences o Straw Bale Barriers o Brush or Rock Filters o Storm Drain Inlet Protection o Sediment Traps

BMP Number	BMP Title	BMP Description
		o Sediment Basins o Erosion Control Blankets and Mats o Soil Stabilization (i.e. tackified straw with seed, jute or geotextile blankets, etc.) o Wood chips o Straw mulch 5. All temporary construction-related erosion control methods shall be removed at the completion of the project (e.g. silt fences). 6. Surface barrier applications installed as a method of animal conflict management, such as chain link fencing, woven geotextiles, and other similar materials, will be installed no longer than 300 feet, with at least an equal amount of open area prior to another linear installation; and only on one side of levee slopes. Inboard and outboard areas will only have installations set in an alternating pattern, such that no inboard and outboard levee faces would have erosion control blankets along the same levee stationing. 7. Each maintenance site will be visually inspected at least once daily during extended storm events to confirm that BMPs are effective and maintained as necessary. 8. Each maintenance site will be visually inspected within two business days (48 hours) after each significant rain event to determine whether BMPs were effective and identify the need to modify or maintain existing BMPs or include additional BMPs to be protective.
GEN-21	Staging and Stockpiling of Materials	1. To protect on-site vegetation and water quality, staging areas should occur on access roads, surface streets, or other disturbed areas that are already compacted and only support ruderal vegetation. Similarly, all maintenance equipment and materials (e.g., road rock and project spoil) will be contained within the existing service roads, paved roads, or other pre-determined staging areas. 2. Building materials and other maintenance-related materials, including chemicals and sediment, will not be stockpiled or stored where they could spill into water bodies or storm drains. Materials will not be stockpiled longer than seven (7) calendar days. 3. No runoff from the staging areas may be allowed to enter water ways, including the creek channel or storm drains, without being subjected to adequate filtration (e.g., vegetated buffer, swale, hay wattles or bales, silt screens). 4. The discharge of decant water to water ways from any on-site temporary sediment stockpile or storage areas is prohibited. 5. Wet material removed from an isolated creek reach may be pulled to the side of the channel (within the channel and below top of bank) and allowed to naturally drain prior to removal from the channel. Pulled material will be removed from the channel prior to deactivation of the site or forecast of rain. 6. During the wet season, no stockpiled soils will remain exposed, unless surrounded by properly installed and maintained (i.e., per manufacturer specifications) silt fencing or other means of erosion control. During the dry season; exposed, dry stockpiles will be watered, enclosed, covered, or sprayed with non-toxic soil stabilizers (GEN-24). 7. All pipes, culverts, or similar structures stored at a site within sensitive species areas, for one or more overnight periods shall be securely capped prior to storage or inspected before the pipe is subsequently moved. If any potential special-status species are observed within a pipe, a District biologist shall be consulted on what steps should be taken to protect the species. If a District biologist is on-site, they may remove the special status species from the pipes and relocate to the nearest appropriate and unaffected habitat.

BMP Number	BMP Title	BMP Description
GEN-22	Sediment Transport	To prevent sediment-laden water from being released back into waterways during transport of spoils to disposal locations, truck beds will be lined with an impervious material (e.g., plastic), or the tailgate blocked with wattles, hay bales, or other appropriate filtration material. Trucks may then drain excess water by slightly tilting the loads and allowing the water to drain out through the applied filter, but only within the active project area of the creek where the sediment is being loaded into the trucks or within an identified vegetated area (swale) that is separated from the creek.
GEN-23	Stream Access	District personnel will use existing access ramps and roads to the extent feasible. If necessary to avoid large mature trees, native vegetation, or other significant habitat features, temporary access points will be constructed in a manner that minimizes impacts according to the following guidelines: 1. Temporary access points will be constructed as close to the work area as possible to minimize equipment transport 2. In considering channel access routes, slopes of greater than 20 percent will be avoided, if possible. 3. Any temporary fill used for access will be removed upon completion of the project and pre-project topography will be restored to the extent possible. 4. When temporary access is removed, disturbed areas will be revegetated or filled with compacted soil, seeded, and/or stabilized with erosion control fabric immediately after construction to prevent future erosion. 5. Personnel will use the appropriate equipment for the job that minimizes impacts and disturbance to the stream bottom. Appropriately-tired vehicles, either tracked or wheeled, will be used depending on the site and maintenance activity.
GEN-24	On-Site Hazardous Materials Management	1. An inventory of all hazardous materials used (and/or expected to be used) at the worksite and the end products that are produced (and/or expected to be produced) after their use will be maintained by the worksite manager. 2. As appropriate, containers will be properly labeled with a “Hazardous Waste” label and hazardous waste will be properly recycled or disposed of off-site. 3. Contact of chemicals with precipitation will be minimized by storing chemicals in watertight containers with appropriate secondary containment to prevent any spillage or leakage. 4. Quantities of toxic materials, such as equipment fuels and lubricants, will be stored with secondary containment that is capable of containing 110% of the primary container(s). 5. Petroleum products, chemicals, cement, fuels, lubricants, and non-storm drainage water or water contaminated with the aforementioned materials will not contact soil and not be allowed to enter surface waters or the storm drainage system. 6. All toxic materials, including waste disposal containers, will be covered when they are not in use, and located as far away as possible from a direct connection to the storm drainage system or surface water. 7. Sanitation facilities (e.g., portable toilets) will be placed outside of the creek channel and floodplain. Direct connections with soil, the storm drainage system, and surface waters will be avoided. 8. Sanitation facilities will be regularly cleaned and/or replaced, and inspected daily for leaks and spills.
GEN-25	Existing Hazardous Materials	If hazardous materials, such as oil, batteries or paint cans, are encountered at the maintenance sites, the District will carefully remove and dispose of them according to applicable regulatory requirements. District staff will wear proper protective gear and store the waste in appropriate hazardous waste containers until it can be disposed at a hazardous waste facility.
GEN-26	Spill Prevention and Response	The District will prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water into channels following these measures:

BMP Number	BMP Title	BMP Description
		1. District field personnel will be appropriately trained in spill prevention, hazardous material control, and clean up of accidental spills. 2. Equipment and materials for cleanup of spills will be available on site and spills and leaks will be cleaned up immediately and disposed of according to applicable regulatory requirements. 3. Field personnel will ensure that hazardous materials are properly handled and natural resources are protected by all reasonable means. 4. Spill prevention kits will always be in close proximity when using hazardous materials (e.g., at crew trucks and other logical locations). All field personnel will be advised of these locations. 5. District staff will routinely inspect the work site to verify that spill prevention and response measures are properly implemented and maintained. *Spill Response Measures:* For small spills on impervious surfaces, absorbent materials will be used to remove the spill, rather than hosing it down with water. For small spills on pervious surfaces such as soil, the spill will be excavated and properly disposed rather than burying it. Absorbent materials will be collected and disposed of properly and promptly. If a hazardous materials spill occurs that cannot be contained or cleaned up with the onsite materials, the onsite District field personnel will be responsible for immediately initiating an emergency response sequence by notifying the proper authorities (i.e., District Emergency Response (ER) Team and public fire and hazmat agencies) of the release; taking appropriate defensive steps from a safe distance to secure the site to minimize damage to people, environment, and property (PEP); and deferring all other response activities to public emergency response agencies and/or the District Emergency Response (ER) Team or District ER Contractor. Depending on the nature of the release, the District ER Team's actions will include: urgent (responding within 2 hours of notification) field response site reconnaissance, emergency sequence initiation, defensive containment, release control, incident command; or priority (non 2-hour) field response site reconnaissance and clean-up operations. If a "reportable" spill of petroleum products occurs, the District's Stream Maintenance Implementation Program Manager will be notified and action taken to contact the appropriate safety and cleanup crews. A reportable spill is defined as when: ▪ a film or sheen on, or discoloration of, the water surface or adjoining bank/shoreline is observed; or ▪ a sludge or emulsion is deposited beneath the surface of the water or adjoining banks/shorelines (40 Code of Federal Regulations 110); or when ▪ another violation of water quality standards is observed. A written description of the reportable release must be submitted to the appropriate Regional Water Quality Control Board and the California Department of Toxic Substances Control (DTSC). This submittal must contain a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. If an appreciable spill has occurred, and results determine that project activities have adversely affected surface water or groundwater quality, a detailed analysis will be performed to the specifications of DTSC to identify the likely cause of contamination. This analysis will include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, the District or contractors will select and implement

BMP Number	BMP Title	BMP Description
		measures to control contamination, with a performance standard that surface and groundwater quality will be returned to baseline conditions. These measures will be subject to approval by the District, DTSC, and the Regional Water Quality Control Board.
GEN-27	Existing Hazardous Sites	Upon selection of maintenance project locations, the District will conduct a search for existing known contaminated sites, as part of its annual preparation of the Notice of Proposed Work (NPW), on the State Water Resource Control Board's GeoTracker Web site (http://www.geotracker.waterboards.ca.gov). The Geotracker search will only be performed for the District's ground disturbing activities. For any proposed ground disturbing maintenance sites located within 1,500 feet of any "open" sites where contamination has not been remediated, the District will contact the RWQCB case manager listed in the database. The District will work with the case manager to ensure maintenance activities would not affect cleanup or monitoring activities or threaten the public or environment.
GEN-28	Fire Prevention	1. All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors. 2. During the high fire danger period (April 1–December 1), work crews will ~~: a) H~~have appropriate fire suppression equipment available at the work site.
GEN-29	Dust Management	The District will implement the Bay Area Air Quality Management District's (BAAQMD) required Dust Control Measures (http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines%20May%202011.ashx?la=en). Current measures stipulated by the BAAQMD Guidelines include the following: 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 4. Water used to wash the various exposed surfaces (i.e., parking areas, staging areas, soil piles, graded areas, etc.) will not be allowed to enter the water way. 5. All vehicle speeds on unpaved roads shall be limited to 15 mph. 6. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. 7. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. 8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. 9. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

BMP Number	BMP Title	BMP Description
GEN-30	Vehicle and Equipment Maintenance	1. All vehicles and equipment will be kept clean. Excessive build-up of oil and grease will be prevented. 2. All equipment used in the creek channel will be inspected for leaks each day prior to initiation of work. Maintenance, repairs, or other necessary actions will be taken to prevent or repair leaks, prior to use. 3. Incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) will be checked for leaking oil and fluids. Vehicles or equipment visibly leaking operational fluids will not be allowed on-site. 4. No heavy equipment will operate in a live stream. This will not apply to activities for which no other option exists, such as sediment removal which cannot be conducted from top of bank, etc. In these cases, dewatering will be conducted as necessary, following the protocols in BMPs GEN-33 or GEN-34. 5. No equipment servicing will be done in the creek channel or immediate floodplain, unless equipment stationed in these locations cannot be readily relocated (i.e., pumps and generators). 6. If emergency repairs are required in the field, only those repairs necessary to move equipment to a more secure location, and that can be performed without releasing any material into the floodway or water, will be conducted in the channel or floodplain. 7. If necessary, all servicing of equipment done at the job site will be conducted in a designated, protected area to reduce threats to water quality from vehicle fluid spills. Designated areas will not directly connect to the ground, surface water, or the storm drain system. The service area will be clearly designated with berms, sandbags, or other barriers. Secondary containment, such as a drain pan, to catch spills or leaks will be used when removing or changing fluids. Fluids will be stored in appropriate containers with covers, and properly recycled or disposed of offsite.
GEN-31	Vehicle Cleaning	1. Equipment will be cleaned of any visible sediment or vegetation clumps before transferring and using in a different watershed to avoid spreading pathogens or exotic/invasive species. 2. Vehicle and equipment washing can occur on-site only as needed to prevent the spread of sediment, pathogens or exotic/invasive species. No runoff from vehicle or equipment washing is allowed to enter water bodies, including creek channels and storm drains, without being subjected to adequate filtration (e.g., vegetated buffers, straw wattles or bales, fiber rolls, and silt screens). The discharge of decant water from any on-site wash area to water bodies or to areas outside of the active project site is prohibited. Additional vehicle/equipment washing will occur at the approved wash area in the District's corporation yard.
GEN-32	Vehicle and Equipment Fueling	1. No fueling will be done in the channel (top-of-bank to top-of-bank) or immediate floodplain unless equipment stationed in these locations cannot be readily relocated (e.g., pumps and generators). 2. All off-site fueling sites (i.e., on access roads above the top-of-bank) will be equipped with secondary containment and avoid a direct connection to soil, surface water, or the storm drainage system. 3. For stationary equipment that must be fueled on-site, secondary containment, such as a drain pan or drop cloth, will be used to prevent accidental spills of fuels from reaching the soil, surface water, or the storm drain system.

BMP Number	BMP Title	BMP Description
Dewatering		
GEN-33	Dewatering for Non-Tidal Sites	When sediment removal and bank stabilization work area includes a flowing stream, the entire streamflow will be diverted around the work area by construction of a temporary dam and/or bypass. Where appropriate, stream flow diversions will occur via gravity driven systems. *A. Planning to avoid and minimize impacts to water quality and aquatic wildlife:* 1. For construction and monitoring of a stream flow bypass, the *Sediment Removal and Bank Stabilization Projects* checklist will be completed. 2. Recommendations by a qualified Fisheries Biologist to protect native fisheries and aquatic vertebrates will be incorporated into the bypass design. The recommendations may include but are not limited to: i. Screening the stream flow diversion source or pump to prevent entrainment of native fish or amphibian species. The screening dimensions will be appropriate to the species present. ii. Relocation of native aquatic vertebrates. This will include the methods to be used to capture and hold and move the aquatic vertebrates and a description of where the aquatic vertebrates will be relocated. 3. Depending on the channel configurations, sediment removal activities may occur where the flows are not bypassed around the work site as long as a berm is left between the work area and stream flows to minimize water quality impacts during excavation activities. The berm between the work and the live channel will be wide enough to prevent introduction of turbid water from the cell into the live channel. *B. Construction*: 1. The construction of facilities will be based on the water bypass plan. 2. Coffer dams will be installed both upstream and downstream of the work area to minimize impacts or the distance necessary to accomplish effective passive systems. 3. In streams where water may enter the construction site from downstream (reverse flow) additional coffer dams (downstream) may be necessary. When multiple coffer dams are constructed, the upstream dam will be constructed first. 4. Instream cofferdams will only be built from materials such as sandbags, earth fill, clean gravel, or rubber bladders which will cause little or no siltation or turbidity. 5. Plastic sheeting will be placed over k-rails, timbers, and earth fill to minimize water seepage into and out of the maintenance areas. The plastic sheets will be firmly anchored, using sandbags, to the streambed to minimize water seepage. 6. When pumping is necessary to dewater a work site, a temporary siltation basin and/or use of silt bags may be required to prevent sediment from re-entering the wetted channel. Pump intakes will be screened to prevent harm to aquatic wildlife. 7. If necessary to prevent erosion an energy dissipater will be constructed at the discharge point. 8. Timing of flow diversions will be coordinated with the completion of the dam structure to facilitate not drying up the downstream creek area and to minimize dry back conditions. *C. Implementation*: 1. Water flows downstream of the project site will be maintained to prevent stranding aquatic vertebrates.

BMP Number	BMP Title	BMP Description
		2. Water diverted around work sites and water detained by coffer dams will be protected from maintenance activity-related pollutants, such as soils, equipment lubricants or fuels. 3. The *Fish Relocation Guidelines* (Attachment B) will be implemented to ensure that fish and other aquatic vertebrates are not stranded during construction and implementation of channel dewatering. a) Native aquatic vertebrates shall be captured in the work area and transferred to another reach as determined by a qualified biologist. Timing of work in streams that supports a significant number of amphibians will be delayed until metamorphosis occurs to minimize impacts to the resource. Capture and relocation of aquatic native vertebrates is not required at individual work sites when site conditions preclude reasonably effective operation of capture gear and equipment. b) Aquatic invertebrates will not be transferred (other than incidental catches) because of their anticipated abundance and colonization after completion of the repair work. 4. Filtration devices (silt bags attached to the end of discharge hoses and pipes to remove sediment from discharged water) or settling basins will be provided as necessary at discharge sites to ensure that the turbidity of discharged water is not visibly more turbid than the water in the channel upstream of the maintenance site. If increases in turbidity are observed, additional measures will be implemented such as a larger settling basin or additional filtration. If increases in turbidity persist, the District's Stream Maintenance Program Implementation Project Manager will be alerted since turbidity measurements may be required. 5. Water remaining in the work area will be removed by evaporation, seepage, or pumping. When pumping is required to dewater a site, the decanted water will be discharged with water bypassed around the site or in a separate erosion control – energy dissipation area/vegetated swale. The turbidity of discharged water will not be visibly more turbid than the receiving water. *Deconstruction*: 1. When maintenance is completed, the flow diversion structure will be removed as soon as possible. Impounded water will be released at a reduced velocity to minimize erosion, turbidity, or harm to downstream habitat. 2. Removal will normally proceed from downstream in an upstream direction. 3. When diversion structures are removed, the ponded water will be directed back into the low-flow channel in a phased manner to minimize erosion and downstream water quality impacts. Normal flows will be restored. 4. The area disturbed by flow bypass mechanisms will be restored to the pre-project condition at the completion of the project (to the extent practical). This may include, but is not limited to, recontouring the area and planting of riparian vegetation.

BMP Number	BMP Title	BMP Description
GEN-34	Dewatering in Tidal Work Areas	For tidal areas, a downstream cofferdam will be constructed to prevent the work area from being inundated by tidal flows. 1. Installation of cofferdams and fish exclusion measures will be installed at low tide when the channel and project site are at their driest. 2. It is preferable to not use any bypass pipes when work is being conducted on one side of the channel, if~~s~~ isolated by the cofferdam, and flows can continue on the other side of the creek channel without entering the project area. 3. If downstream flows cannot be diverted around the project site, the creek waters will be transmitted around the site through cofferdam bypass pipes. Waters discharged through tidal cofferdam bypass pipes will not exceed 50 NTUs over the background levels of the tidal waters into which they are discharged. 4. Cofferdams in tidal areas may be made from earthen or gravel material. If earth is used, the downstream and upstream faces will be covered by a protected covering (e.g., plastic or fabric) if needed to minimize erosion. A protected covering or sheeting will be placed on the water side of an earthen coffer dam to protect water quality. 5. When maintenance is completed, the cofferdams and bypass pipes will be removed as soon as possible but no more than 72 hours after work is completed. Flows will be restored at a reduced velocity to minimize erosion, turbidity, or harm to downstream habitat.
GEN-35	Pump/Generator Operations and Maintenance	When needed to assist in channel dewatering, pumps and generators will be maintained and operated in a manner that minimizes impacts to water quality and aquatic species. 1. Pumps and generators will be maintained according to manufacturers' specifications to regulate flows to prevent dryback or washout conditions. 2. Pumps will be operated and monitored to prevent low water conditions, which could pump muddy bottom water, or high water conditions, which creates ponding. 3. All pump intakes will be screened. Pumps in steelhead creeks will be screened according to NMFS criteria (http://www.swr.noaa.gov/sr/fishscrn.pdf) to prevent entrainment of steelhead.
Public Safety		
GEN-36	Public Outreach	The public will be informed of stream maintenance work prior to the start of work as part of the preparation of the NPW for all projects in the NPW: 1. Each spring, a newspaper notice will be published with information on the NPW work sites, approximate work dates, and contact information. 2. Neighborhood Work Notices will be distributed as part of the NPW preparation prior to the start of work. 3. Local governments (cities and County) will be notified of scheduled maintenance work. The NPW will be submitted to the public works departments, local fire districts, and the District's Flood Protection and Watershed Advisory Committees. 4. The District will post specific information on individual maintenance projects on the Stream Maintenance Web site: (http://valleywater.org/EkContent.aspx?id=379&terms=stream+maintenance) 5. For high profile projects, at the District's discretion, signs will be posted in the neighborhood to notify the public at least one week in advance of maintenance schedules, trail closures, and road/lane closures as necessary and as possible. Signage used at work sites will include contact information for lodging comments and/or complaints regarding the maintenance activities.
GEN-37	Implement Public Safety Measures	The District will implement public safety measures during maintenance as follows: 1. Construction signs will be posted at job sites warning the public of construction work and to exercise caution,

BMP Number	BMP Title	BMP Description
		as appropriate to public accessed areas. 2. Where work is proposed adjacent to a recreational trail, warning signs will be posted several feet beyond the limits of work. Signs will also be posted if trails will be temporarily closed. 3. If needed, a lane will be temporarily closed to allow for trucks to pull into and out of access points to the work site. 4. Temporary fencing, either the orange safety type or chain link, will be installed above repair sites on bank stabilization projects. 5. When necessary, District or contracted staff will provide traffic control and site security.
GEN-38	Minimize Noise Disturbances to Residential Areas	The District will implement maintenance practices that minimize disturbances to residential areas surrounding work sites. 1. With the exception of emergencies, work will be conducted during normal working hours. Maintenance activities in residential areas will not occur on Saturdays, Sundays, or District observed holidays except during emergencies, or with approval by the local jurisdiction and advance notification of surrounding residents. 2. Vehicles, generators and heavy equipment will be equipped with adequate mufflers. 3. Idling of vehicles will be prohibited beyond 5 minutes unless operation of the engine is required to operate a necessary system such as a power take-off (PTO).
GEN-39	Planning for Pedestrians, Traffic Flow, and Safety Measures	1. Work will be staged and conducted in a manner that maintains two-way traffic flow on public roadways in the vicinity of the work site. If temporary lane closures are necessary, they will be coordinated with the appropriate jurisdictional agency and scheduled to occur outside of peak traffic hours (7:00 – 10:00 a.m. and 3:00 – 6:00 p.m.) to the maximum extent practicable. Any lane closures will include advance warning signage, a detour route and flaggers in both directions. When work is conducted on public roads and may have the potential to affect traffic flow, work will be coordinated with local emergency service providers as necessary to ensure that emergency vehicle access and response is not impeded. 2. Bicycle and pedestrian facility closures will be scheduled outside of peak traffic hours (7:00 – 10:00 a.m. and 3:00 – 6:00 p.m.) to the maximum extent practicable. 3. Public transit access and routes will be maintained in the vicinity of the work site. If public transit will be affected by temporary road closures and require detours, affected transit authorities will be consulted and kept informed of project activities. 4. Adequate parking will be provided or designated public parking areas will be used for maintenance-related vehicles not in use through the maintenance period. 5. Access to driveways and private roads will be maintained. If brief periods of maintenance would temporarily block access, property owners will be notified prior to maintenance activities.

