DEPARTMENT OF THE ARMY
REGIONAL GENERAL PERMIT (RGP) NUMBER 100

Permittee: Orange County Public Works (OCPW)

Project Name: OCPW Countywide Long-term Routine Maintenance Program

Permit Number: SPL-2012-00817

Issuing Office: Los Angeles District

Note: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Location: This RGP applies to channel facilities throughout Orange County, California, as shown in Enclosure 1 and listed in Enclosure 2. The extent of Section 10 waters of the United States covered under this RGP is detailed in Enclosure 3.

Project Description:

The OCPW Countywide Long-term Routine Maintenance Program (Maintenance Program) covers routine maintenance activities conducted by OCPW within Orange County Flood Control Division (OCFCD) rights-of-way situated throughout the 13 watersheds of Orange County. This RGP authorizes activities associated with the Maintenance Program that would result in a discharge of dredged and/or fill material into waters of the United States and/or would place structures or consist of work in or affecting navigable waters of the United States. Maintenance activities covered under this RGP include channel and basin/dam maintenance, bridge maintenance, invasives removal, and channel/bridge inspections/cleaning, among a wide variety of other routine maintenance types.

This RGP only authorizes Corps-jurisdictional activities that would result in temporary impacts to waters of the United States and which would have minimal impacts, both individually and cumulatively, on the aquatic environment. This RGP does not authorize impacts beyond the baseline/as-built conditions of covered facilities.

The complete framework for implementing this RGP is provided in the "Maintenance Framework for Implementation of the Orange County Public Works Long-Term Routine Maintenance Program" (Maintenance Framework), dated April 11, 2019 (Enclosure 4). The Maintenance Framework identifies the specific activity types covered under this RGP, avoidance and minimization measures that must be implemented in conjunction with these activities, program implementation procedures, and annual reporting measures, among other program details and requirements.

Permit Conditions:

General Conditions:

1. The time limit for completing the authorized activity ends on **May 3, 2024**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification from this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.

Special Conditions:

1. **Coastal Zone Management Act**: Coastal Development Permit No. 5-13-0851 expired on January 23, 2019. Therefore, no work shall be authorized by this RGP within the coastal zone until the Permittee receives a valid Coastal Zone Management Act consistency certification from the California Coastal Commission.

2. **33 U.S.C. 408:** A pre-construction notification shall be submitted to the Corps Regulatory Division for any activity that would alter or temporarily or permanently modify or use an existing Corps project. Notification shall not be required for any Operation & Maintenance (O&M) activities specified in a Corps-issued O&M manual or any activities to restore the Corps project to the physical dimensions and design of the constructed project, without any changes to the real property, existing design features, or physical dimensions or performance of the Corps project. No activity requiring a Section 408 permit shall be authorized by this RGP within the following facilities until the activity has been approved by the Corps Engineering Division:
   a. Coyote Creek Channel (A01) from 900 feet downstream of Valley View Street to 1,200 feet downstream of Imperial Highway;
   b. Santa Ana River Channel (E01) from Pacific Coast Highway to Weir Canyon Road; and
   c. Greenville-Banning Channel (D03) from downstream of Victoria Avenue to 1,500 feet upstream of Gisler Avenue.

3. **Endangered Species Act:** This Corps permit does not authorize you to take any threatened or endangered species or adversely modify designated critical habitat. In order to legally take a listed species, you must have separate authorization under the ESA (e.g. ESA Section 10 permit, or a Biological Opinion (BO) under ESA Section 7, with "incidental take" provisions with which you must comply).

4. **Essential Fish Habitat:** A pre-construction notification shall be submitted to the Corps Regulatory Division for any activity that may result in impacts to eelgrass (*Zostera marina*). In tidally influenced areas, a pre-construction eelgrass survey shall be conducted in accordance with the California Eelgrass Mitigation Policy (CEMP) (http://www.westcoast.fisheries.noaa.gov/publications/habitat/california_eelgrass_mitigation/Final CEMP October 2014/cemp_oct_2014_final.pdf) and submitted to the Corps Regulatory Division and NMFS before project-related activities commence. In addition, a pre-construction Caulerpa (*Caulerpa taxifolia*) survey shall be conducted in accordance with the Caulerpa Control Protocol (http://www.westcoast.fisheries.noaa.gov/publications/habitat/caulerpa_taxifolia/caulerpa_control_protocol_4_.pdf) and submitted to the Corps Regulatory Division and NMFS before project-related activities commence. No work shall be conducted until a Notice to Proceed is issued by the Corps Regulatory Division. If the pre-construction eelgrass survey

demonstrates eelgrass presence within the project vicinity, a post-project survey shall be conducted and impacts to eelgrass mitigated in accordance with the CEMP. In the event that Caulerpa is detected within the project area, the Permittee shall not commence work until such time as the infestation has been isolated, treated, and the risk of spread is eliminated as confirmed in writing by the Corps Regulatory Division, in consultation with NMFS and CDFW.