BMP Number	BMP Title	BMP Description
Cultural Resources		
GEN-40	Discovery of Cultural Remains or Historic or Paleontological Artifacts	Work in areas where remains or artifacts are found will be restricted or stopped until proper protocols are met. 1. Work at the location of the find will halt immediately within 50 feet of the find. A "no work" zone shall be established utilizing appropriate flagging to delineate the boundary of this zone, which shall measure at least 50 feet in all directions from the find. 2. The District shall retain the services of a Consulting Archaeologist or Paleontologist, who shall visit the discovery site as soon as practicable, and perform minor hand-excavation to describe the archaeological or paleontological resources present and assess the amount of disturbance. 3. The Consulting Archaeologist shall provide to the District and the Corps, at a minimum, written and digital-photographic documentation of all observed materials, utilizing the guidelines for evaluating archaeological resources for the California Register of Historic Places (CRHP) and National Register of Historic Places (NRHP). Based on the assessment, the District and Corps shall identify the CEQA and Section 106 cultural-resources compliance procedure to be implemented. 4. If the find appears to not meet the CRHP or NRHP criteria of significance, and the Corps archaeologist concurs with the Consulting Archaeologist's conclusions, construction shall continue while monitored by the Consulting Archaeologist. The authorized maintenance work shall resume at the discovery site only after the District has retained a Consulting Archaeologist to monitor and the Watershed Manager has received notification from the Corps to continue work. 5. If the find appears significant, avoidance of additional impacts is the preferred alternative. The Consulting Archaeologist shall determine if adverse impacts to the resources can be avoided. 6. When avoidance is not practical (e.g., maintenance activities cannot be deferred or they must be completed to satisfy the SMP objective), the District shall develop an Action Plan and submit it to the Corps within 48 hours of Consulting Archaeologist's evaluation of the discovery. The action Plan may be submitted via e-mail to (rstradford@spd.usace.army.mil). The Action Plan is synonymous with a data-recovery plan. It shall be prepared in accordance with the current professional standards and State guidelines for reporting the results of the work, and shall describe the services of a Native American Consultant and a proposal for curation of cultural materials recovered from a non-grave context. 7. The recovery effort will be detailed in a report prepared by the archaeologist in accordance with current archaeological standards. Any non-grave artifacts will be placed with an appropriate repository. 8. The Consulting Paleontologist will meet the Society for Vertebrate Paleontology's criteria for a "qualified professional paleontologist" (Society of Vertebrate Paleontology Conformable Impact Mitigation Guidelines Committee 1995). 9. The paleontologist will follow the Society for Vertebrate Paleontology's guidelines for treatment of the artifact. Treatment may include preparation and recovery of fossil materials for an appropriate museum or university collection, and may include preparation of a report describing the finds. The District will be responsible for ensuring that paleontologist's recommendations are implemented. 10. In the event of discovery of human remains (or the find consists of bones suspected to be human), the field crew supervisor shall take immediate steps to secure and protect such remains from vandalism during periods when work crews are absent.) 11. Immediately notify the Santa Clara County Coroner and provide any information that identify the remains as Native American. If the remains are determined to be from a prehistoric Native American, or determined to be a Native American from the ethnographic period, the Coroner shall contact the Native American Heritage

BMP Number	BMP Title	BMP Description
		Commission (NAHC) within 24 hours of being notified of the remains. The NAHC then designates and notifies within 24 hours a Most Likely Descendant (MLD). The MLD has 24 hours to consult and provide recommendations for the treatment or disposition, with proper dignity, of the human remains and grave goods. 12. Preservation in situ is the preferred option. Human remains shall be preserved in situ if continuation of the maintenance work, as determined by the Consulting Archaeologist and MLD, will not cause further damage to the remains. The remains and artifacts shall be documented and the find location carefully backfilled (with protective geo-fabric if desirable) and recorded in District project files. 13. Human remains or cultural items exposed during maintenance that cannot be protected from further damage shall be exhumed by the Consulting Archaeologist at the discretion of the MLD and reburied with the concurrence of the MLD in a place mutually agreed upon by all parties.
GEN-41	Review of Projects with Native Soil	A cultural resources specialist will conduct a review and evaluation of those sites that would involve disturbance / excavation of native soil previously undisturbed by contemporary human activities to determine their potential for affecting significant cultural resources. The evaluation of the potential to disturb cultural resources will be based on an initial review of archival information provided by the California Historical Resources System/Northwest Information Center (CHRIS/NWIC) in regard to the project area based on a 0.25 mile search radius. It is recommended that this initial archival review be completed by a professional archaeologist who will be able to view confidential site location data and literature to arrive at a preliminary sensitivity determination. If necessary, a further archival record search and literature review (including a review of the Sacred Lands Inventory of the Native American Heritage Commission); and a field inventory of the project area will be conducted to determine the presence/absence of surface cultural materials associated with either prehistoric or historic occupation. The results along with any mitigation and/or management recommendations would be presented in an appropriate report format and include any necessary maps, figures, and correspondence with interested parties. A summary table indicating appropriate management actions (e.g., monitoring during construction, presence/absence testing for subsurface resources; data recovery, etc.) will be developed for each project site reviewed. The management actions will be implemented on site to avoid significant effects to cultural resources.
Utilities		
GEN-42	Investigation of Utility Line Locations	An evaluation of the locations of utility lines that could be affected by maintenance activities will be conducted annually as part of the preparation of the Notice of Proposed Work (NPW). Utilities will be avoided as much as possible. For maintenance areas with the potential for adverse effects on utility services, the following measures shall be implemented: 1. Utility excavation or encroachment permits shall be required from the appropriate agencies. These permits include measures to minimize utility disruption. The District and its contractors shall comply with permit conditions. Such conditions shall be included in construction contract specifications. 2. Utility locations shall be verified through a field survey (potholing) and use of the Underground Service Alert services. 3. Detailed specifications shall be prepared as part of the design plans to include procedures for the excavation, support, and/or fill of areas around utility cables and pipelines. All affected utility services shall be notified of the District's maintenance plans and schedule. Arrangements shall be made with these entities regarding protection, relocation, or temporary disconnection of services. 4. Residents and businesses in the project area shall be notified of planned utility service disruption 2 to 4 days in advance, in conformance with state standards. 5. Disconnected cables and lines shall be reconnected promptly.

B. SECTION B – Sediment Removal BMPs

This group of BMPs is intended to be implemented specifically during sediment removal activities to avoid potential impacts on biological resources.

BMP Number	BMP Title	BMP Description
SED-1	Groundwater Management	If high levels of groundwater (i.e., visible water) are encountered during excavations in a work area, the water will be pumped out of the work site or left within the work area if the work activity is not causing water quality degradation in a live stream. Water Quality monitoring would need to occur. If necessary to protect water quality, the extracted water will be discharged into specifically constructed infiltration basins, holding ponds, or areas with vegetation to remove sediment prior to the water re-entering a creek. Water discharged into vegetated areas or swales will be pumped in a manner that will not create erosion around vegetation.
SED-2	Prevent Scour Downstream of Sediment Removal	Sediment removal sites in the transport zone on alluvial fans may cause increased scour downstream if they experience scouring flows or rapid sediment accumulation after maintenance. After sediment removal, the channel will be graded so that the transition between the existing channel both upstream and downstream of the maintenance area is smooth and continuous between the maintained and non-maintained areas and does not present a sudden vertical transition (wall of sediment) or other blockage that could erode once flows are restored to the channel.
SED-3	Restore Channel Features	Low-flow channels within non-tidal streams will be contoured to facilitate fish passage and will emulate the pre-construction conditions as closely as possible, within the finished channel topography.
SED-4	Berm Bypass	Where sediment removal is accomplished without a bypass by removing alternating cells, the berm between the work and the live channel will be wide enough to prevent introduction of turbid water from the cell into the live channel.
SED-5	Sediment Characterization	Projects involving sediment removal at stream gauges, outfalls, culverts, flap gates, tide gates, grade control structures, bridges, fish ladders, and fish screens in excess of 25 cubic yards shall be characterized in accordance with the SCVWD's Sediment Characterization Plans for SMP-2. These projects shall be reported in the annual summary report. Sediment removed will not be reused without pre-approval from appropriate regulatory agencies. See section 5.4 for information on the waiver process.

C. SECTION C – Vegetation Management BMPs

These BMPs provide specific and detailed guidance on the variety of vegetation management procedures implemented by the District. BMPs for the following maintenance techniques are included: tree pruning, tree removal, plant removal, woody debris management, herbicide application, mowing, discing, flaming, and grazing. Practices will be implemented by fully trained and qualified field crews.

BMP Number	BMP Title	BMP Description
VEG-1	Minimize Local Erosion Increase from In-channel Vegetation Removal	To minimize the potential effect of localized erosion, the toe of the bank will be protected by leaving vegetation to the maximum extent possible and consistent with the maintenance guidelines or original design requirements.
VEG-2	Non-native Invasive Plant Removal	Invasive species (e.g. cape ivy [*Delairea odorata/Senecio mikanoides]*, arundo [*Arundo donax*]) will be disposed of in a manner that will not contribute to the further spread of the species. Cape ivy removed during a project shall be bagged and disposed of in a landfill. Arundo canes will be prevented from floating downstream or otherwise entering the creek or waterway.
VEG-3	Use Appropriate Equipment for Instream Removal	When using heavy equipment to cut or remove instream vegetation, low ground pressure equipment, such as tracked wheels will be utilized to reduce impacts to the streambed.
VEG-4	Use Flamers with Caution	1. A fire extinguisher, water supply and other appropriate fire suppression equipment will always be kept close to the work site in case of an emergency. 2. Propane tanks will be checked for leaks and proper functioning prior to and proceeding use of flaming equipment. The propane tank will be treated as a hazardous material.
VEG-5	Conduct Flaming During Appropriate Weather and Seasonal Conditions	Flamers will not be used during periods of high fire danger or in areas where fuel or climate conditions could accidentally ignite a fire.
VEG-6	Standard Grazing Procedures	1. Vegetation and areas to be preserved will be fenced off to exclude grazing animals. 2. Grazing animals will be excluded from stream channels, using fencing or other barriers.

D. SECTION D – Bank Stabilization BMPs

These BMPs provide additional guidance during implementation of bank stabilization projects to avoid impacts on biological and cultural resources. Review of the Post-Project Restoration BMPs in Section F is recommended because those measures will be implemented after bank stabilization projects are complete. The BMPs included in this section are implemented by the field crew and site manager.

BMP Number	BMP Title	BMP Description
BANK-1	Bank Stabilization Design to Prevent Erosion Downstream	To further prevent potential downstream erosion impacts due to bank stabilization, the site design will be adjusted to provide proactive protection of vulnerable areas within the reach of the worksite. Such measures include, but are not limited to, appropriately keyed-in coir logs, riparian planting, strategic placement of rock, and flow deflectors. Bank stabilization will include appropriate transition designs upstream and downstream of the work site to prevent potential erosion impacts.
BANK-2	Concrete Use Near Waterways	Concrete that has not been cured is alkaline and can increase the pH of the water. Fresh concrete will be isolated until it no longer poses a threat to water quality using the following appropriate measures: 1. Wet sacked concrete will be excluded from the wetted channel for a period of 30 days after installation. During that time, the wet sacked concrete will be kept moist (such as covering with wet carpet) and runoff from the wet

BMP Number	BMP Title	BMP Description
		sacked concrete will not be allowed to enter a live stream. 2. Poured concrete will be excluded from the wetted channel for a period of 30 days after it is poured. During that time, the poured concrete will be kept moist, and runoff from the wet concrete will not be allowed to enter a live stream. Commercial sealants (e.g., Deep Seal, Elasto-Deck Reservoir Grade) may be applied to the poured concrete surface where difficulty in excluding water flow for a long period may occur. If a sealant is used, water will be excluded from the site until the sealant is dry. 3. Dry sacked concrete will not be used in any channel. 4. An area outside of the channel and floodplain will be designated to clean out concrete transit vehicles.
BANK-3	Bank Stabilization Post-Construction Maintenance	The District may maintain or repair bank stabilization projects that are less than 2 years old that are damaged by winter flows. The District will notify the regulatory agencies 24 hours prior to beginning the work and the work will be reported as part of the Post-Construction Report submitted by January 15 of each year or if necessary, the subsequent year. Appropriate BMPs will be applied during maintenance repairs.

E. SECTION E – Post-Project Restoration BMPs

These BMPs will be implemented, as appropriate, on all sites that involve ground disturbance.

BMP Number	BMP Title	BMP Description
REVEG-1	Seeding	Sites where maintenance activities result in exposed soil will be stabilized to prevent erosion. Disturbed areas shall be seeded with native seed as soon as is appropriate after maintenance activities are complete. An erosion control seed mix may be applied to exposed soils, and down to the ordinary high water mark (OHWM). 1. The seed mix should consist of California native grasses (e.g., *Hordeum brachyantherum*, *Elymus glaucus*, and *Vulpia microstachyes*) or annual, sterile seed mix. 2. Temporary earthen access roads may be seeded when site and horticultural conditions are suitable, or have other appropriate erosion control measures in place (GEN-20).
REVEG-2	Planting Material	Revegetation and replacement plantings will consist of locally collected native species. Species selection will be based on surveys of natural areas on the same creek that have a similar ecological setting and/or as appropriate for the site location.

F. SECTION F – Management of Animal Conflict BMPs

Methods of animal management included in the SMP are avoidance, biological controls, physical alterations, habitat alterations, and lethal controls. Of all these methods, implementation of lethal controls has the highest potential for environmental and biological impacts. Therefore, the animal management BMPs provided in this section focus on lethal controls. The application area for lethal controls will be identified during the annual planning process (see the Biological Resource Planning BMPs) and guided as directed by wildlife biologists. Species habitat areas are defined by the District's GIS species mapping, updated CNDDB and known local biological information and are included in the SMP Update Subsequent EIR.

BMP Number	BMP Title	BMP Description
ANI-1	Avoid Redistribution of Rodenticides	Carcass surveys will be conducted periodically when acute poisons and first generation anticoagulants are used. The frequency of the carcass surveys will be specific to the type of rodenticide used, to minimize secondary poisoning impacts: • Acute toxins – Daily carcass surveys, beginning the first day after application until the end of the baiting period for acute toxins used above-ground. • Anticoagulants - Within 7 days of installation of first generation anticoagulant bait, and weekly thereafter. Anytime a carcass is found, daily carcass surveys will begin for as long as carcasses are found until no carcasses are found during a daily survey. Once no carcasses are found, carcass surveys will return to the weekly carcass survey timeline maximum from the date of initial installation of an anticoagulant bait station. To verify that the frequency of carcass surveys is adequate, a biologist will conduct daily carcass surveys 2 times per year over one baiting cycle. Based on the results of these surveys, the timing of carcass surveys will be adjusted if necessary. Any spilled bait will be cleaned up immediately.
ANI-2	Prevent Harm to the Salt Marsh Harvest Mouse and California Clapper Rail	1. No rodenticides or fumigants will be used within the range of the SMHM or CCR as identified on District range maps. 2. Methods of rodent control within SMHM or CCR habitat will be limited to live trapping. All live traps shall have openings measuring no smaller than 2 inches by 1 inch to allow any SMHM that inadvertently enter the trap to easily escape. All traps will be placed outside of pickleweed areas and above the high tide line.
ANI-3	Burrowing Owl, Bald Eagle and Golden Eagle Buffer Zone	Per the California Department of Fish and Wildlife's 2008 *Guidance for Burrowing Owl Conservation*, a 656-yard buffer will be established around known burrowing owl locations where no rodenticides or fumigants (including smoke bombs) will be used. A 0.5-mile buffer will be established around known bald eagle and golden eagle nesting locations where no rodenticides will be used.
ANI-4	Animal Control in Sensitive Amphibian Habitat	1. Fumigants will not be used within the habitat areas of special status amphibians. 2. The use of bait stations within the potential habitat areas of California red-legged frog, California tiger salamander, or foothill yellow-legged frog will be limited to bait stations specifically designed to prevent entry by these species. 3. Any live traps will allow California red-legged frogs, California tiger salamanders, or foothill yellow-legged frogs to safely exit (e.g., by having openings measuring no smaller than 2 inches by 1 inch).
ANI-5	Slurry Mixture near Waterways	All slurry type mixes used to fill rodent burrows will be prevented from entering any waterway by using appropriate erosion control methods and according to the manufacturer's specifications. If the creek bed is dry or has been dewatered, any material that has entered the channel will be removed.
ANI-6	Species requiring depredation permit	Animal Conflict Management will not include lethal control of species listed in California F&G Code Section 4181 inlcuding beaver and gray squirrel without first obtaining a depredation permit.

G. SECTION G – Use of Pesticides

Pesticides may be used for vegetation management or control of animal damage.

BMP Number	BMP Title	BMP Description
HM-4	Posting and Notification for Pesticide Use	Posting of areas where pesticides are used will be performed in compliance with District Policy Ad-8.2 Pesticide Use as follows: 1. Posting will be performed in compliance with the label requirements of the product being applied. 2. In addition, posting will be provided for any products applied in areas used by the public for recreational purposes, or those areas readily accessible to the public, regardless of whether the label requires such notification. In doing this, the District ensures that exposure risk is minimized further by adopting practices that go beyond the product label requirements. (The posting method may be modified to avoid destruction of bait stations or scattering of rodenticide.) 3. These postings will notify staff and the general public of the date and time of application, the product's active ingredients, and common name, and the time of allowable re-entry into the treated area. 4. Signs will not be removed until after the end of the specified re-entry interval. 5. Right-to-know literature on the product will be made available to anyone in the area during the re-entry period. 6. A District staff contact phone number will be posted on the sign, including a cellular phone number. 7. Notification of pesticide activities will be made as required by law. Also, the District will maintain records of neighbors with specific needs relative to notification before treatment of an adjacent area so that such needs are met.

Source: Data compiled by Horizon Water and Environment in 2011

EXHIBIT D – SANTA CLARA VALLEY WATER DISTRICT STREAM MAINTENANCE PROGRAM UPDATE

CALIFORNIA STATE LANDS COMMISSION STATEMENT OF FINDINGS AND STATEMENT OF OVERRIDING CONSIDERATIONS

1.0 INTRODUCTION

The California State Lands Commission (Commission), acting as a responsible agency under the California Environmental Quality Act (CEQA), makes these findings and this Statement of Overriding Considerations to comply with CEQA as part of its discretionary approval to authorize issuance of a General Lease – Public Agency Use, to Santa Clara Valley Water District (District), for use of sovereign lands associated with the proposed Stream Maintenance Program (SMP) Update (Project). Per the final Subsequent Environmental Impact Report (SEIR), the Project is intended to support permitting for the next 10-year planning period that began in 2012 and will end in 2022. However, according to District, the Project will be ongoing, and the time horizon for this SEIR is indefinite. The District has stated that the SEIR and the SMP Manual (updated in 2013) are intended to fully replace the original documents that guided the SMP from its inception through 2012 (see generally Pub. Resources Code, § 21069; State CEQA Guidelines, § 15381.)[1] The Commission has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The Commission also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions. (Pub. Resources Code, §§ 6301, 6306, 6009, subd. (c).) All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the common law Public Trust.

The Commission is a responsible agency under CEQA for the Project because the Commission must approve a lease for the Project to go forward and because the District, as the CEQA lead agency, has the principal responsibility for approving the Project and has completed its environmental review under CEQA. The Commission is also a trustee agency under CEQA for the Project because the Project affects state-owned sovereign lands under the jurisdiction of the Commission that are held in trust for the people of the state of California. The District analyzed the environmental impacts associated with the Project in a SEIR (State Clearinghouse [SCH] No. 2000102055) and, in February 14, 2012, certified the EIR and adopted a Mitigation Monitoring Program (MMP), Findings, and a Statement of Overriding Considerations.

The Project would remove sediment and manage vegetation to maintain the hydraulic, safety, and habitat functions of the creek systems; allow for levee inspections and maintenance access; stabilize beds and banks of creeks and canals to protect existing

[1] CEQA is codified in Public Resources Code section 21000 et seq. The State CEQA Guidelines are found in California Code of Regulations, title 14, section 15000 et seq.

infrastructure, maintain public safety, reduce sediment loading, protect water quality, and habitat values; and avoid, minimize, or mitigate impacts on the environment by incorporating stream stewardship measures into maintenance activities.

The District determined that the Project could have significant environmental effects on the following environmental resources:

- Aesthetics
- Air Quality
- Biological Resources
- Global Climate Change
- Noise

Project components within the Commission's jurisdiction (i.e., dredging, vegetation management, and restoration) could have significant environmental effects on all five of these resource areas.

In certifying the Final SEIR and approving the Project, the District imposed various mitigation measures for Project-related significant effects on the environment as conditions of Project approval and concluded that Project-related impacts would be substantially lessened with implementation of these mitigation measures such that the impacts would be less than significant for most resource areas. However, even with the integration of all feasible mitigation, the District concluded in the SEIR that some of the identified impacts would remain significant. As a result, the District adopted a Statement of Overriding Considerations to support its approval of the Project despite the significant and unavoidable impacts. The District determined that, after mitigation, the Project may still have significant impacts on **Aesthetics, Air Quality, Biological Resources, Global Climate Change, and Noise**. Because some of these significant impacts may occur on lands under the jurisdiction of the Commission, the Commission also adopts the Statement of Overriding Considerations set forth in this exhibit as part of its approval.

As a responsible agency, the Commission complies with CEQA by considering the SEIR and reaching its own conclusions on whether, how, and with what conditions to approve a project. In doing so, the Commission may require changes in a project to lessen or avoid the effects, either direct or indirect, of that part of the project which the Commission will be called on to carry out or approve. In order to ensure the identified mitigation measures and/or Project revisions are implemented, the Commission adopts the Mitigation Monitoring Program (MMP) as set forth in Exhibit C as part of its Project approval.

2.0 FINDINGS

The Commission's role as a responsible agency affects the scope of, but not the obligation to adopt, findings required by CEQA. Findings are required under CEQA by each "public agency" that approves a project for which an EIR has been certified that identifies one or more significant impacts on the environment (Pub. Resources Code, §

21081, subd. (a); State CEQA Guidelines, § 15091, subd. (a).) Because the SEIR certified by the District for the Project identifies potentially significant impacts that fall within the scope of the Commission's approval, the Commission makes the Findings set forth below as a responsible agency under CEQA. (State CEQA Guidelines, § 15096, subd. (h); *Riverwatch v. Olivenhain Mun. Water Dist.* (2009) 170 Cal.App.4th 1186, 1202, 1207.

While the Commission must consider the environmental impacts of the Project as set forth in the EIR, the Commission's obligation to mitigate or avoid the direct or indirect environmental impacts of the Project is limited to those parts which it decides to carry out, finance, or approve (Pub. Resources Code, § 21002.1, subd. (d); State CEQA Guidelines, §§ 15041, subd. (b), 15096, subds. (f)-(g). Accordingly, because the Commission's exercise of discretion involves only issuing a General Lease – Public Agency Use for this Project, the Commission is responsible for considering only the environmental impacts related to lands or resources subject to the Commission's jurisdiction. With respect to all other impacts associated with implementation of the Project, the Commission is bound by the legal presumption that the SEIR fully complies with CEQA.

The Commission has reviewed and considered the information contained in the Project EIR. All significant adverse impacts of the Project identified in the SEIR relating to the Commission's approval of a General Lease – Public Agency Use, which would allow stream maintenance activities, are included herein and organized according to the resource affected.

These Findings, which reflect the independent judgment of the Commission, are intended to comply with CEQA's mandate that no public agency shall approve or carry out a project for which an EIR has been certified that identifies one or more significant environmental effects unless the agency makes written findings for each of those significant effects. Possible findings on each significant effect are:

(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the Final EIR.

(2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the Commission. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

(3) Specific economic, legal, social, technological or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or Project alternatives identified in the Final EIR.[2]

A discussion of supporting facts follows each Finding.

[2] See Public Resources Code section 21081, subdivision (a) and State CEQA Guidelines section 15091, subdivision (a).

- Whenever Finding (1) occurs, the mitigation measures that lessen the significant environmental impact are identified in the facts supporting the Finding.
- Whenever Finding (2) occurs, the agencies with jurisdiction are specified. These agencies, within their respective spheres of influence, have the responsibility to adopt, implement, and enforce the mitigation discussed.
- Wherever Finding (3) is made, the Commission has determined that, even after implementation of all feasible mitigation measures and consideration of feasible alternatives, the identified impact will exceed the significance criteria set forth in the EIR. Furthermore, to the extent that potentially feasible measures have been alleged or proposed, the Findings explain why certain economic, legal, social, technological or other considerations render such possibilities infeasible. The significant and unavoidable impacts requiring Finding (3) are identified in the Final EIR, discussed in the Responses to Comments, and explained below. Having done everything it can to avoid and substantially lessen these effects consistent with its legal authority and CEQA, the Commission finds in these instances that overriding economic, legal, social, and other benefits of the approved Project outweigh the resulting significant and unavoidable impacts. The Statement of Overriding Considerations adopted as part of this exhibit applies to all such unavoidable impacts as required by CEQA. (Pub. Resources Code, § 21081, subd. (b); State CEQA Guidelines, §§ 15092 and 15093.)

These Findings are supported by substantial evidence contained in the SEIR and other relevant information provided to the Commission or existing in its files, all of which is contained in the administrative record. The mitigation measures are briefly described in these Findings; more detail on the mitigation measures is included in the Final SEIR.

The Commission is the custodian of the record of proceedings upon which its decision is based. The location of the Commission's record of proceedings is in the Sacramento office of the Commission, 100 Howe Avenue, Suite 100-South, Sacramento, CA 95825.

A. SUMMARY OF FINDINGS

There were no environmental issue areas where all impacts were Beneficial or resulted in No Impact; however, the SEIR subsequently identified the following impacts as Less Than Significant:

- Cultural Resources
- Hazards and Hazardous Materials
- Hydrology and Geomorphology
- Land Use and Planning
- Public Services and Utilities
- Recreation
- Traffic and Transportation
- Water Quality

For the remaining potentially significant effects, the Findings are organized by

significant impacts within the SEIR issue areas as presented below.

B. IMPACTS REDUCED TO LESS THAN SIGNIFICANT LEVELS WITH MITIGATION

The impacts identified below would apply to Commission jurisdiction and were determined in the Final SEIR to be potentially significant absent mitigation; after application of mitigation, however, the impacts were determined to be less than significant. **For the full text of each mitigation measure (MM), please refer to Exhibit C, Attachment C-1.**

1. Aesthetics	AES-3[3]
2. Biological Resources	BIO-1, BIO-8, BIO-9, BIO-10, BIO-12, BIO-14, BIO-16, BIO-20, BIO-28, BIO-35, BIO-44

1. AESTHETICS

CEQA FINDING NO. AES-3

Impact: **Impact AES-3. Temporary Alteration of Visual Character or Quality from Maintenance Activities.** Short-term maintenance activities including vegetation management, sediment removal, and bank protection could result in a temporary degradation of visual quality.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR, within the jurisdiction of the Commission.

FACTS SUPPORTING THE FINDING(S)

Temporary degradation of visual quality could result from short-term maintenance activities. These impacts are described below.

Vegetation Management: During vegetation management activities, a temporary visual impact would occur from the presence of maintenance crews and equipment near channels. Vegetation management could degrade the visual character of creeks and canals if it were to remove major stands of large vegetation. Invasive plant removal activities may alter a densely vegetated area to a partially vegetated or bare area until newly planted vegetation grow in. Herbicide activities also could alter the visual character of a site as targeted vegetation was removed. Tree removal is not anticipated within areas under the jurisdiction of the Commission.

Sediment Removal and Bank Stabilization: For sediment removal and bank stabilization activities, a temporary visual impact also would occur from maintenance

[3] The District found this impact to be significant due to tree removal. As no tree removal is anticipated on lands under the jurisdiction of the Commission, the impact would be less than significant with mitigation within Commission's jurisdiction.

crews and equipment near and in channels. Both sediment removal and bank stabilization projects could result in areas that would be temporarily de-vegetated, which on some creeks in the system would be different from areas surrounding the site, although bank stabilization sites would include a revegetation component, where feasible (see SEIR Appendix C, which describes the revegetation approach for bank stabilization activities). Viewer response to altered channel and riparian corridors after maintenance activities may vary. Commuters on creekside trails who passed by the site on a daily basis could react to the changed conditions. However, such changed conditions would be temporary (because vegetation would grow back over time) and would occur at isolated, discrete locations. Likewise, sediment removal projects that would remove silt, vegetation and other blockages may allow the creek to function more naturally, resulting in an aesthetic benefit.

Management of Animal Conflicts: Other than the temporary presence of maintenance personnel and vehicles, activities proposed for animal conflict management would not involve actions which could result in the temporary alteration of visual character or quality. Bait traps, if left on-site, would be hidden or otherwise made inconspicuous to prevent vandalism and theft.

Minor Maintenance: Minor maintenance activities generally would be small scale (e.g., small amounts of sediment removal, removal of debris), and would have limited potential to impact visual quality. However, the installation/maintenance of landscape sites would result in a visual improvement at the time of installation.

The compensatory mitigation package requires compensation for new impacts on wetlands and on jurisdictional other waters. Implementation of **MM BIO-1** has been incorporated into the Project to address riparian planting and restoration and reduces this impact to a less than significant level.

MM BIO-1: Implement Compensatory Mitigation for Wetlands and Other Waters.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

2. BIOLOGICAL RESOURCES

CEQA FINDING NO. BIO-1

Impact: **Impact BIO-1. Loss or Disturbance of Wetlands and Other Waters**. Implementation of the Project would result in short-term, but repetitive, disturbance of wetland and aquatic communities, including both jurisdictional and non-jurisdictional wetlands and other waters.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

Activities that could result in disturbance of wetlands and other waters within Commission jurisdiction include placement of fill, hydrological interruption (e.g., dewatering or diversion), alteration of bed and bank, degradation of water quality (e.g., increased sedimentation and turbidity, herbicide contamination), and other direct impacts. Certain types of vegetation management work such as hand removal, herbicide, and pruning are also projected activities that may affect wetlands and other waters. Wetland functions such as sediment stabilization, sediment/toxicant retention, nutrient removal/transformation, and aquatic wildlife species habitat may be adversely affected as a result of Project activities. The Project would result in temporal losses of wetland and aquatic habitat functions and values, possible type conversions of wetlands (e.g., from wetlands dominated by certain plants species to wetlands dominated by others) and potentially permanent losses of wetlands and other waters.

To mitigate for losses, MM BIO-1 is the compensatory mitigation package applied to loss or disturbance of wetland and other waters, detailed in Appendix C of Volume II of the final SEIR (the 2012-2022 SMP Update Mitigation Approach Memorandum). The compensatory mitigation package requires compensation for new impacts on wetlands and on jurisdictional other waters. Implementation of **MM BIO-1** has been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-1: Implement Compensatory Mitigation for Wetlands and Other Waters.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-5

Impact: **Impact BIO-5. Impacts to Non-Serpentine Special-Status Plant Species**. The Project may negatively affect special-status plants typically occurring in non-serpentine vegetation communities.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

Maintenance activities such as trampling by personnel and equipment, soil compaction leading to damage of roots, or alteration of hydrology and mechanical, physical, or chemical removal of vegetation may kill or damage many plant species. MM BIO-5 provides guidelines for compensation for unavoidable impacts to populations of special-status non-serpentine plants. A combination of preservation and enhancement of those species' populations would occur outside Project work sites. Implementation of **MM BIO-5** has been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-5: Implement Compensatory Mitigation for Impacts to Non-Serpentine Special-Status Plant Species.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-8

Impact: **Impact BIO-8. Impacts on Steelhead**. The Project Area contains designated critical habitat for both the Central California Coast steelhead and South-Central California Coast steelhead. Maintenance activities such as bank stabilization may significantly alter important habitat values and result in the direct injury or mortality of these species.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

Minor adverse impacts to steelhead habitat are expected to occur as a result of Project activities. Gravel removal, which occurs during sediment removal, would reduce the extent and availability of potential spawning habitat, and possibly rearing habitat, in the short term, and in the long term by reducing gravel supply. The District will implement MM BIO-8 and MM BIO-9 for loss of instream complexity, which provides habitat heterogeneity, cover, and refugia during high flows, by in-kind installation of structures that provide such complexity. Enhancing instream complexity would involve a number of possible actions such as enlarging an existing large woody debris feature, or enhancing a pool feature threatened by sedimentation.

Implementation of **MMs BIO-8 and BIO-9** has been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-8: Augmentation of Spawning Gravel.

MM BIO-9: Augmentation of Instream Complexity for Non-Tidal Stream Fish.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-9

Impact: **Impact BIO-9. Impacts on the Pacific Lamprey and Monterey Roach.** The Pacific lamprey and the Monterey roach may be impacted by many of the factors that threaten steelhead.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

The Pacific lamprey is not a special-status species, however this anadromous species has been impacted by many of the factors that threaten the steelhead, and occurs in a number of District maintained creeks. The Monterey roach is a California species of special concern and occurs in the Project Area. Electrofishing for fish relocation, stranding, herbicide and surfactant use, increased turbidity, and heavy equipment use on these species, their prey and their habitat, may result in the direct injury or mortality of individual fish.

MM BIO-1 would benefit the Pacific lamprey and Monterey roach within areas of Commission jurisdiction, through wetland and aquatic habitat restoration, enhancement and protection, which would help to maintain water quality, cover and instream habitat complexity. MM BIO-9 would increase instream complexity, and thus could be expected to benefit these fish in a similar manner as described for steelhead.

Implementation of **MMs BIO-1 and BIO-9** has been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-1: Implement Compensatory Mitigation for Wetlands and Other Waters.

MM BIO-9: Augmentation of Instream Complexity for Non-Tidal Stream Fish.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-10

Impact: **Impact BIO-10. Impacts on the Longfin Smelt and Green Sturgeon.** Impacts to longfin smelt and green sturgeon could potentially occur in the Project Area.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

Sediment removal and fuel or chemical spills could decrease water quality and impair the health of longfin smelt (state listed as threatened) and green sturgeon (federally listed as threatened and a California species of special concern). Vegetation removal along sloughs could result in minor adverse effects on these species. Mitigation for impacts to tidal wetlands and other waters, which would be the habitats in which longfin smelt and green sturgeon could potentially occur are included in MM BIO-1. The additional 21 acres of tidal marsh restoration that the District has implemented for previous impacts that did not occur, would also be used as mitigation for impacts to tidal

wetlands and aquatic habitats, as well as tidal species such as longfin smelt and green sturgeon.

Implementation of MM BIO-1 has been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-1: Implement Compensatory Mitigation for Wetlands and Other Waters.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-12

Impact: **Impact BIO-12. Impacts on the California Red-Legged Frog.**

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

The California red-legged frog is federally listed as a threatened species throughout its range in California and has the potential to occur within Commission jurisdictional areas. Spill of chemicals and fuels could occur from stream maintenance activities; however, MM BIO-1 would require the District to provide compensatory mitigation for impacts to wetland, aquatic, and riparian habitats. These measures could result in benefits to California red-legged frog through wetland restoration and the protection and management of mitigation lands that may support this species. MM BIO-11 requires mitigation of 2 acres of mitigation for every 1 acre of impact. Compensatory mitigation would be carried out preferably by the preservation, management, and enhancement of high-quality habitat that is already occupied by California red-legged frog, or by restoration or enhancement of degraded habitat or habitat that is unsuitable for use by California red-legged frog but is in the vicinity of areas of known occurrence or can be made more suitable.

Implementation of **MMs BIO-1 and BIO-11** has been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-1: Implement Compensatory Mitigation for Wetlands and Other Waters.

MM BIO-11: Implement Compensatory Mitigation for the California Red-Legged Frog.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-14

Impact: **Impact BIO-14. Impacts on Non-Special-Status Fish and Amphibians.** Native species of fish and amphibians may be impacted by Project activities.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

The rivers and creeks of Santa Clara County provide habitat for 12 native species of fish which includes the special-status fish mentioned under Impacts BIO-8, -9, and -10 as well as California roach, hitch, Sacramento sucker, threespine stickleback and others. Non-special-status amphibians such as western toad and Pacific chorus frog use the Project area as breeding and foraging habitat. The non-special-status fish and amphibians that would be impacted by the Project are relatively abundant and widespread. As a result, any one maintenance activity would not result in a substantial effect on regional populations. However, over the entire geographic and temporal scope of the Project, activities may result in modifications to extensive areas of their habitats resulting in the potential to impact relatively large numbers of non-special-status fish and amphibians.

Mitigation Measure BIO-1 would require the District to provide compensatory mitigation for impacts to wetland and aquatic habitats. This measure could result in benefits to non-special-status fish and amphibians through wetland restoration and the protection and management of mitigation lands that may support these species.

Implementation of **MM BIO-1** has been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-1: Implement Compensatory Mitigation for Wetlands and Other Waters.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-16

Impact: **Impact BIO-16. Impacts on the Western Pond Turtle.** Nesting habitat, dispersal habitat, and refugia for western pond turtles may be temporarily or permanently lost during Project activities.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

Proposed maintenance work, such as sediment removal and vegetation management, may result in the injury or mortality of turtles. For instance, the turtles or turtle eggs may be harmed or killed from crushing by construction personnel or equipment or as a result of desiccation or burying. In addition, riparian areas within Commission jurisdiction that provide nesting habitat, dispersal habitat, and refugia for western pond turtles may be temporarily or permanently lost during bank stabilization activities.

Mitigation Measure BIO-1 would benefit the western pond turtle through wetland and aquatic habitat restoration, enhancement and protection, which would help to maintain water quality, cover and instream habitat complexity. Mitigation Measure BIO-9 would increase instream complexity, and thus could be expected to benefit this species by compensating for the loss of turtle basking habitat.