5. **Historic Properties:** Pursuant to 36 C.F.R. section 800.13, in the event of any discoveries during construction of either human remains, archeological deposits, or any other type of historic property, the Permittee shall notify the Corps' Archeology Staff and Corps' Regulatory Staff within 24 hours (Danielle Storey at 213-452-3855 or Meg McDonald at 213-452-3849; and Eric Sweeney at 760-602-4837). The Permittee shall immediately suspend all work in any area(s) where potential cultural resources are discovered. The Permittee shall not resume construction in the area surrounding the potential cultural resources until the Corps Regulatory Division re-authorizes project construction, per 36 C.F.R. section 800.13.

6. **SAMP Watersheds:** Impact limits have been designated within the boundaries of the SAMPs, i.e., the San Diego Creek Watershed and San Juan Creek/Western San Mateo Creek Watershed. Specifically, this RGP only authorizes activities resulting in less than or equal to 0.5 acre of temporary impacts to waters of the United States, including less than or equal to 0.1 acre of temporary impacts to areas with native wetland vegetation, outside of aquatic resource integrity areas. Furthermore, within aquatic resource integrity areas, this RGP only authorizes activities resulting in less than or equal to 0.25 acre of temporary impacts to waters of the United States with no native wetland vegetation. No impact to native wetland vegetation is authorized within aquatic resource integrity areas.

7. **Authorized Work:** Any work authorized by this permit must be the minimum necessary to alleviate the maintenance need and shall not exceed the design specifications of the facilities. In the event that additional maintenance activities are required, the Permittee shall submit a pre-construction notification to the Corps Regulatory Division to perform the work. If the work requested under the permit were denied, the Permittee would need a separate permit from the Corps Regulatory Division.

8. **Access:** You must allow representatives from this office and other Federal and state resource agencies to inspect the authorized activity at any time deemed necessary to ensure the project is being or has been accomplished in accordance with the terms and conditions of this RGP.

9. **Best Management Practices (BMPs):** No debris, soil, silt, sand, sawdust, rubbish, cement or concrete washings thereof, oil or petroleum products, from construction shall be allowed

to enter into or be placed where it may be washed by rainfall or runoff into waters of the United States. Therefore, the Permittee shall employ all standard BMPs to ensure that toxic materials, silt, debris, or excessive erosion do not enter waters of the United States during project construction.

10. **Equipment:** Vehicles shall not be driven or equipment operated in waters of the United States on-site, except as necessary to complete the proposed project. The Permittee shall ensure all vehicle maintenance, staging, storage, and dispensing of fuel occur in designated upland areas, located in such a manner as to prevent any runoff from entering waters of the United States.

11. **Limits of Work:** The Permittee shall clearly mark the limits of the workspace with flagging or similar means to ensure mechanized equipment does not enter sensitive habitats outside of the permitted maintenance channels. Adverse impacts to waters of the United States beyond the Corps-approved construction footprint are not authorized. Such impacts could result in permit suspension and revocation, administrative, civil or criminal penalties, and/or substantial, additional, compensatory mitigation requirements.

12. **Suitable Material:** No discharge of dredged or fill material may consist of unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.) and material discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

13. **Aquatic Life Movements:** No activity may substantially disrupt the movement of those species of aquatic life indigenous to the waterbodies in which work is authorized under this RGP, including those species that normally migrate through these waterbodies.

14. **Navigation:** The permitted activity shall not interfere with the right of the public to free navigation on all navigable waters of the United States. The Permittee understands and agrees that, if future operations by the United States require the removal, relocation, cessation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittee will be required, upon due notice from the Corps, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

15. **Reports:** The Permittee shall comply with all reporting requirements as stated in the Maintenance Framework (Enclosure 4).