Implementation of **MMs BIO-1 and BIO-9** has been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-1: Implement Compensatory Mitigation for Wetlands and Other Waters.

MM BIO-9: Augmentation of Instream Complexity for Non-Tidal Stream Fish.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-20

Impact: **Impact BIO-20. Impacts on the California Clapper Rail and Alameda Song Sparrow.** Disturbance caused by Project activities in close proximity to clapper rail or Alameda song sparrow habitat during the breeding season could potentially result in the abandonment of nests, eggs, and young.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

Very little bank stabilization would be needed near tidal salt and brackish marsh habitats where California clapper rail and Alameda song sparrow reside, and neither sediment removal nor instream herbicide treatment would occur near suitable breeding habitat. However, increased human activity may affect the behavior of the clapper rails and song sparrows. Project activities in close proximity to the species' habitat during the breeding season could potentially result in the abandonment of nests, eggs, and young. Hand removal of instream vegetation is projected to occur adjacent to clapper rail and song sparrow habitat, which would reduce the amount of vegetative cover that may be used to conceal individuals from predators during high tides, especially during the winter.

Mitigation for impacts to tidal wetlands and other waters, which would be the habitats in which California clapper rail and Alameda song sparrow could potentially occur are included in Mitigation Measure BIO-1. The additional 21 acres of tidal marsh restoration that the District has implemented for previous impacts that did not occur would be used as mitigation for impacts to tidal wetlands and aquatic habitats as well as tidal species such as California clapper rail and Alameda song sparrow.

Implementation of **MM BIO-1** has been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-1: Implement Compensatory Mitigation for Wetlands and Other Waters.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-28

Impact: **Impact BIO-28. Impacts to Yellow-Breasted Chat.** Disturbance caused by Project activities in close proximity to Yellow-Breasted Chat habitat during the breeding season could potentially result in the nest destruction or abandonment of nests, eggs, and young.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

The Project may affect yellow-breasted chat habitat for breeding or foraging and/or individuals (e.g., disturbance of active nests during maintenance activities). Optimal chat habitat is characterized by relatively large patches of riparian vegetation. Yellow-breasted chat eggs or young in nests could be killed or injured during maintenance activities resulting from nest destruction by construction personnel or equipment (e.g., knocking nests out of vegetation), or by removal of vegetation containing a nest. Maintenance activities causing a substantial increase in noise, movement of equipment, or human presence near active nests also may result in nest abandonment, and possibly the loss of eggs or young as a result. Human disturbance leading to reduced attendance of nests potentially could increase the risk of brood parasitism by brown-headed cowbirds.

MM BIO-12 would provide two measures (12A and 12B) to maintain willow-dominated riparian habitat for the least Bell's vireo. Either of the two measures would also mitigate impacts to the yellow-breasted chat, by ensuring that suitable breeding and foraging habitat is maintained, reducing the impacts below the level of significance.

Mitigation Measure BIO-12: Implement Compensatory Mitigation for the Yellow-Breasted Chat (or Least Bell's Vireo).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-35

Impact: **Impact BIO-35. Impacts on the Salt Marsh Harvest Mouse and Salt Marsh Wandering Shrew.** The Project may result in injury or displacement of the salt marsh harvest mouse and salt marsh wandering shrew.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

Project maintenance activities may result in the injury or mortality of salt marsh harvest mice and salt marsh wandering shrews because of equipment use and worker foot traffic. Individuals that vacate the area because of increased levels of noise and disturbance may be exposed to increased competition from members of the same species already occupying the area to which they were displaced and increased levels of predation because of unfamiliarity with the new area or lack of sufficient cover. Removal of vegetation may expose individual mice and shrews to predation.

Mitigation for impacts to tidal wetlands and other waters, which would be the habitats in which salt marsh harvest mouse and salt marsh wandering shrew could potentially occur, are included in MM BIO-1. The additional 21 acres of tidal marsh restoration that the District has implemented for previous impacts that did not occur would be used as mitigation for impacts to tidal wetlands and aquatic habitats as well as tidal species such as salt marsh harvest mouse and salt marsh wandering shrew. Implementation of **MM BIO-1** has been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-1: Implement Compensatory Mitigation for Wetlands and Other Waters.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-44

Impact: **Impact BIO-44. Introduction of Invasive Species.** Proposed restoration activities may create conditions suitable for additional spreading of aquatic invasive plants and invertebrates.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

Habitats within the jurisdiction of the Commission may include riparian, freshwater, and tidal wetlands where invasive species such as giant reed or smooth cordgrass are present. Proposed vegetation management activities may create conditions suitable for additional spreading of invasive plant species. MM BIO-16 would implement an Invasive Plant Management Program as an element of the SMP's compensatory mitigation package. The Program would preserve and improve habitat within Santa Clara County streams and riparian corridors by reducing populations of invasive plant species. In addition to the introduction of invasive plant species, without proper procedures, mitten crabs and other aquatic invasive invertebrates, such as the New Zealand mud snail, Quagga mussel, or zebra mussel, could inadvertently be introduced into the Project area.

Implementation of **MMs BIO-16 and BIO-17** has been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-16: Invasive Plant Management Program.

MM BIO-17: Aquatic Invasive Invertebrates. As a precaution against invasive quagga and zebra mussels, if waterborne vessels are used in maintenance activities, crews will wash and dry them off-site prior to using them in another creek or tributary.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. CUMULATIVE BIO-1

Impact: **Cumulative Impact BIO-1. Effects on Biological Resources.** Any of the Proposed Project's activities could have the potential for impacts to a variety of biological resources,

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

The proposed maintenance activities within Commission jurisdiction would involve sediment removal, bank stabilization, minor maintenance, and vegetation management. Any of the proposed Project's activities could have the potential for impacts to a variety of biological resources.

The cumulative impact on biological resources resulting from the Project in combination with other projects in the Project area would be dependent on the relative magnitude of adverse effects of these projects on biological resources compared to the relative benefit to these resources of impact avoidance and minimization efforts prescribed by

planning documents, CEQA mitigation measures, and permit requirements for each project; compensatory mitigation and proactive conservation measures associated with each project; and the benefits to biological resources accruing from the habitat conservation plans (HCPs) being pursued by District and others. In the absence of such avoidance, minimization, compensatory mitigation, and conservation measures, cumulatively significant impacts to biological resources would occur.

MMs BIO-1, BIO-5, BIO-8, BIO-9, BIO-10, BIO-11, BIO-14, BIO-15 and **BIO-16** as described in the Final SEIR, and **BIO-17**, would avoid, minimize, and mitigate impacts to biological resources. County and jurisdictional general plans considered for this cumulative impact assessment contain conservation measures that would benefit biological resources. There are two regional HCPs with which the District is involved, that will result in a net benefit to biological resources. With these measures in place, cumulative impacts to biological resources would be less than significant.

MM BIO-1: Implement Compensatory Mitigation for Wetlands and Other Waters.

MM BIO-5: Implement Compensatory Mitigation for Impacts to Non-Serpentine Special-Status Plant Species.

MM BIO-8: Augmentation of Spawning Gravel.

MM BIO-9: Augmentation of Instream Complexity for Non-Tidal Stream Fish.

MM BIO-10: Implement Compensatory Mitigation for the California Tiger Salamander.

MM BIO-11: Implement Compensatory Mitigation for the California Red-Legged Frog.

MM BIO-14: Implement Compensatory Mitigation for the Yellow Warbler.

MM BIO-15: Provide Alternative Bat Roost provides guidance if a tree or structure containing a pallid bat maternity roost is to be removed by the Project.

MM BIO-16: Invasive Plant Management Program.

MM BIO-17: Aquatic Invasive Invertebrates.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

C. SIGNIFICANT AND UNAVOIDABLE IMPACTS

The following impacts were determined in the Final SEIR to be significant and unavoidable within Commission jurisdiction. The Statement of Overriding Considerations adopted as part of this exhibit applies to all such unavoidable impacts as required by CEQA. (Pub. Resources Code, § 21081, subd. (b); State CEQA Guidelines, §§ 15092 and 15093.)

1. Air Quality	AIR-1
2. Biological Resources	BIO-45
3. Global Climate Change	GCC-1
4. Noise	NZ-1, NZ-3

1. AIR QUALITY

CEQA FINDING NO. AIR-1

Impact: **Impact AIR-1. Temporary Increase in NO_x.** Average daily and annual emissions of NO_x from the Project would be substantially greater than Bay Area Air Quality Management District (BAAQMD) significance thresholds.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

Emissions of criteria air pollutants ROG, PM10, and PM2.5 from the Project would occur at levels below BAAQMD significance thresholds and would not require mitigation. However, average daily and annual emissions of NO_x from the Project would be substantially greater than BAAQMD significance thresholds and could result in a significant impact.

MM AIR-1A would reduce impacts by developing a plan to demonstrate that off-road equipment to be used in the Project would achieve a Project-wide fleet average of a 20 percent NO_x reduction compared to the most recent air resources board (ARB) fleet average. However, this MM does not reduce NO_x emissions from the Project to below BAAQMD operational significance thresholds; therefore, temporary increases in NO_x emissions in exceedance of BAAQMD significance thresholds would still be significant.

Two other proposed MMs, AIR-1B and AIR-1C, would also reduce NO_x emissions to below operational significance thresholds, but may not be feasible to implement based on costs, logistics, or other factors. The resulting impact would constitute a significant

impact, and is considered unavoidable. The District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

MM AIR-1A: Reduction in Fleet Emissions.

MM AIR-1B: Off-site NO_x Emissions Mitigation Program.

MM AIR-1C: NO_x Emissions Offsets.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

CEQA FINDING NO. CUMULATIVE AIR-1

Impact: **Cumulative Impact AIR-1. Emissions of NO_x.** Cumulative emissions of NO_x from the Project would be substantially greater than BAAQMD significance thresholds.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

Emissions of criteria air pollutants ROG, PM10, and PM2.5 from Project activities would occur at levels below BAAQMD significance thresholds and would not require mitigation. However, average daily and annual emissions of NO_x would be substantially greater than BAAQMD significance thresholds throughout the Project, and would make a considerable contribution to cumulative air quality impacts that could result in a significant impact.

MM AIR-1A would reduce impacts by developing a plan to demonstrate that off-road equipment to be used in the Project would achieve a Project-wide fleet average of a 20 percent NO_x reduction compared to the most recent ARB fleet average. However, this mitigation measure does not reduce NO_x emissions from the Project to below BAAQMD operational significance thresholds. Two other proposed MMs, AIR-1B and AIR-1C, would further reduce NO_x emissions to below operational significance thresholds but may not be feasible to implement based on costs, logistics, or other factors. See the findings for Impact AIR-1. The residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

MM AIR-1A: Reduction in Fleet Emissions.

MM AIR-1B: Off-site NO_x Emissions Mitigation Program.

MM AIR-1C: NO_x Emissions Offsets.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

CEQA FINDING NO. CUMULATIVE AIR-2

Impact: **Cumulative Impact AIR-2. Emissions of Greenhouse Gases.** Annual emissions of greenhouse gases (GHGs) from the Project would occur at levels in exceedance of BAAQMD significance thresholds.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

The Project's maintenance activities would release GHGs from the combustion of fossil fuels in on- and off-road vehicles, and portable power generators. Annual emissions of GHGs from the Project would occur at levels in exceedance of BAAQMD significance thresholds. The Project would therefore make a considerable contribution to cumulative GHG impacts and could result in a significant impact.

MM AIR-1A would reduce emissions of NO_x by 20 percent. However, this mitigation measure does not reduce GHG emissions from the Project to below BAAQMD operational significance thresholds. Two other proposed mitigation measures, GCC-1A and GCC-1B, would also reduce GHG emissions to below operational significance thresholds but may not be feasible to implement based on costs, logistics, or other factors (see the findings for Impact GCC-1). The District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

MM AIR-1A: Reduction in Fleet Emissions.

MM GCC-1A: On-site or Off-site GHG Emissions Mitigation Program.

MM GCC-1B: Greenhouse Gas Emissions Offsets

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

2. BIOLOGICAL RESOURCES

CEQA FINDING NO. BIO-45

Impact: **Impact BIO-45. Habitat Fragmentation.** Stream maintenance activities may lead to habitat fragmentation.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

Santa Clara County creeks are becoming the last refuge for some wildlife species. Stream maintenance activities could result in some local wildlife populations dropping below a self-sustaining level on some creek sections. The impact of Project activities on habitat connectivity and movement would be significant.

A variety of compensatory MMs, as described under Cumulative Impact BIO-1, would reduce impacts from Project activities on impacted species living in the lease area. These measures would partially compensate for fragmentation impacts by providing habitat that could either help to fill gaps in habitat outside the impact area (e.g., resulting from riparian or wetland restoration in areas that formerly lacked such habitat) or by boosting the sizes of populations that may be adversely affected by habitat loss and fragmentation. Adverse effects from fragmentation, however, may remain for those species that could not easily move to undisturbed areas or mitigation sites. The cumulative effect of fragmentation also must be viewed in the context of other activities. With increasing development in Santa Clara County, creeks are becoming the last refuge for some wildlife species. Over the next 10 years, the combination of continued stream maintenance and development of surrounding uplands may result in some local wildlife populations dropping below a self-sustaining level on some creek sections. Thus, the impact of Project activities on habitat connectivity and movement of some wildlife species would be significant.

Because the impacted species would occur in the very locations where flood protection was being maintained, it would not be possible to entirely avoid this impact. On-site mitigation would be applied where feasible to minimize the duration during which a given maintenance area would not serve as habitat. That said, the impact would occur at many stream locations throughout the county, and some localized populations may drop below a self-sustaining level that could not be completely mitigated.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

CEQA FINDING NO. CUMULATIVE BIO-2

Impact: **Cumulative Impact BIO-2. Habitat Fragmentation.** The stream maintenance activities may lead to cumulative impacts associated with habitat fragmentation.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

The stream maintenance activities and development of surrounding uplands may lead to habitat fragmentation. Santa Clara County creeks are becoming the last refuge for some wildlife species. Stream maintenance activities could result in some local wildlife populations dropping below a self-sustaining level on some creek sections. The Project's contribution to the cumulative impairments to regional habitat connectivity and movement would be considerable, and could result in a significant impact.

A variety of compensatory mitigation measures previously described would reduce impacts from Project activities on impacted species living in Santa Clara County creeks. These measures would partially compensate for fragmentation impacts by providing habitat that could either help to fill gaps in habitat outside the impact area (e.g., resulting from riparian or wetland restoration in areas that formerly lacked such habitat) or by boosting the sizes of populations that may be adversely affected by habitat loss and fragmentation. See the discussion of mitigation under Impact BIO-45 above for a further discussion of these measures.

Adverse effects from fragmentation, however, may remain for species that cannot easily move to undisturbed areas or mitigation sites. The cumulative effect of fragmentation must also be viewed in the context of other activities. With increasing development in Santa Clara County, creeks are becoming the last refuge for some wildlife species. Over the next 10 years, the combination of continued stream maintenance and development of surrounding uplands may result in some local wildlife populations dropping below a self-sustaining level on some creek sections. Thus, the impact of Project activities on habitat connectivity and movement of some wildlife species would be significant.

Because the impacted species would occur in the very locations where flood protection was being maintained, it would not be possible to entirely avoid this impact. On-site mitigation would be applied where feasible to minimize the duration during which a given maintenance area would not serve as habitat. That said, the impact would occur at many stream locations throughout the county, and some localized populations may drop below a self-sustaining level that could not be completely mitigated.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

3. GLOBAL CLIMATE CHANGE

CEQA FINDING NO. GCC-1

Impact: **Impact GCC-1. Temporary Increase in GHGs during Maintenance Activities.** Annual emissions of GHGs from Project activities would occur at levels in exceedance of BAAQMD significance thresholds.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

The Project's maintenance activities would release GHGs from the combustion of fossil fuels in on- and off-road vehicles, and portable power generators. Annual emissions of GHGs from the Project would occur at levels in exceedance of BAAQMD significance thresholds and could result in a significant impact. MM AIR-1A would reduce emissions of NO_x by 20 percent. However, this mitigation measure does not reduce GHG emissions from the Project to below BAAQMD operational significance thresholds. Two other proposed mitigation measures, GCC-1A and GCC-1B, would further reduce GHG emissions to below operational significance thresholds, but may not be feasible to implement based on costs, logistics, or other factors.

MM AIR-1A is a feasible, ascertainable, and measurable MM. It would mitigate emissions at the source, and would have other benefits such as reductions in emissions of other constituents. This measure will be incorporated into the Project documentation to ensure its implementation, and comprise the approach identified as feasible to reduce increases in NO_x emission impacts associated with the Project. However, even with this measure in place, NO_x and other GHG emissions would exceed BAAQMD significance thresholds would still be significant. The resulting impacts would constitute a significant impact, and is considered unavoidable. The District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

MM AIR-1A: Reduction in Fleet Emissions.

MM GCC-1A: On-site or Off-site GHG Emissions Mitigation Program.

MM GCC-1B: Greenhouse Gas Emissions Offsets

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

4. NOISE

CEQA FINDING NO. NZ-1

Impact: **Impact NZ-1. Temporary Exposure of the Public to Noise Levels in Excess of City or County Standards.** Temporary construction-type noise of varying degrees would occur from maintenance activities. Bank stabilization in particular would result in the greatest noise generation.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

Permanent changes in the existing noise environment would not result from proposed maintenance activities and would not require mitigation. However, temporary construction-type noise of varying degrees would occur from maintenance activities, and bank stabilization in particular would result in the greatest noise generation. Increases in the ambient noise levels and/or exterior noise levels in excess of city or county standards are possible, and would result in a potentially significant impact.

No feasible mitigation is available to reduce the significant and unavoidable impact associated with temporary noise impacts from Project activities, as use of certain sound barriers would block access of many access roads and impede movement of maintenance equipment.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

CEQA FINDING NO. NZ-3

Impact: **Impact NZ-3. Temporary Substantial increase in Noise above Ambient Levels**. In some cases, temporary noise impacts would persist for a longer period at a given location.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the SEIR.

FACTS SUPPORTING THE FINDING(S)

Many Project activities would be short-term, would have less-than-significant impacts on noise increases above ambient levels, and would not require mitigation. However, in some cases, these temporary noise impacts would persist for a longer period at a given location and could result in a significant impact.

No feasible mitigation is available to reduce the significant and unavoidable impact associated with temporary noise impacts from Project activities, as use of certain sound barriers would block access of many access roads and impede movement of maintenance equipment.

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

3.0 STATEMENT OF OVERRIDING CONSIDERATIONS

A. INTRODUCTION

This section addresses the Commission's obligations under Public Resources Code section 21081, subdivisions (a)(3) and (b). (See also State CEQA Guidelines, §§ 15091, subd. (a)(3), 15093.) Under these provisions, CEQA requires the Commission to balance, as applicable, the economic, legal, social, technological, or other benefits, including regionwide or statewide environmental benefits, of the Lease approval related to the Project against the backdrop of the Project's unavoidable significant environmental impacts. For purposes of CEQA, if the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable significant environmental effects, those effects may be considered acceptable and the decision-making agency may approve the underlying project. (State CEQA Guidelines § 15092, subd. (b)(2)(B).) CEQA, in this respect, does not prohibit the Commission from approving the Lease even if the Project activities as authorized under the Lease may cause significant and unavoidable environmental effects.

This Statement of Overriding Considerations presents a list of (1) the specific significant effects on the environment attributable to the approved Project that cannot feasibly be mitigated to below a level of significance, (2) benefits derived from the approved Project, and (3) specific reasons for approving the Project. Although the District and Commission have imposed mitigation measures to reduce impacts, impacts remain that are considered significant after application of all feasible mitigation. Significant impacts of the approved Project fall under five resource areas: Aesthetics, Air Quality, Biological Resources, Global Climate Change, and Noise (see Table 1 below). These impacts are specifically identified and discussed in more detail in the Commission's CEQA Findings and in the District's Final SEIR. While the Commission has required all feasible mitigation measures, these impacts remain significant for purposes of adopting this Statement of Overriding Considerations.

Table 1 – Significant and Unavoidable Impacts Identified for the Approved Project

Impact	Impact Description
Air Quality	
AIR-1. Temporary Increase in ROG, NO_x, PM10, and PM25.	Average daily and annual emissions of NO_x from the Project would be substantially greater than Bay Area Air Quality Management District (BAAQMD) significance thresholds.
Cumulative Impact AIR-1. Emissions of ROG, NO_x, PM10, and PM2 5.	Average daily and annual emissions of NO_x from the Project would be substantially greater than BAAQMD significance thresholds.
Cumulative Impact AIR-2. Emissions of Greenhouse Gases.	Annual emissions of GHGs from the SMP would occur at levels in exceedance of BAAQMD significance thresholds.
BIO-45. Habitat Fragmentation.	The stream maintenance activities may lead to habitat fragmentation.
Cumulative Impact BIO-2. Habitat Fragmentation.	The stream maintenance activities may lead to cumulative impacts to habitat fragmentation.
GCC-1. Temporary Increase in greenhouse gases (GHGs) during Maintenance Activities.	Annual emissions of GHGs from Project activities would occur at levels in exceedance of BAAQMD significance thresholds.
NZ-1. Temporary Exposure of the Public to Noise Levels in Excess of City or County Standards.	Temporary construction-type noise of varying degrees would occur from maintenance activities, bank stabilization in particular would result in the greatest noise generation.
NZ-3. Temporary Substantial increase in Noise above Ambient Levels.	In some cases, temporary noise impacts would persist for a longer period at a given location.

B. ALTERNATIVES

As explained in *California Native Plant Society* v. *City of Santa Cruz* (2009) 177 Cal.App.4th 957, 1000:

> *When it comes time to decide on project approval, the public agency's decisionmaking body evaluates whether the alternatives [analyzed in the SEIR] are actually feasible…. At this final stage of project approval, the agency considers whether '[s]pecific economic, legal, social, technological, or other considerations…make infeasible the mitigation measures or alternatives identified in the environmental impact report.' Broader considerations of policy thus come into play when the decisionmaking body is considering actual feasibility than when the SEIR preparer is assessing potential feasibility of the alternatives [citations omitted].*

The four alternatives analyzed in the SEIR represent a reasonable range of potentially feasible alternatives that could reduce one or more significant impacts of the Project. These alternatives include:

1. No Project Alternative
2. Reduced Frequency Alternative
3. Limited Work in Unmodified Channels Alternative
4. Limited Activities Alternative

As presented in the SEIR, the alternatives were described and compared with each other and with the proposed Project. Under State CEQA Guidelines section 15126.6, subdivision (e)(2), if the No Project Alternative is identified as the environmentally superior alternative, the SEIR must also identify an environmentally superior alternative among the other alternatives. Based on the analysis contained in the SEIR, the Reduced Frequency Alternative is the environmentally superior alternative to the proposed Project because by limiting the amount of all annual maintenance activities, it would reduce the impacts associated with these activities. However, the Reduced Frequency Alternative would maintain the design flow or appropriate conveyance capacity of facilities to a lesser extent than the Project. While it would not have greater impacts overall, this potential flooding impact is considered to be an overriding factor, given that flood management is the primary Project goal.

The District independently reviewed and considered the information on alternatives provided in the SEIR and in the record. The SEIR reflects the District's independent judgment as to alternatives. The District found that the Project provides the best balance between the Project goals and objectives and the Project's benefits. The four CEQA alternatives proposed and evaluated in the SEIR were rejected as being infeasible for the following reasons provided in the District's Findings Regarding Alternatives (incorporated herein by reference).

1). No Project Alternative: The increase in sediment discharges from areas requiring bank stabilization, and the decrease in the frequency of maintenance activities would result in a greater temporary reduction in conveyance capacity. As a result, this alternative would fail to adequately accomplish the first three of the four project objectives on Page 2-3 of the Draft SEIR. Mitigation would be undertaken in smaller increments and overall may be less ecologically significant than the approach proposed in the SMP Update.

2). Reduced Frequency Alternative: This alternative would maintain the design flow or appropriate conveyance capacity of facilities to a lesser extent than the Project. While it would not have greater impacts overall, the potential flooding impact is considered to be an overriding factor, given that flood management is the primary Project goal.

3). Limited Work in Unmodified Channels Alternative: The flood flow capacities would not be maintained in unmodified channels, which may increase flood risk in those reaches. As a result, this alternative would fail to adequately accomplish the first two of the four project objectives on Page 2-3 of the Draft SEIR.

4). Limited Activities Alternative: Although avoidance of the activities with the greatest impact would eliminate those impacts, there may be an increase in other types of impacts such as those associated with hand removal of vegetation. Similarly, restricting bank stabilization to "soft" methods could result in repeat bank failures, with adverse impacts on habitat and water quality. The additional impacts that would occur under this alternative are believed to outweigh the impacts that this alternative would avoid, resulting in greater impacts overall.

Based upon the objectives identified in the Final SEIR and the detailed mitigation measures imposed upon the Project, the Commission has determined that the Project should be approved, subject to such mitigation measures (Exhibit C, Mitigation Monitoring Program), and that any remaining unmitigated environmental impacts attributable to the Project are outweighed by the following specific economic, fiscal, social, environmental, land use, and other overriding considerations.

C. BENEFICIAL IMPACTS OF THE PROJECT

State CEQA Guidelines section 15093, subdivision (a) requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project.

The overall flood management goals of the Project are to maintain the design flow or appropriate conveyance capacity of District facilities, and to maintain the structural and functional integrity of District facilities. To meet these goals, the Project would prioritize and administer maintenance activities to achieve the following objectives:

- Remove sediment to maintain the hydraulic, safety, and habitat functions of the creek systems.
- Manage vegetation to maintain the hydraulic, safety, and habitat functions of the creek systems, and to allow for levee inspections and maintenance access.
- Stabilize beds and banks of creeks and canals to protect existing infrastructure, maintain public safety, reduce sediment loading, protect water quality, and protect habitat values.
- Avoid, minimize, or mitigate impacts on the environment by incorporating stream stewardship measures into maintenance activities.

The District’s Board of Directors adopted a series of Ends Policies to guide District activities toward achieving the District’s mission. Flood protection is one of the District's two primary purposes, and the SMP meets a required part of that purpose by integrating the District's purposes and policies with environmental requirements (Ends Policy E-1). Specifically, creek maintenance preserves flow capacity of District creeks to reduce the risk of flooding, and improves water quality through the stabilization of eroding creek banks and removal of excess sediment (Ends Policies E-3.1 and E-4.2). Maintenance of canals ensures that water conveyance systems are functioning, sustainable, and able to

move water between reservoirs, creeks, percolation ponds, and water treatment plants (Ends Policy E-2.1). Water released into creeks and percolation ponds helps to replenish local groundwater aquifers and manage environmental needs (Ends Policy E-2.1).

Implementation of the Project would likely result in significant and unavoidable impacts from temporary or permanent alteration of visual character or quality from maintenance activities, temporary increase in NO_x, emissions during maintenance activities, habitat fragmentation, temporary increase in greenhouse gases during maintenance activities, temporary exposure of the public to noise levels in excess of city or county standards, temporary substantial increase in noise above ambient levels and cumulative impacts, as specified above.

The District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available. Implementation of the Project as proposed would prevent unacceptable flood risks throughout the District's jurisdiction. The District Act, which establishes the District, cites flood protection within several of its objectives and purposes (see sections 4(c)(1) and 4(c)(2) of the act). Similarly, the District's Ends Policy E-3 discusses a healthy and safe environment for residents, businesses, and visitors, and establishes goals of providing flood protection and reducing potential for flood damage. Failure to provide this flood protection would put thousands of homes and business at risk, with a large cost of recovery in the event of a flood. Other impacts of flooding may include closure of essential transportation arteries, interruptions in emergency service, likely losses of instruction time at area public and private schools, loss of use of affected public facilities such as parks, and at the extreme, loss of human life. The Project represents the best way to minimize these risks while also avoiding or minimizing the impacts of stream maintenance to the greatest extent feasible.

D. CONCLUSION

The Commission has considered the Final SEIR and all the environmental impacts described therein including those that cannot be mitigated to a less than significant level. The Commission has considered the fiscal, economic, legal, social, environmental, and public health and safety benefits of the Project and has balanced them against the Project’s unavoidable and unmitigated adverse environmental impacts and, based upon substantial evidence in the record, has determined that the benefits of the Project outweigh the adverse environmental effects. Based on the foregoing and pursuant to Public Resources Code section 21081 and State CEQA Guidelines sections 15096 subdivision (h) and 15093, the Commission finds that the remaining significant unavoidable impacts of the Project are acceptable in light of the economic, fiscal, social, environmental, and public health and safety benefits of the Project. Such benefits outweigh such significant and unavoidable impacts of the Project and provide the substantive and legal basis for this Statement of Overriding Considerations.

The Commission finds that to the extent that any impacts identified in the Final SEIR remain unmitigated, mitigation measures have been required to the extent feasible, although the impacts could not be reduced to a less-than-significant level.

Based on the above discussion, the Commission finds that the benefits of the Project outweigh the significant unavoidable impacts that could remain after mitigation is applied and considers such impacts acceptable.

ATTACHMENT D-1

Santa Clara Valley Water District
Findings, Alternatives, and
Statement of Overriding Considerations

II. Significant Impacts that Can Be Mitigated to a Less than Significant Level

The Final SEIR identified a number of potentially significant environmental impacts that, without the adoption of mitigation measures, could occur with the implementation of the Stream Maintenance Program Update.

The Board finds that, in response to each significant effect identified in the Final SEIR and listed in this Section II, all feasible changes or alterations have been required in, or incorporated into, the SMP Update which avoid or substantially lessen these environmental effects. With implementation of the proposed mitigation measures described in the Final SEIR and summarized below, the SMP Update is determined to have less-than-significant impacts on these resources except for impacts on aesthetics, air quality, biological resources, global climate change, noise, and cumulative impacts, discussed in Section III, below.

The findings regarding the level of impacts and their mitigation are not intended to state all of the substantial evidence in the Final SEIR, or elsewhere in the record, that supports the conclusions stated in these findings. In addition, the mitigation measures are described in an abbreviated fashion; the Final SEIR should be consulted for a complete description of the requirements of these measures.

A. BIOLOGICAL RESOURCES

Impact BIO-1: Loss or Disturbance of Wetlands and Other Waters

Implementation of the Project would result in short-term, but repetitive, disturbance of wetland and aquatic communities, including both jurisdictional and non-jurisdictional wetlands and other waters, which provide valuable habitat for fish and wildlife. Activities that could result in disturbance of wetlands and other waters, include placement of fill, hydrological interruption (e.g., dewatering or diversion), alteration of bed and bank, degradation of water quality (e.g., increased sedimentation and turbidity, herbicide contamination), and other direct impacts. Certain types of vegetation management work such as hand removal, herbicide, pruning, mowing and discing are also projected activities. Wetland functions such as sediment stabilization, sediment/toxicant retention, nutrient removal/transformation, and aquatic and terrestrial wildlife species habitat may be adversely affected as a result of SMP activities. The Project would result in temporal losses of wetland and aquatic habitat functions and values, possible type conversions of wetlands (e.g., from wetlands dominants by certain plants species to wetlands dominated by others) and potentially permanent losses of wetlands and other waters.

Mitigation

To mitigate for losses, *Mitigation Measure BIO-1: Implement Compensatory Mitigation for Wetlands and Other Waters* is the compensatory mitigation package applied to loss or disturbance of wetland and other waters, detailed in Appendix C of Volume II of the FSEIR (the 2012-2022 SMP Update Mitigation Approach Memorandum). The compensatory mitigation package requires compensation for new impacts on wetlands (both jurisdictional and non-

jurisdictional) and on jurisdictional "other waters"; no mitigation is necessary for impacts to non-jurisdictional "other waters", which are limited to unvegetated areas of inoperable canals, or in the locations and work activities previously mitigated in the 2002 EIR, for which the Project would not have any new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

There are two main types of mitigation that can be applied for impacts from sediment removal, vegetation management, and canal maintenance and minor maintenance to non-tidal wetlands and other waters, which are "in perpetuity" mitigation and "pay as you go" mitigation. In perpetuity mitigation is used for permanent impacts and can also be used to mitigate repetitive impacts to wetlands or other waters in a specific area. One or more of the four methods can be used; in-kind restoration/creation, in-kind preservation and enhancement, out-of-kind preservation of watershed lands, and enhancement or management of land that is owned by other agencies. Incremental "pay as you go" habitat mitigation is used to compensate for temporary impacts to wetlands and aquatic habitats. Two programs are used, invasive plant management and riparian planting. Mitigation for bank stabilization is also detailed as well as mitigation for impacts to tidal wetlands and other waters. Any of the mitigation options described above would reduce the impacts below the level of significance.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measure BIO-1 is feasible and will adopt it as described in the Final SEIR. This measure will be incorporated into the SMP Update documentation to ensure its implementation. With this measure in place, impacts on wetlands and other waters would be less than significant.

Impact BIO-2: Loss or Disturbance of Woody Riparian Vegetation

The SMP Update includes activities which could result in the loss and disturbance of woody riparian vegetation that occurs along the stream banks above the ordinary high water mark. Vegetation that is removed by Project activities is expected to regrow, except in areas where bank stabilization would result in the permanent loss of natural streambank, or where capacity or other maintenance activities would require the permanent exclusion of vegetation. At some work sites, riparian vegetation consist of herbaceous rather than woody vegetation, which is quick to regenerate and would provide relatively low functions and values for wildlife.

Mitigation

Mitigation Measure BIO-2: Implement Compensatory Mitigation for Woody Riparian Vegetation details the compensatory mitigation package, as described in Appendix C of Volume II of the Final SEIR, shall be implemented to compensate for new impacts on woody riparian vegetation. According to the mitigation package, the District will have several options for satisfying mitigation requirements for impacts to riparian vegetation by the SMP. The two main types of mitigation that can be applied for impacts to riparian vegetation resulting from sediment removal, vegetation management, canal maintenance, and minor maintenance are "in

perpetuity" mitigation and "pay as you go" mitigation. These mitigation options would be applied to riparian vegetation as described in Mitigation Measure BIO-1 for wetlands and other waters. Any of the mitigation options described above would reduce the impacts below the level of significance.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measure BIO-2 is feasible and will adopt it as described in the Final SEIR. This measure will be incorporated into the SMP Update documentation to ensure its implementation. With this measure in place, impacts on woody riparian vegetation would be less than significant.

Impact BIO-3: Disturbance of Sensitive Plant Communities

The Project activities may affect sensitive plant communities, such as northern coastal salt marsh, sycamore alluvial woodland, and serpentine communities, through direct disturbance of vegetation and disturbance, modification, or destruction of habitat. Northern coastal salt marsh would not be directly impacted by sediment removal but vegetation management, such as mowing or removal of plants, in salt and brackish marsh habitats would affect these habitats. The highest-quality occurrences of sycamore alluvial woodland are not expected to be disturbed by maintenance activities, even though vegetation management activities are projected on sycamore dominated land. Projected activities would occur in or very close to serpentine communities.

Mitigation

Mitigation Measure BIO-3: Implement Compensatory Mitigation for Serpentine Communities states that compensation for unavoidable effects to high-quality serpentine communities will be provided via the protection, enhancement, and management of serpentine communities. Serpentine communities are considered to be "high-quality" if they are in a semi natural or natural/undisturbed state and multiple special-status plant occurrences are present and/or relatively high abundance of natives or serpentine obligates vs. non-natives. Compensation for unavoidable effects to high-quality serpentine communities will be provided via two acres of mitigation for every one acre of impact. Compensatory mitigation would be carried out preferably through the preservation and management of existing serpentine communities or the restoration or enhancement of previously existing or degraded serpentine communities. In either case, a Habitat Mitigation and Management Plan (HMMP) will be developed, which will adhere to specific performance standards, to enhance and manage these mitigation lands and to monitor the effects of management on serpentine communities. These quantitative and/or qualitative standards are set out in Pages 3.3-85 and 3.3-86 in Volume II of the FSEIR. Both preservation/management of existing serpentine communities and restoration/enhancement of previously existing or degraded serpentine communities would reduce the impacts below the level of significance.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measure BIO-3 is feasible and will adopt it as described in the Final SEIR. This measure will be incorporated into the SMP Update documentation to ensure its implementation. With this measure in place, impacts on sensitive plant communities would be less than significant.

Impact BIO-4: Impacts to Serpentine-Associated Special-Status Plant Species

Project activities may impact serpentine-associated special-status plant species. Activities such as bank stabilization, sediment removal, vegetation management and animal conflict management activities may result in injury or mortality of individual plants. Serpentine plant communities in the Project Area support a variety of unique plant species, including 11 special-status species; Tiburon paintbrush, Coyote ceanothus, Santa Clara Valley dudleya, Metcalf Canyon jewel-flower, Big-scale balsamroot, Pink creamsacs, Mt. Hamilton thistle, Fragrant fritillary (*Fritillaria falcata*), Woolly-headed lessingia (*Lessingia hololeuca*), Smooth lessingia (*Lessingia micradenia* var. *glabrata*), and Most beautiful jewel-flower (*Streptanthus albidus* ssp. *peramoenus*). Tiburon paintbrush and Coyote ceanothus are so rare that any new occurrence would be significant to the population. Potential direct and indirect effects to these two species are prevented by the implementation of BMP GEN-9. Several of the other special-status species, such as Santa Clara Valley dudleya, Metcalf Canyon jewel-flower, Mr. Hamilton thistle, smooth lessingia, Hall's bush-mallow and most beautiful jewel flower are known to occur in or near proposed work sites. None of the remaining serpentine-associated species listed above were detected during these surveys.

Mitigation

The implementation of *Mitigation Measure BIO-4: Implement Compensatory Mitigation for Serpentine Associated Special-Status Plant Species* will provide mitigation for unavoidable impacts to serpentine-associated special-status plant populations. Compensation for unavoidable impacts to populations of special-status serpentine-associated plants will be provided by a combination of preservation and enhancement of those species' populations outside SMP work sites. Compensatory mitigation for impacts to high-quality serpentine communities (as discussed in Mitigation Measure BIO-3) and special-status serpentine-associated plants may occur on the same lands, provided that the conditions pertaining to special-status plant species are satisfied for each species for which mitigation is required. The HMMP that will be prepared by the District to describe the measures that will be taken to enhance, manage, and monitor these mitigation lands (as discussed in Mitigation Measure BIO-3) also will include consideration of focal special-status species. These quantitative and/or qualitative standards are set out in Pages 3.3-89 and 3.3-90 in Volume II of the FSEIR.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measure BIO-4

is feasible and will adopt it as described in the Final SEIR. This measure will be incorporated into the SMP Update documentation to ensure its implementation. With this measure in place, impacts on serpentine associated special-status plant species would be less than significant.

Impact BIO-5: Impacts to Non-Serpentine Special-Status Plant Species

The Project may negatively affect special status plants, not strongly associated with serpentine communities and instead typically occurring in communities such as valley and foothill grassland and riparian woodland. Maintenance activities such as trampling by personnel and equipment, soil compaction leading to damage of roots, or alteration of hydrology and mechanical, physical, or chemical removal of vegetation may kill or damage the following 21 plant species.