Further Information:

1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

PERMITTEE

JAMES VOLZ, P.E.
SENIOR CIVIL ENGINEER

5/6/19
DATE

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

ALLEN.AARON.O.1232270795 Digitally signed by ALLEN.AARON.O.1232270795
Date: 2019.05.07 07:30:17 -07'00'

David J. Castanon
Chief, Regulatory Division

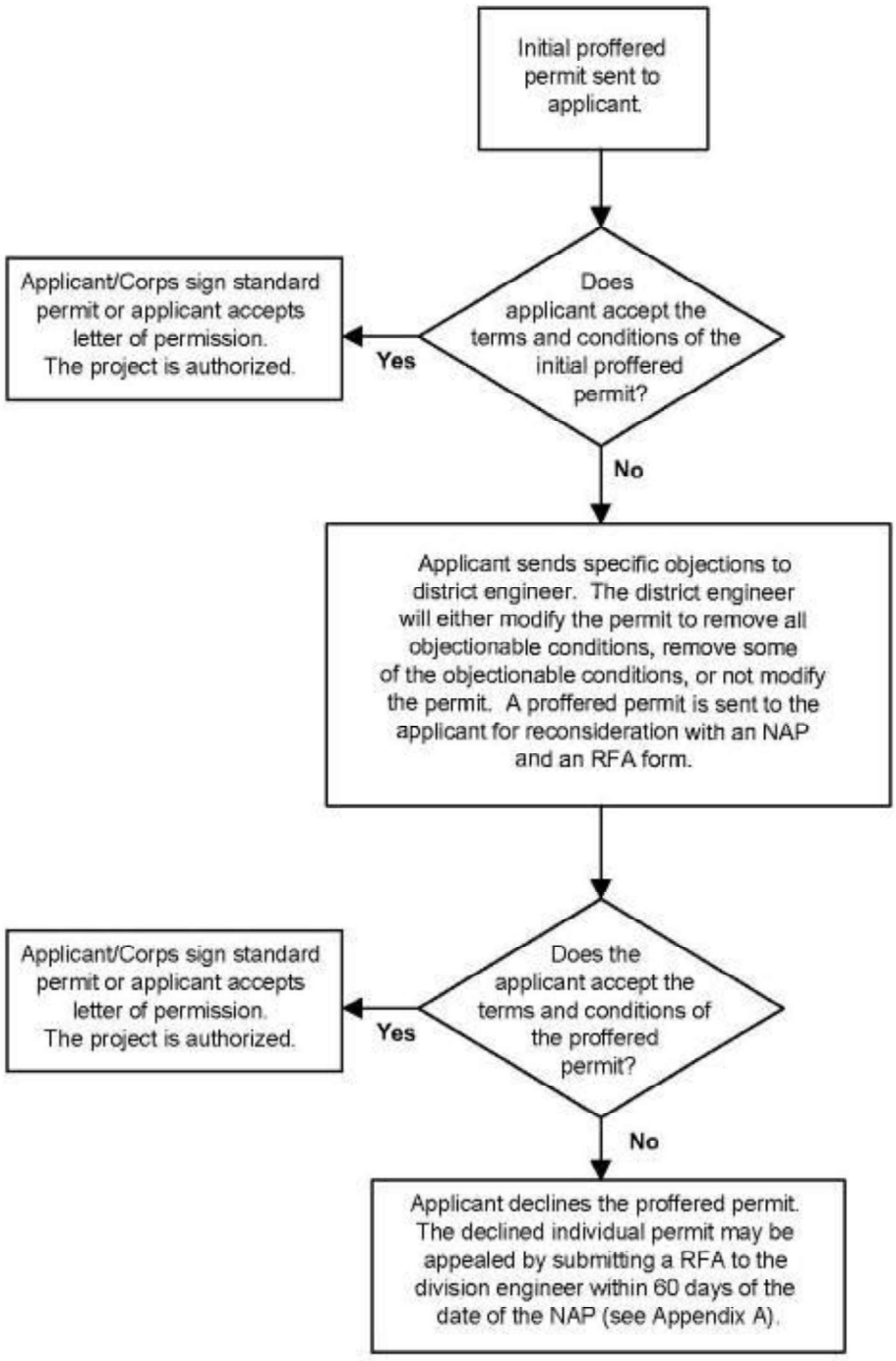
DATE

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

TRANSFEREE