- Franciscan onion (*Allium peninsulare* var. *franciscanum*)
- Bent-flowered fiddleneck (*Amsinckia lunaris*)
- Anderson's manzanita (*Arctostaphylos andersonii*)
- Brittlescale (*Atriplex depressa*)
- Round-leaved filaree (*Erodium macrophyllum*)
- Congdon's tarplant (*Hemizonia parryi* ssp. *congdonii*)
- Santa Clara red ribbons (*Clarkia concinna* ssp. *automixa*)
- Hospital Canyon larkspur (*Delphinium californicum* ssp. *interius*)
- Western leatherwood (*Dirca occidentalis*)
- Hoover's button-celery (*Eryngium aristulatum* var. *hooveri*)
- Satan's goldenbush (*Isocoma menziesii* var. *diabolica*)
- Showy golden madia (*Madia radiata*)
- Davidson's bush-mallow (*Malacothamnus davidsonii*)
- Hall's bush-mallow (*Malacothamnus hallii*)
- Loma Prieta hoita (*Hoita strobilina*)
- San Francisco collinsia (*Collinsia multicolor*)
- Oregon meconella (*Meconella oregana*)
- Mt. Diablo cottonweed (*Micropus amphibolus*)
- Robust monardella (*Monardella villosa* ssp. *globosa*)
- Hooked popcorn-flower (*Plagiobothrys uncinatus*)
- Saline clover (*Trifolium depauperatum* var. *hydrophilum*)

Mitigation

Mitigation Measure BIO-5: Implement Compensatory Mitigation for Impacts to Non-Serpentine Special-Status Plant Species provides guidelines for compensation for unavoidable impacts to populations of special-status non-serpentine plants. A combination of preservation and enhancement of those species' populations would occur outside SMP work sites. For impacts to populations of a specific special-status plant species, compensatory mitigation will include preservation, enhancement, and management of lands that (a) already support equal or greater numbers (and health) of individuals of that species and (b) contain sufficient unoccupied habitat to allow for an increase in populations, the increase being at least equivalent to the number impacted, through habitat enhancement and management. The District will develop an HMMP

which will describe the measures that will be taken to enhance and manage the mitigation lands and to monitor the effects of management on the focal special-status plant species.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measure BIO-5 is feasible and will adopt it as described in the Final SEIR. This measure will be incorporated into the SMP Update documentation to ensure its implementation. With this measure in place, impacts on non-serpentine associated special-status plant species would be less than significant.

Impact BIO-6: Impacts to Serpentine-Associated Special-Status Invertebrates

Serpentine-associated invertebrate species including the Bay checkerspot butterfly, Hom's micro-blind harvestman (*Microcina homi*), Jung's micro-blind harvestman (*Microcina jungi*), and Opler's longhorn moth (*Adela oplerella*), which may be affected by Project activities that occurred along canals running through serpentine habitats. No high-quality serpentine communities were identified in work sites during the District's surveys. As a result, the Bay checkerspot butterfly would be unlikely to occur in such areas, and a low probability exists that the other serpentine-associated invertebrate species (i.e., Hom's micro-blind harvestman, Jung's micro-blind harvestman, and Opler's longhorn moth) would be present in these areas. Equipment use, vehicle traffic, and worker foot traffic along canals may result in the injury or mortality of serpentine dependent invertebrates including the Bay checkerspot butterfly (larvae and pupae) and its host plants (e.g., physically breaking, crushing, wilting, or uprooting plants and damaging their roots as a result of soil disturbance by heavy equipment). Additionally, butterflies and their host plants may suffer injury or mortality as a result of vegetation clearing for access roads and staging areas. Impacts to Opler's longhorn moth would be similar, although because the two harvestman species typically occur in or under rocks, Project activities likely would have little effect on these species.

Mitigation

The *Mitigation Measure BIO-6: Implement Compensatory Mitigation for Impacts to Serpentine-Associated Special-Status Invertebrates* will mitigate impacts to serpentine-associated special-status invertebrates to less-than-significant levels by enhancing, managing, and protecting populations of these species so that the SMP does not substantially reduce the number or restrict the range of rare or endangered serpentine-associated invertebrates or have a substantial adverse effect on special-status serpentine-associated invertebrates.

The District may also compensate for its impacts to populations and habitat of serpentine-associated special-status invertebrates through the preservation and management of serpentine communities as described for *Mitigation Measure BIO-3*. The procedures for identifying impacts to potential habitat of these species will occur as described for serpentine communities under

Mitigation Measure BIO-3. Mitigation lands will be preserved and managed as described for *Mitigation Measure BIO-3* as well, with the qualification that for any impacts to high-quality serpentine communities within Bay checkerspot butterfly critical habitat, the compensatory mitigation lands also must be in Bay checkerspot critical habitat. The management and monitoring of mitigation lands, as described in the HMMP, will include measures specifically targeting the Bay checkerspot butterfly, which will serve as a proxy for the other special-status invertebrates. These quantitative and/or qualitative standards are set out in Page 3.3-96 in Volume II of the FSEIR.

Either of the mitigation measures described above would reduce the impacts below the level of significance.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measures BIO-3 and BIO-6 are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation. With these measures in place, impacts on serpentine associated special-status invertebrate would be less than significant.

Impact BIO-7: Loss of Ordinance Trees

Removal of hazard trees and trees greater than 12 inches dbh is not included in the SMP Update. As a result, few ordinance trees (as defined based on applicable local ordinances) are likely to be impacted by Project activities. Nevertheless, vegetation management and bank stabilization activities associated with the Project may result in the removal of ordinance trees, and some potential would exist for all Project activities indirectly to affect the health of ordinance trees through herbicide application or damage to roots resulting from the movement of heavy equipment.

Mitigation

Mitigation Measure BIO-7: Tree Replacement will mitigate impacts to ordinance trees to less-than-significant levels by replacing trees that are removed so that the SMP does not conflict with the provisions of local tree ordinances. The District will replace ordinance trees as follows. As discussed under *Mitigation Measure BIO-2*, removal of trees sized 6-12 inches dbh will be mitigated through the individual planting of replacement trees. The protocol in Section 5.5 in Appendix C of Volume II of the Final SEIR (*Mitigation for Tree and Shrub Removals 6–12 inches dbh*) provides a specific tree appraisal and evaluation protocol to determine how replacement planting should occur. The protocol involves carefully assessing targeted tree removals for their existing conditions and functions, including their canopy cover, local area value, ecosystem benefits, and ecosystem detriments.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measures BIO-2 and BIO-7 are feasible and will adopt them as described in the Final SEIR. This measure will be incorporated into the SMP Update documentation to ensure their implementation. With these measures in place, impacts regarding loss of ordinance trees would be less than significant.

Impact BIO-8: Impacts on Steelhead

The Project Area contains designated critical habitat for both the Central California Coast (CCC) steelhead and South-Central California Coast (SCCC) steelhead. Maintenance activities such as bank stabilization may significantly alter important habitat values and result in the direct injury or mortality of CCC steelhead and SCCC steelhead. Alteration to riparian shrubs and trees, undercut banks, instream and overhanging escape cover and sedimentation can decrease habitat for fish. In contrast, bank stabilization is anticipated to result in long-term benefits to steelhead habitat. Overall, however, minor adverse impact to steelhead habitat is expected to occur as a result of Project activities. Gravel removal, which occurs during sediment removal, would reduce the extent and availability of potential spawning habitat, and possibly rearing habitat, in the short term by removing existing spawning habitat and in the long term by reducing gravel supply within a creek.

Mitigation

The District will implement *Mitigation Measure BIO-8: Augmentation of Spawning Gravel* for SMP impacts to CCC and SCCC steelhead spawning habitat. Mitigation Measure BIO-8 states that if more than 100 square feet of sediment removal is proposed along steelhead streams, a District fisheries ecologist will assess the sediment removal site for spawning and rearing habitat quality before the initiation of work. The biologist will determine the extent of sediment that is proposed for removal and that is considered to be "high-quality" based on specific criteria. The District will implement *Mitigation Measure BIO-8: Augmentation of Spawning Gravel* and *Mitigation Measure BIO-9: Augmentation of Instream Complexity for Non-Tidal Stream Fish* for loss of instream complexity, which provides habitat heterogeneity, cover, and refugia during high flows, by in-kind installation of structures that provide such complexity. Enhancing instream complexity would involve a number of possible actions such as enlarging an existing large woody debris feature, or enhancing a pool feature threatened by sedimentation.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measures BIO-8 and BIO-9 are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation. With these measures in place, impacts on steelhead would be less than significant.

Impact BIO-9: Impacts on the Pacific Lamprey and Monterey Roach

The Pacific lamprey is not a special-status species, however this anadromous species likely has been impacted by many of the factors that threaten the steelhead and occurs in a number of District maintained creeks. The Monterey roach is a California species of special concern and occurs in the Project Area. Electrofishing for fish relocation, stranding, herbicide and surfactant use, increased turbidity, and heavy equipment use on these species, their prey and their habitat, may result in the direct injury or mortality of individual fish.

Mitigation

Mitigation Measure BIO-1 and BIO-2 would benefit the Pacific lamprey and Monterey roach through wetland, aquatic and riparian habitat restoration, enhancement and protection, which would help to maintain water quality, cover and instream habitat complexity. Mitigation Measure BIO-9 would increase instream complexity, and thus could be expected to benefit these fish in a similar manner as described for steelhead.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measures BIO-1, BIO-2 and BIO-9 are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation. With these measures in place, impacts on Pacific lamprey and Monterey roach would be less than significant.

Impact BIO-10: Impacts on the Longfin Smelt and Green Sturgeon

Longfin smelt (state listed as threatened) is known to occur, and green sturgeon (federally listed as threatened and a California species of special concern) could potentially occur, in the Project Area, but are not expected to spawn in the Project Area. Sediment removal and fuel or chemical spills could decrease water quality and impair the health of these fish. Vegetation removal along sloughs could result in minor adverse effects on these species.

Mitigation

Mitigation for impacts to tidal wetlands and other waters, which would be the habitats in which longfin smelt and green sturgeon could potentially occur are included in Mitigation Measure BIO-1. The additional 21 acres of tidal marsh restoration that the District has implemented for previous project impacts that did not occur would be used as mitigation for impacts to tidal wetlands and aquatic habitats as well as tidal species such as longfin smelt and green sturgeon.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measure BIO-1 is feasible and will adopt it as described in the Final SEIR. This measure will be incorporated

into the SMP Update documentation to ensure its implementation. With this measure in place, impacts on longfin smelt and green sturgeon would be less than significant.

Impact BIO-11: Impacts on the California Tiger Salamander

The California tiger salamander (federally and state-listed as threatened) are found on the outskirts of the Project Area primarily in seasonal pools and stock ponds, particularly in less heavily developed areas. They may pass through work sites during seasonal movements to and from breeding ponds, breed in inoperable channels and may use upland burrows within work sites as refugia (e.g. to prevent dehydration during the dry summer and autumn months).

Maintenance activities may result in the injury, or a low probability of mortality, of individuals as a result of worker foot traffic, equipment use, or vehicle traffic. Daily and seasonal movements throughout individuals' home ranges may be temporarily affected during maintenance activities because of disturbance, and substrate vibrations may cause individuals to move out of refugia, exposing them to a greater risk of predation or desiccation. In addition, tiger salamanders may be crushed in their burrows by the passage of heavy equipment or trapped and suffocated, and petrochemicals, hydraulic fluids, and solvents that are spilled or leaked from construction vehicles or equipment may kill individuals. Direct mortality of individuals may occur because of filling or compaction of crevices/holes on levee surfaces or slopes.

Mitigation

Mitigation Measure BIO-1 and BIO-2 would require the District to provide compensatory mitigation for impacts to wetland, aquatic, and riparian habitats. This mitigation may take a variety of forms, and not all of this mitigation would occur in areas where California tiger salamander occurred. However, these measures could result in benefits to California tiger salamander through wetland restoration and the protection and management of mitigation lands that may support this species.

Mitigation Measure BIO-10: Implement Compensatory Mitigation for the California Tiger Salamander requires mitigation of two acres of mitigation for every one acre of impact. Compensatory mitigation would be carried out preferably by the preservation, management, and enhancement of high-quality habitat that is already occupied by California tiger salamanders, or by restoration or enhancement of degraded habitat or habitat that is unsuitable for use by California tiger salamanders but is in the vicinity of areas of known occurrence or can be made more suitable. Where such preservation or enhancement is infeasible, the District will implement measures from the HMMP which will adhere to specific performance standards and establish measures that will be taken to manage the property and to monitor the effects of management to the California tiger salamander. These quantitative and/or qualitative standards are set out in Pages 3.3-120 and 3.3-121 in Volume II of the FSEIR.

Any of the mitigation measures described above would reduce the impacts below the level of significance.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measures BIO-1, BIO-2 and BIO-10 are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation. With these measures in place, impacts on California tiger salamander would be less than significant.

Impact BIO-12: Impacts on the California Red-Legged Frog

The California red-legged frog (federally listed as threatened and a California species of special concern) distribution is limited in the Project Area. Breeding within the Project Area is possible however the species is likely to occur sparingly and as a non-breeding visitor, if at all. No indication of this species presence was identified at any locations of the pre-construction presence/absence surveys for special status amphibians, listed in Table 3.3-3 of Vol. II of the Final SEIR. There are similar potentials for mortality or injury to the California red-legged frog as to the California tiger salamander. Spill of chemicals and fuels, crushing from heavy equipment or burrow damage could occur from stream maintenance activities.

Mitigation

Mitigation Measure BIO-1 and BIO-2 would require the District to provide compensatory mitigation for impacts to wetland, aquatic, and riparian habitats. These measures could result in benefits to California red-legged frog through wetland restoration and the protection and management of mitigation lands that may support this species.

Mitigation Measure BIO-11: Implement Compensatory Mitigation for the California Red-Legged Frog requires mitigation of two acres of mitigation for every one acre of impact. Compensatory mitigation would be carried out preferably by the preservation, management, and enhancement of high-quality habitat that is already occupied by California red-legged frog, or by restoration or enhancement of degraded habitat or habitat that is unsuitable for use by California red-legged frog but is in the vicinity of areas of known occurrence or can be made more suitable. The District will develop an HMMP, which will adhere to specific performance standards, describing the measures that will be taken to manage the property and to monitor the effects of management to the California red-legged frog. These quantitative and/or qualitative standards are set out in Pages 3.3-130 and 3.3-131 in Volume II of the FSEIR.

Any of the mitigation measures described above would reduce the impacts below the level of significance.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measures BIO-1, BIO-2 and BIO-11 are feasible and will adopt them as described in the Final SEIR. These

measures will be incorporated into the SMP Update documentation to ensure their implementation. With these measures in place, impacts on California red-legged frog would be less than significant.

Impact BIO-14: Impacts on Non-Special-Status Fish and Amphibians

The rivers and creeks of Santa Clara County provide habitat for 12 native species of fish which includes the special-status fish mentioned under Impacts BIO-8, 9, and 10 as well as California roach, hitch, Sacramento sucker, threespine stickleback and others present in the Project Area. Non-special-status amphibians such as western toad and Pacific chorus frog use the Project Area as breeding and foraging habitat. The non-special-status fish and amphibians that would be impacted by the Project are relatively abundant and widespread. As a result, any one maintenance activity would not result in a substantial effect on regional populations. However, over the entire geographic and temporal scope of the SMP Update, Project activities may result in modifications to extensive areas of their habitats resulting in the potential to impact relatively large numbers of non-special-status fish and amphibians.

Mitigation

Mitigation Measure BIO-1 and BIO-2 would require the District to provide compensatory mitigation for impacts to wetland, aquatic, and riparian habitats. These measures could result in benefits to non-special-status fish and amphibians through wetland restoration and the protection and management of mitigation lands that may support these species. Either of the mitigation measures described above would reduce the impacts below the level of significance.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measures BIO-1 and BIO-2 are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation. With these measures in place, impacts on non-special-status fish and amphibians would be less than significant.

Impact BIO-16: Impacts on the Western Pond Turtle

The western pond turtle (a California species of special concern) has the potential to occur in all perennial creeks, many intermittent creeks, and most ponds in the Project Area. This species' habitat consists of ponds or instream pools with available basking sites, nearby upland areas for nesting and shallow aquatic habitat for juveniles. Proposed maintenance work, such as sediment removal and vegetation management, may result in the injury or mortality of turtles. For instance the turtles or turtle eggs may be harmed or killed from crushing by construction personnel or equipment or as a result of desiccation or burying. In addition, riparian and upland areas that provide nesting habitat, dispersal habitat, and refugia for western pond turtles may be temporarily or permanently lost during bank stabilization activities and the construction of temporary stream access routes.

Mitigation

Mitigation Measure BIO-1 and BIO-2 would benefit the western pond turtle through wetland, aquatic and riparian habitat restoration, enhancement and protection, which would help to maintain water quality, cover and instream habitat complexity. Mitigation Measure BIO-9 would increase instream complexity, and thus could be expected to benefit this species by compensating for the loss of turtle basking habitat. All of the mitigation measures described above would reduce the impacts below the level of significance.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measures BIO-1, BIO-2 and BIO-9 are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation. With these measures in place, impacts on western pond turtle would be less than significant.

Impact BIO-20: Impacts on the California Clapper Rail and Alameda Song Sparrow

The California clapper rail (federally and state listed as endangered and a state fully protected species) and Alameda song sparrow (a California species of special concern) live in salt marsh habitats and are known to breed in the Project Area. Very little bank stabilization would be needed near tidal salt and brackish marsh habitats. Neither sediment removal nor instream herbicide treatment would occur near suitable breeding habitat. Increased human activity may affect the behavior of the clapper rails and song sparrows, causing them to avoid work sites and possibly exposing them to increased competition with conspecifics (members of the same species) in the areas to which they dispersed and to increased levels of predation caused by unfamiliarity with the new area. Disturbance caused by Project activities in close proximity to clapper rail or Alameda song sparrow habitat during the breeding season could potentially result in the abandonment of nests, eggs, and young. Non-instream herbicide application, hand removal of instream vegetation and mowing are projected to occur on the sides of levees adjacent to clapper rail and song sparrow habitat, which would reduce the amount of vegetative cover that may be used to conceal individuals from predators during high tides, especially during the winter.

Mitigation

Mitigation for impacts to tidal wetlands and other waters, which would be the habitats in which California clapper rail and Alameda song sparrow could potentially occur are included in Mitigation Measure BIO-1. The additional 21 acres of tidal marsh restoration that the District has implemented for previous project impacts that did not occur would be used as mitigation for impacts to tidal wetlands and aquatic habitats as well as tidal species such as California clapper rail and Alameda song sparrow.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measure BIO-1 is feasible and will adopt it as described in the Final SEIR. This measure will be incorporated into the SMP Update documentation to ensure its implementation. With this measure in place, impacts on California clapper rail and Alameda song sparrow would be less than significant.

Impact BIO-23: Impacts on the Least Bell's Vireo

The least Bell's vireo (federally and state-listed as endangered) is unlikely to be more than a rare and very locally occurring breeder along South County streams. This species is a riparian-obligate breeder (Kus 1998), nesting in dense thickets of willows and other low bushes along perennial or ephemeral streams (Franzreb et al. 1994, Kus 2002). Project activities have the potential to inflict injury or mortality of individuals (especially eggs or young in nests) as a result of equipment, vehicle traffic, and worker foot traffic. Individuals and their nests also could be disturbed by substantial increases in noise and human disturbance, which may lead to nest abandonment, and increases in native and non-native predators. Human disturbance leading to reduced attendance of nests potentially could increase the risk of brood parasitism by brown-headed cowbirds.

Mitigation

Mitigation for impacts to riparian habitats is included in Mitigation Measure BIO-2. Only riparian mitigation that occurs within least Bell's vireo's limited range will benefit this species. *Mitigation Measure BIO-12: Implement Compensatory Mitigation for the Least Bell's Vireo* would be implemented to reduce the impacts to the least Bell's vireo. Two measures would be implemented to maintain willow-dominated riparian habitat with adjacent shrubs and tall forbs in extreme southern Santa Clara County for least Bell's Vireo nesting habitat. Mitigation Measure BIO-12A proposes the projected vegetation management regime for lower Llagas Creek from Southside Drive downstream to the confluence with the Pajaro River. Mitigation Measure BIO-12B proposes the District create or restore conditions similar to land considered good quality least Bell's vireo habitat, as listed in the mitigation measure. If this mitigation measure is selected, an HMMP for the mitigation site will be prepared. These quantitative and/or qualitative standards are set out in Pages 3.3-153 and 3.3-154 in Volume II of the FSEIR. Any of the mitigation measures described above would reduce the impacts below the level of significance.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measures BIO-1 and BIO-12 are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation. With these measures in place, impacts on least Bell's vireo would be less than significant.

Impact BIO-24: Impacts on the Burrowing Owl

Burrowing owls are present in the Project Area, with a few areas of concentration. This species occurs in annual and perennial grassland habitats. Project activities may affect burrowing owl habitats. Burrowing owls can adapt to the presence of humans and are known to nest and forage in open grassland areas adjacent to human developments. However, because they nest underground individual burrowing owls (especially young or adults in burrows) may be killed or injured during maintenance activities from trampling by construction personnel or equipment. Maintenance activities that occur in close proximity to active burrows may disturb owls to the point of abandoning their burrows, including active nests, eggs, and young.