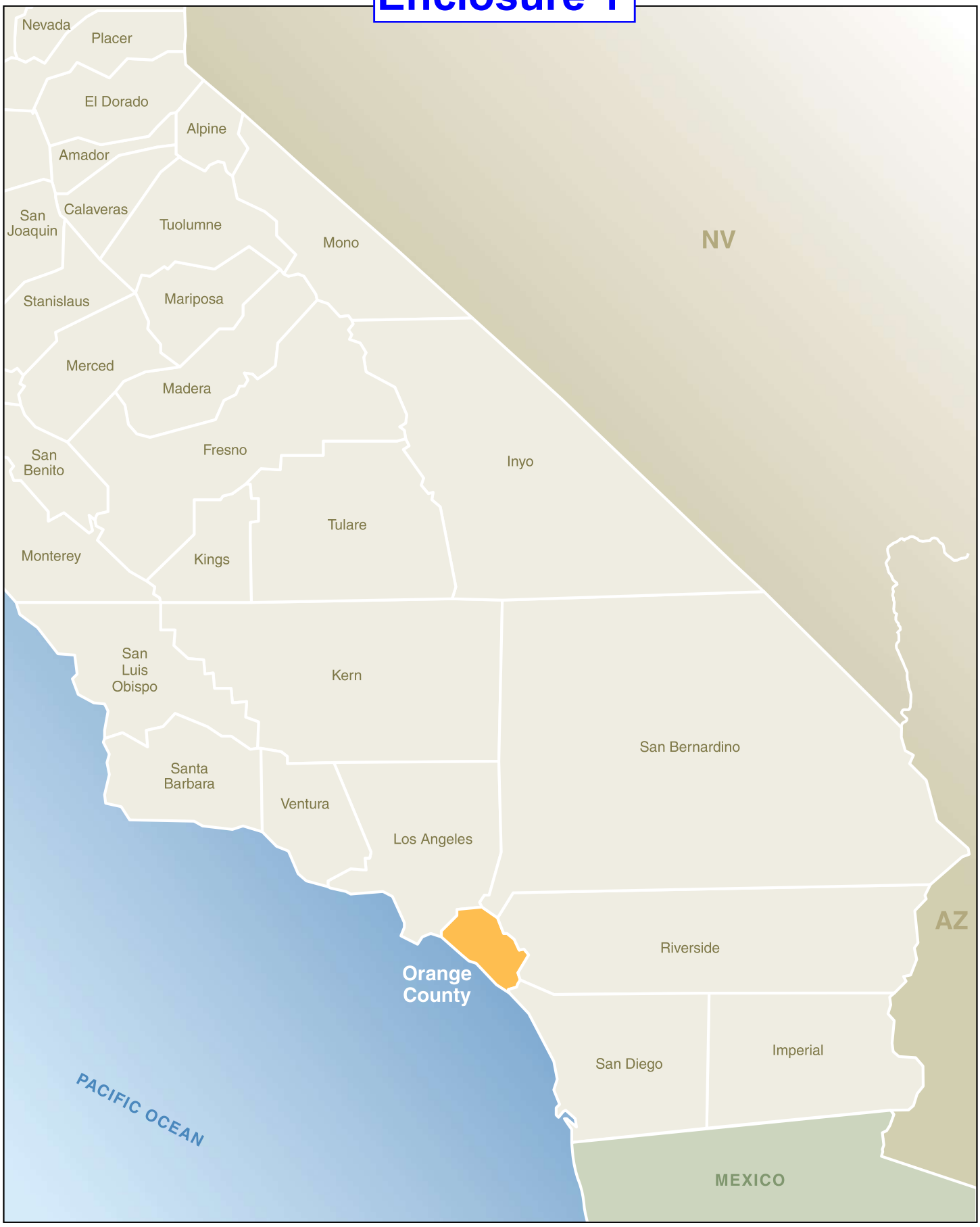
DATE

Applicant Options with Initial Proffered Permit



Appendix B

Enclosure 1



RBF CONSULTING

not to scale

6/23/10 JN 10-105607-16737 MAS

COUNTY OF ORANGE • LONG-TERM MAINTENANCE PERMITTING PROGRAM

Regional Vicinity

Exhibit 1

RBF CONSULTING

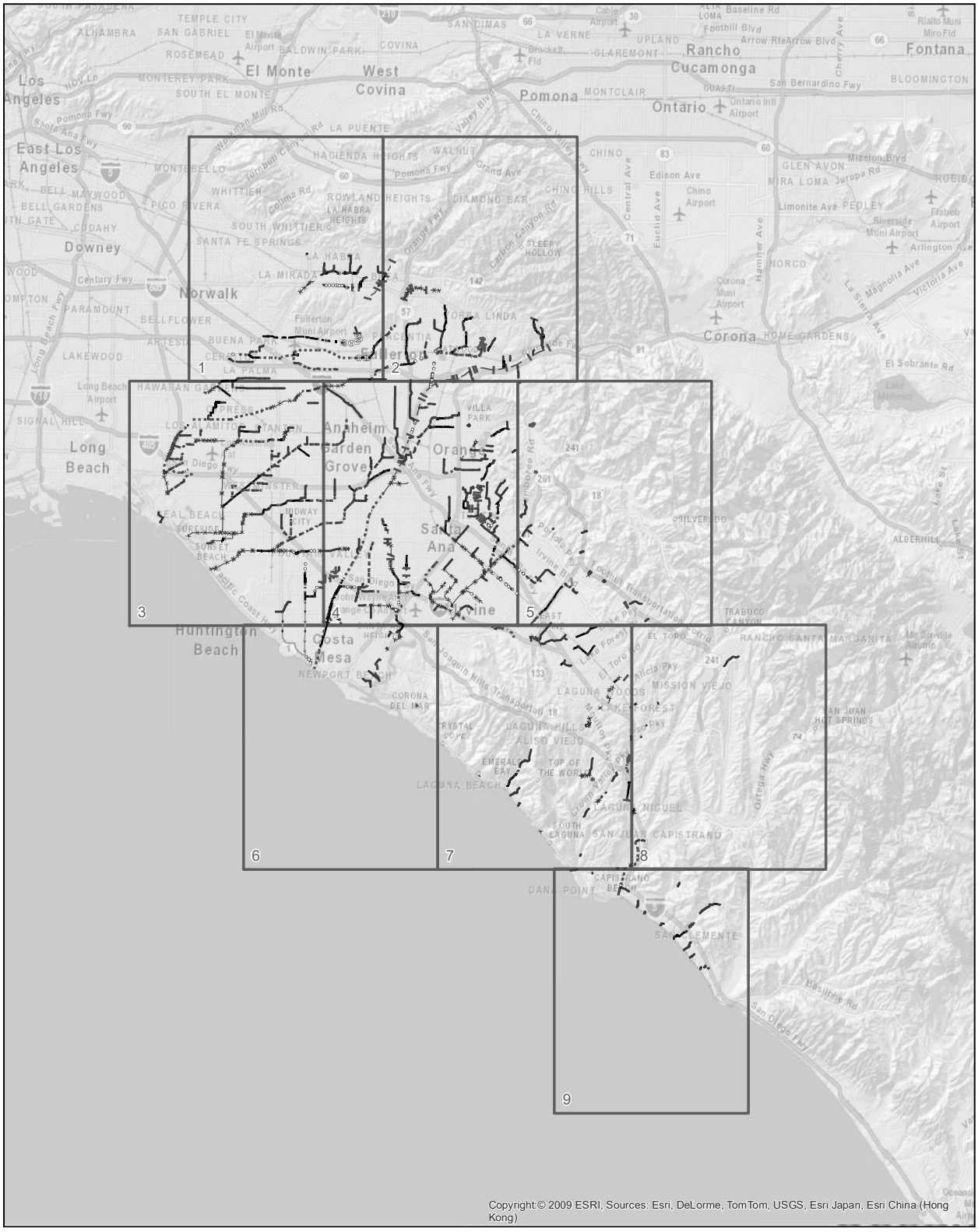
not to scale

6/23/10 JN 10-105607-16737 MAS

COUNTY OF ORANGE • LONG-TERM MAINTENANCE PERMITTING PROGRAM

Site Vicinity

Exhibit 2



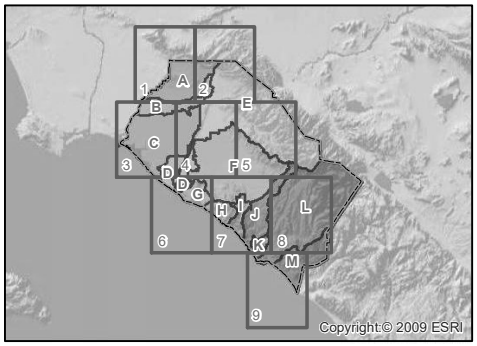
Legend

Channel Type, Channel Slope Type, Channel Bottom Type

- Concrete Box/Pipe, Concrete, Concrete
- Metal Sheet Channel, Concrete, Concrete
- Metal/Steel Pipe, Concrete, Concrete
- Rectangle, Concrete, Concrete
- Rectangle, Concrete, Earthen
- Trapezoidal, Concrete, Concrete
- Trapezoidal, Concrete, Earthen
- Trapezoidal, Earthen, Earthen
- Trapezoidal, Riprap, Concrete
- Trapezoidal, Riprap, Earthen
- Dams/Reservoirs/Basins