Mitigation

Mitigation Measure BIO-13: Implement Compensatory Mitigation for the Burrowing Owl describes the procedure to follow when burrowing owl habitat is disturbed or degraded. If a burrow that has been used for nesting by burrowing owls within the prior 3 years cannot be avoided then a relocation plan for the burrowing owl(s) and habitat compensation will be provided. If the habitat surrounding the burrow remains suitable for use, then the District will have the option to provide off-site habitat mitigation, or monitor the work site to determine whether it is re-occupied by owls. If within 2 years of after maintenance activity completion, the owl(s) returns to use the site, no further mitigation is required. California burrowing owl mitigation guidelines recommend for off-site mitigation that 9.75–19.5 acres of habitat be preserved and managed per occupied burrowing owl nest burrow (whether by a pair or singly) in mitigation sites (California Burrowing Owl Consortium 1993). The amount of mitigation habitat provided will depend on whether the mitigation habitat is occupied by burrowing owls (9.75 acres), adjacent to occupied habitat (13.0 acres), or suitable but unoccupied (19.5 acres).

If mitigation is provided via the management of suitable habitat, an HMMP will be prepared detailing the areas to be preserved for owls. These quantitative and/or qualitative standards are set out in Page 3.3-157 in Volume II of the FSEIR.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measure BIO-13 is feasible and will adopt it as described in the Final SEIR. This measure will be incorporated into the SMP Update documentation to ensure its implementation. With this measure in place, impacts on Burrowing Owl would be less than significant.

Impact BIO-27: Impacts on the Yellow Warbler

The yellow warbler is a widespread but uncommon breeder in riparian habitats in the Project Area. Suitable breeding habitat consists of riparian woodlands, often with an overstory of mature cottonwoods and sycamores, a midstory of box elder and willow, and a substantial shrub understory (Bousman 2007j). Yellow warbler eggs or young in nests may be killed or injured during Project maintenance activities (e.g., tree removal), resulting from nest destruction by

construction personnel or equipment, or by removal of vegetation containing a nest. Maintenance activities causing a substantial increase in noise, movement of equipment, or human presence near active nests also may result in nest abandonment, and possibly the loss of eggs or young as a result. Human disturbance leading to reduced attendance of nests potentially could increase the risk of brood parasitism by brown-headed cowbirds.

Mitigation

Mitigation Measure BIO-2 would require the District to provide compensatory mitigation for impacts to riparian habitat. Only riparian mitigation that occurs within yellow warbler's breeding habitat will benefit this species. *Mitigation Measure BIO-14: Implement Compensatory Mitigation for the Yellow Warbler* would be implemented to reduce the impacts to the yellow warbler. A mitigation ratio of one acre of impacted habitat to one acre of habitat creation, restoration, or preservation is prescribed for impacts to yellow warbler breeding habitat. Either of the mitigation measures described above would reduce the impacts below the level of significance.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measures BIO-2 and BIO-14 are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation. With these measures in place, impacts on yellow warbler would be less than significant.

Impact BIO-28: Impacts on the Yellow-Breasted Chat

The yellow-breasted chat is a very scarce breeder in the Project Area because of the loss of suitable breeding habitat and the presence of brown-headed cowbirds (Bousman 2007b). The Project may affect yellow-breasted chat habitat for breeding or foraging and/or individuals (e.g., disturbance of active nests during maintenance activities). Yellow-breasted chat eggs or young in nests could be killed or injured during maintenance activities (e.g., tree removal) resulting from nest destruction by construction personnel or equipment (e.g., knocking nests out of vegetation), or by removal of vegetation containing a nest. Maintenance activities causing a substantial increase in noise, movement of equipment, or human presence near active nests also may result in nest abandonment, and possibly the loss of eggs or young as a result. Human disturbance leading to reduced attendance of nests potentially could increase the risk of brood parasitism by brown-headed cowbirds.

Mitigation

Mitigation for impacts to riparian habitats is included in Mitigation Measure BIO-2. Mitigation Measure BIO-12 would also provide two measures to maintain willow-dominated riparian habitat with adjacent shrubs and tall forbs in extreme southern Santa Clara County for least Bell's Vireo nesting habitat. Either of the two measures would mitigate impacts to the yellow-breasted chat, by ensuring that suitable breeding and foraging habitat is maintained. Any of the mitigation measures described above would reduce the impacts below the level of significance.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measures BIO-2 and BIO-12 are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation. With these measures in place, impacts on yellow-breasted chat would be less than significant.

Impact BIO-35: Impacts on the Salt Marsh Harvest Mouse and Salt Marsh Wandering Shrew

The salt marsh harvest mouse and salt marsh wandering shrew are similarly associated with tidal marsh habitat in the northern portion of the Project Area and the potential impacts from the Project would be similar. Project maintenance activities may result in the injury or mortality of salt marsh harvest mice and salt marsh wandering shrews because of equipment use (including mowing and discing), vehicle traffic, and worker foot traffic. Individuals that vacate the area because of increased levels of noise and disturbance may be exposed to increased competition from members of the same species already occupying the area to which they were displaced and increased levels of predation because of unfamiliarity with the new area or lack of sufficient cover. Removal of vegetation may expose individual mice and shrews to predation.

Mitigation

Mitigation for impacts to tidal wetlands and other waters, which would be the habitats in which salt marsh harvest mouse and salt marsh wandering shrew could potentially occur are included in Mitigation Measure BIO-1. The additional 21 acres of tidal marsh restoration that the District has implemented for previous project impacts that did not occur would be used as mitigation for impacts to tidal wetlands and aquatic habitats as well as tidal species such as salt marsh harvest mouse and salt marsh wandering shrew.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measure BIO-1 is feasible and will adopt it as described in the Final SEIR. This measure will be incorporated into the SMP Update documentation to ensure its implementation. With this measure in place, impacts on salt marsh harvest mouse and salt marsh wandering shrew would be less than significant.

Impact BIO-37: Impacts on the Pallid Bat

There are a few pallid bat maternity colonies present in the Project Area. Individuals from these maternity roosts may forage in the Project Area, in open areas located within several miles of these roost locations. The Project is unlikely to result in the loss of high-quality roost sites for the pallid bat because large trees (i.e., trees greater than 12 inches dbh), which are the trees most likely to support cavities that could be used by large colonies, would not be removed. The removal of smaller trees which may contain roosting colonies or individual bats may result in

physical injury or death of individual bats; physiological stress resulting from being disturbed during torpor; or increased predation because of exposure during daylight. In addition, nursing young may be subjected to disturbance-related abandonment by their mothers. Maintenance activities also may result in the loss or reduction of a small amount of foraging habitat, such as streams and open grassland areas over which the bats foraged, although the extent of such impacts would not substantially affect the regional availability of foraging habitat.

Mitigation

Mitigation Measure BIO-15: Provide Alternative Bat Roost provides guidance if a tree or structure containing a pallid bat maternity roost is to be removed by the Project. Under these circumstances a qualified biologist will design and determine an appropriate location for an alternative roost structure. If a tree containing a maternity roost of this species is not removed, but SMP-related disturbance causes the abandonment of the roost site (even during the non-breeding season), then the District may either monitor the roost site to determine whether the affected species returns to the roost, or construct an alternative roost. If the District elects to monitor the roost and bats do not return within 1 year, then an alternative roost will be constructed.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measure BIO-15 is feasible and will adopt it as described in the Final SEIR. This measure will be incorporated into the SMP Update documentation to ensure its implementation. With this measure in place, impacts on pallid bats would be less than significant.

Impact BIO-44: Introduction of Invasive Species

Invasive plants often have a competitive advantage because they are no longer controlled by their natural predators or other natural control mechanisms, allowing them to spread quickly out of control. The Project Area contains several highly invasive plant species, such as perennial pepperweed, smooth cordgrass, arundo, and yellow star thistle, which pose threats to wildlands and degrade habitat quality for special-status plants and animals. Proposed vegetation management activities, such as mowing and discing, may create conditions suitable for additional spreading of invasive plant species. Furthermore, bare upland soils left after construction of temporary access ways or installation of bank protection may encourage growth of weedy species, and mulching or erosion control mixes may include and thus introduce invasive, non-native species. In addition to the introduction of invasive plant species, without proper procedures, mitten crabs and other aquatic invasive invertebrates, such as the New Zealand mud snail, Quagga mussel (*Dreissena bugensis*), or zebra mussel (*Dreissena polymorpha*), could inadvertently be introduced into the Project Area or relocated from the Santa Clara Basin into the Pajaro River Basin.

Mitigation

Invasive plant management mitigation is described in *Mitigation Measure BIO-16: Invasive Plant Management Program* and will be targeted at both on-site and off-site locations. The IPMP element of the SMP's compensatory mitigation package is to preserve and improve habitat within Santa Clara County streams and riparian corridors by reducing the population of invasive plant species. The program uses two approaches to accomplish this goal; a systematic program to identify, prioritize, and control invasive plants throughout the Project Area, and an opportunistic, site-specific approach to remove invasive plants from individual work sites. For the larger systematic program, mitigation needs and credit will be determined annually, dependent on the proposed work for the year and the associated impacts expected to be incurred in each habitat type, i.e., upland, riparian, freshwater, and tidal wetland impacts. The opportunistic effort will be variable each year dependent on the number of work sites where invasive plant removal is feasible. Mitigation credit accrued for this portion of the Program will be used to compensate for on-site vegetation impacts or for ongoing vegetation maintenance activities.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measure BIO-16 is feasible and will adopt it as described in the Final SEIR. This measure will be incorporated into the SMP Update documentation to ensure its implementation. With this measure in place, impacts from invasive species would be less than significant.

Cumulative Impact BIO-1: Effects on Biological Resources

The proposed maintenance activities would involve sediment removal, bank stabilization, minor maintenance, management of animal conflicts, vegetation management, and canal maintenance. Any of the Proposed Project's activities could have the potential for impacts to a variety of biological resources, including the following:

- temporary disturbance or permanent loss of aquatic and upland natural communities;
- temporary disturbance or permanent loss of potential habitat for, and loss of individuals of, special-status plants, including:
    - serpentine-associated species (Santa Clara Valley dudleya, Metcalf Canyon jewel-flower, big-scale balsamroot, pink creamsacs, Mt. Hamilton thistle, San Francisco collinsia, fragrant fritillary, Loma Prieta hoita, woolly-headed lessingia, smooth lessingia, and most beautiful jewel-flower);
    - non-serpentine associated species (Franciscan onion, bent-flowered fiddleneck, Anderson's manzanita, brittlescale, round-leaved filaree, Congdon's tarplant, Santa Clara red ribbons, Hospital Canyon larkspur, western leatherwood, Hoover's button-celery, Satan's goldenbush, showy golden madia, arcuate bush-

mallow, Davidson's bush-mallow, Hall's bush-mallow, Oregon meconella, Mt. Diablo cottonweed, robust monardella, hooked popcorn-flower, and saline clover);

- temporary disturbance or permanent loss of potential habitat for, and loss of individuals of, special-status animals, including:
    - special-status invertebrates (Bay checkerspot butterfly, Hom's micro-blind harvestman, Jung's micro-blind harvestman, and Opler's longhorn moth, mimic tryonia);
    - special-status fish (Central California Coast and South-Central Coast steelhead, Pacific lamprey, Monterey roach, longfin smelt, and green sturgeon);
    - special-status amphibians (California tiger salamander, California red-legged frog, and foothill yellow-legged frog);
    - special-status reptiles (western pond turtle and California horned lizard);
    - special-status birds (western snowy plover, black skimmer, California clapper rail, California black rail, redhead, American peregrine falcon, golden eagle, bald eagle, burrowing owl, short-eared owl, long-eared owl, northern harrier, white-tailed kite, Alameda song sparrow, Bryant's savannah sparrow, San Francisco common yellowthroat, Least Bell's vireo, yellow warbler, yellow-breasted chat, grasshopper sparrow, loggerhead shrike, Vaux's swift, tricolored blackbird, and olive-sided flycatcher);
    - special-status mammals (salt marsh harvest mouse, salt marsh wandering shrew, San Francisco dusky-footed woodrat, pallid bat, Townsend's big-eared bat, western red bat, American badger, ringtail, San Joaquin kit fox, and Pacific harbor seal);
- temporary disturbance or permanent loss of potential nesting habitat for, and active nests of, migratory birds, including raptors; and
- loss of heritage-sized trees.

The cumulative impact on biological resources resulting from the Proposed Project in combination with other projects in the Project Area would be dependent on the relative magnitude of adverse effects of these projects on biological resources compared to the relative benefit to these resources of impact avoidance and minimization efforts prescribed by planning documents, CEQA mitigation measures, and permit requirements for each project; compensatory mitigation and proactive conservation measures associated with each project; and the benefits to biological resources accruing from the habitat conservation plans (HCPs) being pursued by SCVWD and others. In the absence of such avoidance, minimization,

compensatory mitigation, and conservation measures, cumulatively significant impacts to biological resources would occur.

Mitigation

The Mitigation Measures proposed in the Biological Resources Chapter, Section 3.3 of Vol. II of the Final SEIR would avoid, minimize, and mitigate impacts to biological resources. County and jurisdictional general plans considered for this cumulative impact assessment contain conservation measures that would benefit biological resources. There are two regional Habitat Conservation Plans (HCPs) with which the District is involved, that will result in a net benefit to biological resources.

Findings

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment. The Board finds that Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-7, BIO-8, BIO-9, BIO-10, BIO-11, BIO-12, BIO-13, BIO-14, BIO-15 and BIO-16 are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation. With these measures in place, cumulative impacts to biological resources would be less than significant.

III. Significant Impacts which cannot be Fully Mitigated

Even after the adoption of all feasible mitigation, implementation of the SMP Update will cause or contribute to potentially significant, unavoidable environmental effects. The Board finds that the SMP Update will result in the following potentially significant and unavoidable impacts, even with the implementation of all feasible mitigation:

Impact AES-3: Temporary Alteration of Visual Character or Quality from Maintenance Activities

Many miles of creekside recreational trails currently exist or are planned within the Project Area. These creekside trails are utilized by recreational users and commuters, and are located in residential, commercial, and open space areas. Short-term maintenance activities including vegetation management, sediment removal, and bank protection could result in a temporary degradation of visual quality. These impacts are described below.

Vegetation Management

During vegetation management activities, a temporary visual impact would occur from the presence of maintenance crews and equipment near channels. Vegetation management could degrade the visual character of creeks and canals if it were to remove major stands of large vegetation. Invasive plant removal activities may alter a densely vegetated area to a partially vegetated or bare area until newly planted vegetation grow in. Herbicide activities also could alter the visual character of a site as targeted vegetation was removed. In addition, impacts from tree removal in areas where existing trees were sparse and where replanting was infeasible could be substantial.

Sediment Removal and Bank Stabilization

For sediment removal and bank stabilization activities, a temporary visual impact also would occur from maintenance crews and equipment near and in channels. Both sediment removal and bank stabilization projects could result in areas that would be temporarily de-vegetated, which on some creeks in the system would be different from areas surrounding the site, although bank stabilization sites would include a revegetation component, where feasible (see Appendix C, which describes the revegetation approach for bank stabilization activities).

Viewer response to altered canal, channel, and riparian corridors after maintenance activities may vary. Commuters on creekside trails who passed by the site on a daily basis could react to the changed conditions. However, such changed conditions would be temporary (because vegetation would grow back over time) and would occur at isolated locations. Likewise, sediment removal projects that would remove silt, vegetation and other blockages may allow the creek to function more naturally, resulting in an aesthetic benefit.

Management of Animal Conflicts

Other than the temporary presence of maintenance personnel and vehicles, activities proposed for animal conflict management would not involve actions which could result in the temporary alteration of visual character or quality. Bait traps, if left on-site, would be hidden or otherwise made inconspicuous to prevent vandalism and theft.

Minor Maintenance

Minor maintenance activities generally would be small scale (e.g., small amounts of sediment removal, removal of debris), and would have limited potential to impact visual quality. However, the installation/maintenance of landscape sites would result in a visual improvement at the time of installation.

Canal Maintenance

Because routine canal maintenance activities would include all general work activities, effects would be the same as described above for other routine maintenance work.

In summary, the majority of activities would have less-than-significant impacts on temporary alterations of visual character or quality and would not require mitigation. However, as described above, depending on viewer sensitivity, tree removal in areas where revegetation was infeasible could result in a significant impact.

Mitigation

Mitigation Measures BIO-1, BIO-2 and BIO-7 would reduce impacts, where implementation of such mitigation would result in revegetation activities or tree planting being conducted on site. However, these mitigation measures would not address the circumstance where onsite revegetation is infeasible.

Findings

As described on Page 3.1-15 of the Draft SEIR, specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. The Board finds that Mitigation Measures BIO-1, BIO-2, and BIO-7 are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation, and comprise all of the approaches identified as feasible to reduce temporary aesthetic impacts associated with the Project. However, even with these measures in place, temporary aesthetic impacts could still be significant where trees are removed in locations where revegetation is infeasible. The feasibility of onsite revegetation will be evaluated using the Mitigation Feasibility Assessment described in Attachment B of the SMP Manual (Appendix A of the Draft SEIR). Revegetation would be considered infeasible when a site has constraints that cannot be reasonably overcome. Factors considered will include soils, slope, hydrology, stream velocity, solar aspect/shade, design characteristics, adjacent land uses, site access, and other factors. In these cases, such impacts would constitute significant residual impacts, and are considered unavoidable. In summary, the District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

Impact AES-4: Permanent Alteration of Visual Character or Quality from Maintenance Activities

This impact discussion focuses on the long-term aesthetic effects of the Proposed Project. Overall, the long-term effect from maintenance activities would improve the visual character and quality of the Project Area.

Sediment Removal and Bank Stabilization

Removal of sediment from SCVWD channels and facilities would remove sediment, vegetation, and other blockages that would allow waterways to function more naturally, and thus resulting in an aesthetic benefit. Similarly, stabilization and repair of eroding banks would reduce sediment loss and in-channel build-up. Although the use of certain materials (i.e., rock, riprap) to repair banks could appear visually different, on-site revegetation (as described in Appendix C) would minimize long-term visual impacts and make them less than significant.

Vegetation Management

Overall, the removal of invasive plant species and revegetation with native species would improve the long-term aesthetic value of the riparian corridors. However, as discussed in Impact AES-3, proposed vegetation maintenance activities, such as tree removal, could potentially alter the character of riparian corridors in the Project Area; in most cases this would be a temporary effect. As discussed in Impact AES-3, this alteration would generally be less than significant, especially where replanting or revegetation would occur. As described in Section 3.3, Biological Resources, mitigation for larger-sized tree removals would be required, which would minimize permanent visual alterations. However, the impact on visual quality or character could be significant when tree removal was conducted in areas where existing trees were sparse and where replanting were infeasible.

Management of Animal Conflicts

Long-term effects from the management of animal conflicts could benefit the visual character or quality of treated areas. By discouraging damage caused by animal activity (i.e., burrowing), the integrity of SCVWD facilities would be preserved and visual damage would be minimized. Therefore, the permanent impacts from management of animal conflicts under the Proposed Project would be beneficial.

Minor Maintenance

Minor maintenance activities, including installation/maintenance of landscape sites, debris removal, fence maintenance, and graffiti removal, would improve the visual quality and character of channels. Therefore, permanent effects on visual quality and character from these activities would be beneficial.

Canal Maintenance

Because routine canal maintenance activities would include all general work activities, effects would be the same as described above for other routine maintenance work.

In summary, the majority of activities would have less-than-significant impacts on permanent alterations of visual character or quality and would not require mitigation. However, as described above, depending on viewer sensitivity, tree removal in areas where replanting was infeasible could result in a significant impact.

Mitigation

Mitigation Measures BIO-1, BIO-2 and BIO-7 would reduce impacts, where implementation of such mitigation would result in revegetation activities or tree planting being conducted on site. However, these mitigation measures would not address the circumstance where onsite revegetation is infeasible.

Findings

As described on Page 3.1-17 of the Draft SEIR, specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. The Board finds that Mitigation Measures BIO-1, BIO-2, and BIO-7 are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation, and comprise all of the approaches identified as feasible to reduce permanent aesthetic impacts associated with the Project. However, even with these measures in place, permanent aesthetic impacts could still be significant where trees are removed in locations where revegetation is infeasible. The feasibility of onsite revegetation will be evaluated using the Mitigation Feasibility Assessment described in Attachment B of the SMP Manual (Appendix A of the Draft SEIR). Revegetation would be considered infeasible when a site has constraints that cannot be reasonably overcome. Factors considered will include soils, slope, hydrology, stream velocity, solar aspect/shade, design characteristics, adjacent land uses, site access, and other factors. In these cases, such impacts would constitute significant residual impacts, and are considered unavoidable. In summary, the District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

Impact AIR-1: Temporary Increase in ROG, NOx, PM_{10}, and $PM_{2.5}$ Emissions during Maintenance Activities

Emissions of criteria air pollutants ROG, PM_{10}, and $PM_{2.5}$ from the Project would occur at levels below BAAQMD significance thresholds and would not require mitigation. However, average daily and annual emissions of NOx from the Project would be substantially greater than BAAQMD significance thresholds and could result in a significant impact.

Mitigation

Mitigation Measure AIR-1A would reduce impacts by developing a plan to demonstrate that off-road equipment to be used in the SMP Update would achieve a project-wide, fleet average 20 percent NOx reduction compared to the most recent ARB fleet average. However, this mitigation measure does not reduce NOx emissions from the SMP Update to below BAAQMD operational significance thresholds. Two other proposed mitigation measures, AIR-1B and AIR-1C, would reduce NOx emissions to below operational significance thresholds but may not be feasible to implement based on costs, logistics, or other factors.

Findings

As described on Pages 3.2-13 and 3.2-14 of the Draft SEIR, specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. After examining Mitigation Measures AIR-1B and AIR-1C, the Board is not aware of specific feasible NOx reduction projects which could be implemented, and finds that the existence of specific actions to implement in compliance with these mitigation measures is speculative. The Board further finds that even if such actions could be found, they would be likely be difficult to measure and track, and determine whether they had been effective. Further, such measures while possibly appropriate for non-mobile sources, have little relation to government mobile sources. In addition, such measures are exorbitantly expensive in relation to annual project costs.

The Board finds that Mitigation Measure AIR-1A is feasible and will adopt it as described in the Final SEIR. The Board believe that this is a feasible, ascertainable, and measurable mitigation measure. It would mitigate emissions at the source, and would have other benefits such as reductions in emissions of other constituents and fuel efficiency. This measure will be incorporated into the SMP Update documentation to ensure its implementation, and comprise the approach identified as feasible to reduce temporary increases in NOx emissions impacts associated with the Project. However, even with this measure in place, temporary increases in NOx emissions in exceedance of BAAQMD significance thresholds would still be significant. The resulting impact would constitute a significant impact, and is considered unavoidable. In summary, the District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

Impact BIO-45: Habitat Fragmentation

The stream maintenance activities and development of surrounding uplands may lead to habitat fragmentation. Santa Clara County creeks are becoming the last refuge for some wildlife species. Stream maintenance activities could result in some local wildlife populations dropping below a self-sustaining level on some creek sections. The impact of SMP activities on habitat connectivity and movement would be significant.

Mitigation

A variety of compensatory mitigation measures previously described would reduce impacts from SMP activities on impacted species living in Santa Clara County creeks. These measures would partially compensate for fragmentation impacts by providing habitat that could either help to fill gaps in habitat outside the impact area (e.g., resulting from riparian or wetland restoration in areas that formerly lacked such habitat) or by boosting the sizes of populations that may be adversely affected by habitat loss and fragmentation.

Adverse effects from fragmentation, however, may remain for those species that could not easily move to undisturbed areas or mitigation sites. The cumulative effect of fragmentation also must be viewed in the context of other activities. With increasing development in Santa Clara County, creeks are becoming the last refuge for some wildlife species. Over the next 10 years, the combination of continued stream maintenance and development of surrounding uplands may result in some local wildlife populations dropping below a self-sustaining level on some creek sections. Thus, the impact of SMP activities on habitat connectivity and movement of some wildlife species would be significant.

Because the impacted species would occur in the very locations where flood protection was being maintained, it would not be possible to entirely avoid this impact. On-site mitigation would be applied where feasible to minimize the duration during which a given maintenance area would not serve as habitat. That said, the impact would occur at many stream locations throughout the county, and some very localized populations may drop below a self-sustaining level that could not be completely mitigated on- or off-site.

Findings

As described on Pages 3.3-188 and 189 of the Draft SEIR, specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. The Board finds that compensatory mitigation measures are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation, and comprise all of the approaches identified as feasible to reduce habitat fragmentation caused by the Project. However, even with these measures in place, permanent habitat fragmentation impacts would still be significant to populations of species impacted by stream maintenance activities. Such impacts would constitute significant impacts, and are considered unavoidable. In summary, the District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

Impact GCC-1: Temporary Increase in GHGs during Maintenance Activities

The Project's maintenance activities would release Green House Gases (GHGs) from the combustion of fossil fuels in on- and off-road vehicles, and portable power generators. Annual

emissions of GHGs from the SMP would occur at levels in exceedance of BAAQMD significance thresholds and could result in a significant impact.

Mitigation

Mitigation Measure AIR-1A would reduce emissions of NOx by 20 percent. However, this mitigation measure does not reduce GHG emissions from the SMP Update to below BAAQMD operational significance thresholds. Two other proposed mitigation measures, GCC-1A and GCC-1B, would reduce GHG emissions to below operational significance thresholds but may not be feasible to implement based on costs, logistics, or other factors.

Findings

As described on Page 3.5-8 of the Draft SEIR, specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. After examining Mitigation Measure GCC-1A, the Board is not aware of any specific feasible actions that could be implemented in compliance with this mitigation measure, and as such finds it infeasible. After examining Mitigation Measure GCC-1B, the Board finds that the effectiveness of purchased offsets would be difficult or impossible to ascertain, rendering this mitigation potentially ineffective and therefore impractical to implement. Further, such measures while possibly appropriate for non-mobile sources, have little relation to government mobile sources. In addition, such measures are exorbitantly expensive in relation to annual project costs.

The Board finds that Mitigation Measure AIR-1A is feasible and will adopt it as described in the Final SEIR. The Board believe that this is a feasible, ascertainable, and measurable mitigation measure. It would mitigate emissions at the source, and would have other benefits such as reductions in emissions of other constituents. This measure will be incorporated into the SMP Update documentation to ensure its implementation, and comprise the approach identified as feasible to reduce increases in NOx emission impacts associated with the Project. However, even with this measure in place, NOx and other GHG emissions in exceedance of BAAQMD significance thresholds would still be significant. The resulting impacts would constitute a significant impact, and is considered unavoidable. In summary, the District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

Impact NZ-1: Temporary Exposure of the Public to Noise Levels in Excess of City or County Standards

Permanent changes in the existing noise environment would not result from proposed maintenance activities and would not require mitigation. However, temporary construction-type noise of varying degrees would occur from maintenance activities, bank stabilization in particular would result in the greatest noise generation. Increases in the ambient noise levels and/or exterior noise levels in excess of City or County standards are possible, and would result in a potentially significant impact.

Mitigation

No feasible mitigation is available to reduce the significant and unavoidable impact associated with temporary noise impacts from SMP Update Activities, as use of certain sound barriers would block access of many access roads and impede movement of maintenance equipment.

Findings

As described on Page 3.9-12 of the Draft SEIR, specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. The Board finds that no mitigation measures are feasible in the Final SEIR. Temporary increases in noise in excess of City or County standards would be significant. Such impacts would constitute a significant impact, and are considered unavoidable. In summary, the District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

Impact NZ-3: Temporary Substantial Increase in Noise above Ambient Levels

The majority of SMP activities would be short-term would have less-than-significant impacts on noise increases above ambient levels and would not require mitigation. However, in some cases, these temporary noise impacts would persist for a longer period at a given location and could result in a significant impact.

Mitigation

No feasible mitigation is available to reduce the significant and unavoidable impact associated with temporary noise impacts from SMP Update Activities, as use of certain sound barriers would block access of many access roads and impede movement of maintenance equipment.

Findings

As described on Page 3.9-14 of the Draft SEIR, specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. The Board finds that no mitigation measures are feasible in the Final SEIR. Temporary substantial increase in noise above ambient levels would be significant. Such impacts would constitute a significant impact, and is considered unavoidable. In summary, the District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

Cumulative Impact AIR-1: Emissions of ROG, NOx, PM_{10}, and $PM_{2.5}$

Emissions of criteria air pollutants ROG, PM_{10}, and $PM_{2.5}$ from the SMP would occur at levels below BAAQMD significance thresholds and would not require mitigation. However, average

daily and annual emissions of NOx from the SMP would be substantially greater than BAAQMD significance thresholds throughout the SMP. The Project would make a considerable contribution to cumulative air quality impacts and could result in a significant impact.

Mitigation

Mitigation Measure AIR-1A would reduce impacts by developing a plan to demonstrate that off-road equipment to be used in the SMP Update would achieve a project-wide, fleet average 20 percent NOx reduction compared to the most recent ARB fleet average. However, this mitigation measure does not reduce NOx emissions from the SMP Update to below BAAQMD operational significance thresholds. Two other proposed mitigation measures, AIR-1B and AIR-1C, would reduce NOx emissions to below operational significance thresholds but may not be feasible to implement based on costs, logistics, or other factors.

Findings

See the findings for Impact AIR-1, above. The District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

Cumulative Impact AIR-2: Emissions of Greenhouse Gases

The Project's maintenance activities would release greenhouse gases (GHGs) from the combustion of fossil fuels in on- and off-road vehicles, and portable power generators. Annual emissions of GHGs from the SMP would occur at levels in exceedance of BAAQMD significance thresholds. The Project would therefore make a considerable contribution to cumulative GHG impacts and could result in a significant impact.

Mitigation

Mitigation Measure AIR-1A would reduce emissions of NOx by 20 percent. However, this mitigation measure does not reduce GHG emissions from the SMP Update to below BAAQMD operational significance thresholds. Two other proposed mitigation measures, GCC-1A and GCC-1B, would reduce GHG emissions to below operational significance thresholds but may not be feasible to implement based on costs, logistics, or other factors.

Findings

See the findings for Impact GCC-1, above. The District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

Cumulative Impact BIO-2: Habitat Fragmentation

The stream maintenance activities and development of surrounding uplands may lead to habitat fragmentation. Santa Clara County creeks are becoming the last refuge for some wildlife

species. Stream maintenance activities could result in some local wildlife populations dropping below a self-sustaining level on some creek sections. The SMP's contribution to the cumulative impairments to regional habitat connectivity and movement would be considerable, and could result in a significant impact.

Mitigation

A variety of compensatory mitigation measures previously described would reduce impacts from SMP activities on impacted species living in Santa Clara County creeks. These measures would partially compensate for fragmentation impacts by providing habitat that could either help to fill gaps in habitat outside the impact area (e.g., resulting from riparian or wetland restoration in areas that formerly lacked such habitat) or by boosting the sizes of populations that may be adversely affected by habitat loss and fragmentation. See the discussion of mitigation under Impact BIO-48 above for a further discussion of these measures.

Adverse effects from fragmentation, however, may remain for those species that could not easily move to undisturbed areas or mitigation sites. The cumulative effect of fragmentation also must be viewed in the context of other activities. With increasing development in Santa Clara County, creeks are becoming the last refuge for some wildlife species. Over the next 10 years, the combination of continued stream maintenance and development of surrounding uplands may result in some local wildlife populations dropping below a self-sustaining level on some creek sections. Thus, the impact of SMP activities on habitat connectivity and movement of some wildlife species would be significant.

Because the impacted species would occur in the very locations where flood protection was being maintained, it would not be possible to entirely avoid this impact. On-site mitigation would be applied where feasible to minimize the duration during which a given maintenance area would not serve as habitat. That said, the impact would occur at many stream locations throughout the county, and some very localized populations may drop below a self-sustaining level that could not be completely mitigated on- or off-site.

Findings

As described on Page 4-22 of the Draft SEIR, specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. The Board finds that compensatory mitigation measures are feasible and will adopt them as described in the Final SEIR. These measures will be incorporated into the SMP Update documentation to ensure their implementation, and comprise all of the approaches identified as feasible to reduce habitat fragmentation caused by the Project. However, even with these measures in place, permanent habitat fragmentation impacts would still be significant to populations of species impacted by stream maintenance activities. Such impacts would constitute significant impacts, and are considered unavoidable.

As described under Mitigation, above, there are no further feasible mitigation measures or alternatives that could be identified to reduce these impacts to a level of insignificance.

All mitigation measures which are included in the Project and Final SEIR (whether or not they are expressly designated as mitigation measures), or which are referenced in these Findings, or which are included in the Mitigation Monitoring and Reporting Program, shall be deemed adopted as part of the Board's approval of the Project and certification of the Final SEIR to the extent they have been identified as measures to be undertaken by the District.

In summary, the District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

IV. Alternatives Analysis

The CEQA Guidelines require that an EIR evaluate a reasonable range of alternatives to the Project, focusing on alternatives that appear to be feasible, would meet the project objectives, and would avoid or substantially lessen at least one of the Project's significant environmental effects. CEQA Guidelines also require that the range of alternatives considered include a No Project Alternative.

The Board finds that the Final SEIR describes a reasonable range of alternatives and rejected them in favor of the Project as summarized below.

The Draft SEIR analyzed four alternatives in addition to the Project as proposed. The Alternatives considered in the Final EIR are:

- No Project Alternative
- Reduced Frequency Alternative
- Limited Work in Unmodified Channels Alternative
- Limited Activities Alternative

Alternatives to the SMP Update were developed as programmatic alternatives to implementation of the Project as a whole. Some of the alternatives considered would limit the extent of Project implementation by altering the frequency of maintenance activities or prohibiting maintenance activities from occurring on specific stream reaches. As a result, the programmatic alternatives would provide varying levels of flood protection. Alternatives were developed by considering the Project's overall goals and objectives as well as by its potential environmental impacts. Alternatives would seek to achieve similar goals as the Project, although the alternatives may reach these goals to a greater or lesser extent than the Project. The alternatives also would seek to reduce the significance of anticipated adverse environmental impacts associated with the Project.

The Board rejects the No Project Alternative, as the increase in sediment discharges from areas requiring bank stabilization, and decrease in the frequency of maintenance activities would result in a greater temporary reduction in conveyance capacity. As a result, this alternative would fail to adequately accomplish the first three of the four project objectives on Page 2-3 of the Draft SEIR. Mitigation would be undertaken in smaller increments and overall may be less ecologically significant than the approach proposed in the SMP Update.

The Board rejects the Limited Work in Unmodified Channels Alternative, as the flood flow capacities would not be maintained in unmodified channels which may increase flood risk in those reaches. As a result, this alternative would fail to adequately accomplish the first two of the four project objectives on Page 2-3 of the Draft SEIR.

The Board rejects the Limited Activities Alternative, although avoidance of the activities with the greatest impact would eliminate those impacts, there may be an increase in other types of

impacts such as those associated with hand removal of vegetation. Similarly, restricting bank stabilization to "soft" methods could result in repeat bank failures, with adverse impacts on habitat and water quality. These additional impacts that would occur under this alternative are believed to outweigh the impacts that this alternative would avoid, resulting in greater impacts overall.

A. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The Project is considered to be environmentally superior, compared to any of the alternatives. Because the Project is not itself an alternative, the environmentally superior alternative has also been identified. Among the four alternatives, the Reduced Frequency Alternative is considered the environmentally superior alternative because by limiting the amount of all annual maintenance activities, it would reduce the impacts associated with these activities. However, the Reduced Frequency Alternative would maintain the design flow or appropriate conveyance capacity of facilities to a lesser extent than the Project. While it would not have greater impacts overall, this potential flooding impact is considered to be an overriding factor, given that flood management is the primary goal of the Proposed Project.

B. OTHER ALTERNATIVES REJECTED FROM FURTHER ANALYSIS UNDER CEQA

A variety of other alternatives were considered in the process of preparing the Draft SEIR, but were eliminated from further consideration at that stage. The following alternatives were considered but ultimately were dismissed from further analysis for one or more of the following reasons: (1) they were not substantively different from one of the considered alternatives; (2) they would not sufficiently meet the Project objectives; (3) they were determined to be infeasible; or (4) they would not avoid or substantially reduce one or more significant impacts of the Project:

- Geomorphic Alternative
- Watershed Approach Alternative
- Return to As-Built Conditions Alternative
- Modified Pajaro River Basin Alternative
- No Herbicides Alternative
- Reduced Extent Alternative
- Alternative Locations
- Reduced Time Frame Alternative

V. Statement of Overriding Considerations

The overall flood management goals of the Stream Maintenance Program Update are to maintain the design flow or appropriate conveyance capacity of District facilities, and to maintain the structural and functional integrity of District facilities.

To meet these goals, the SMP Update would prioritize and administer maintenance activities to achieve the following objectives:

- remove sediment to maintain the hydraulic, safety, and habitat functions of the creek systems;
- manage vegetation to maintain the hydraulic, safety, and habitat functions of the creek systems, and to allow for levee inspections and maintenance access;
- stabilize beds and banks of creeks and canals to protect existing infrastructure, maintain public safety, reduce sediment loading, protect water quality, and protect habitat values; and
- avoid, minimize, or mitigate impacts on the environment by incorporating stream stewardship measures into maintenance activities.

Flood protection is one of the District's two primary purposes and the SMP is a required part of that purpose by integrating the District's purposes and policies with environmental requirements (Ends Policy E-1). Specifically, creek maintenance preserves flow capacity of District creeks to reduce the risk of flooding, and improves water quality through the stabilization of eroding creek banks and removal of excess sediment (Ends Policies E-3.1 and E-4.2). Maintenance of canals ensures that water conveyance systems are functioning, sustainable, and able to move water between reservoirs, creeks, percolation ponds, and water treatment plants (Ends Policy E-2.1). Water released into creeks and percolation ponds helps to replenish local groundwater aquifers and manage environmental needs (Ends Policy E-2.1).

Implementation of the SMP Update would likely result in significant and unavoidable impacts from temporary or permanent alteration of visual character or quality from maintenance activities, temporary increase in NOx, emissions during maintenance activities, habitat fragmentation, temporary increase in green house gases during maintenance activities, temporary exposure of the public to noise levels in excess of city or county standards, temporary substantial increase in noise above ambient levels and cumulative impacts, as specified above in Section III. The District has committed to all feasible mitigation to reduce these impacts, but the residual level of effect is still likely to be significant, and no additional feasible mitigation is available.

Implementation of the Project as proposed would prevent unacceptable flood risks throughout the District's jurisdiction. The District Act, which establishes the District, cites flood protection within several of its objectives and purposes (see Sections 4(c)(1) and 4(c)(2) of the Act). Similarly, the District's Ends Policy No. E-3 discusses a healthy and safe environment for residents, businesses and visitors, and establishes goals of providing flood protection and reducing potential for flood damage. Failure to provide this flood protection would put thousands

of homes and business at risk, with a large cost of recovery in the event of a flood. Other impacts of flooding may include closure of essential transportation arteries, interruptions in emergency service, likely losses of instruction time at area public and private schools, loss of use of affected public facilities such as parks, and at the extreme, loss of human life. The Project represents the best way to minimize these risks while also avoiding or minimizing the impacts of stream maintenance to the greatest extent feasible.

In consideration of flood protection needs, and the analysis of Project outcomes presented in the Final SEIR, the Board finds that the economic, social, and environmental benefits of meeting the Project's goals and objectives outweigh the significant and unavoidable aesthetic, air quality, biological resources, global climate change, noise and cumulative impacts associated with the Project's implementation.

VI. Substantial Evidence

Substantial evidence supporting each and every finding made herein is contained in the SEIR and/or record of proceedings.

VII. Mitigation Monitoring and Reporting Program

The Mitigation Monitoring and Reporting Program for the Stream Maintenance Program Update is specified in Appendix L of Volume II of the Final SEIR.

VIII. References

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