Watershed

A - Coyote Creek
B - Carbon Creek
C - Westminister
D - Talbert
E - Santa Ana River
F - San Diego Creek
G - Newport Bay
H - Newport Coast
I - Laguna Canyon
J - Aliso Creek
K - Salt Creek
L - San Juan Creek
M -San Clemente



0 2.5 5 Miles

M:\mdata\10105607\006gis\RGP_mapbookbase11x17_overall.mxd 1/3/12 JM

COUNTY OF ORANGE LONG-TERM MAINTENANCE PERMITTING PROGRAM

Project Site

OVERALL MAP

Exhibit 3

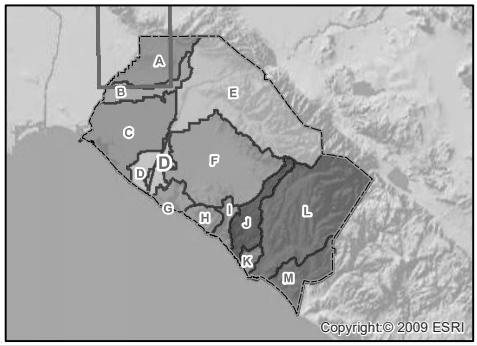
Legend

Channel Type, Channel Slope Type, Channel Bottom Type

- Concrete Box/Pipe, Concrete, Concrete
- Metal Sheet Channel, Concrete, Concrete
- Metal/Steel Pipe, Concrete, Concrete
- Rectangle, Concrete, Concrete
- Rectangle, Concrete, Earthen
- Trapezoidal, Concrete, Concrete
- Trapezoidal, Concrete, Earthen
- Trapezoidal, Earthen, Earthen
- Trapezoidal, Riprap, Concrete
- Trapezoidal, Riprap, Earthen
- Dams/Reservoirs/Basins

WATERSHED

A - Coyote Creek
B - Carbon Creek
C - Westminster
D - Talbert
E - Santa Ana River
F - San Diego Creek
G - Newport Bay
H - Newport Coast
I - Laguna Canyon
J - Aliso Creek
K - Salt Creek
L - San Juan Creek
M -San Clemente



0 0.5 1 Miles

9/4/2013 JN M:\Mdata\10105607\006-Maintenance\GIS\RGP_mapbookbase11x17_BW.mxd JMCPHERSON

COUNTY OF ORANGE LONG-TERM MAINTENANCE PERMITTING PROGRAM

Project Site - Quad 1

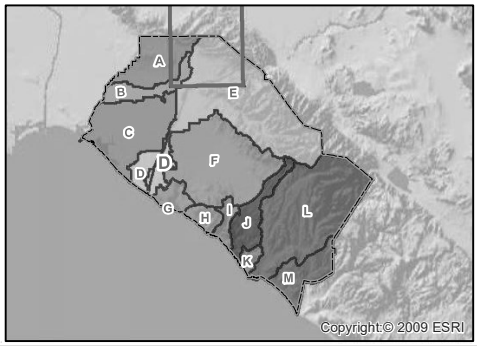
Legend

Channel Type, Channel Slope Type, Channel Bottom Type

- Concrete Box/Pipe, Concrete, Concrete
- Metal Sheet Channel, Concrete, Concrete
- Metal/Steel Pipe, Concrete, Concrete
- Rectangle, Concrete, Concrete
- Rectangle, Concrete, Earthen
- Trapezoidal, Concrete, Concrete
- Trapezoidal, Concrete, Earthen
- Trapezoidal, Earthen, Earthen
- Trapezoidal, Riprap, Concrete
- Trapezoidal, Riprap, Earthen
- Dams/Reservoirs/Basins

WATERSHED

A - Coyote Creek
B - Carbon Creek
C - Westminster
D - Talbert
E - Santa Ana River
F - San Diego Creek
G - Newport Bay
H - Newport Coast
I - Laguna Canyon
J - Aliso Creek
K - Salt Creek
L - San Juan Creek
M -San Clemente



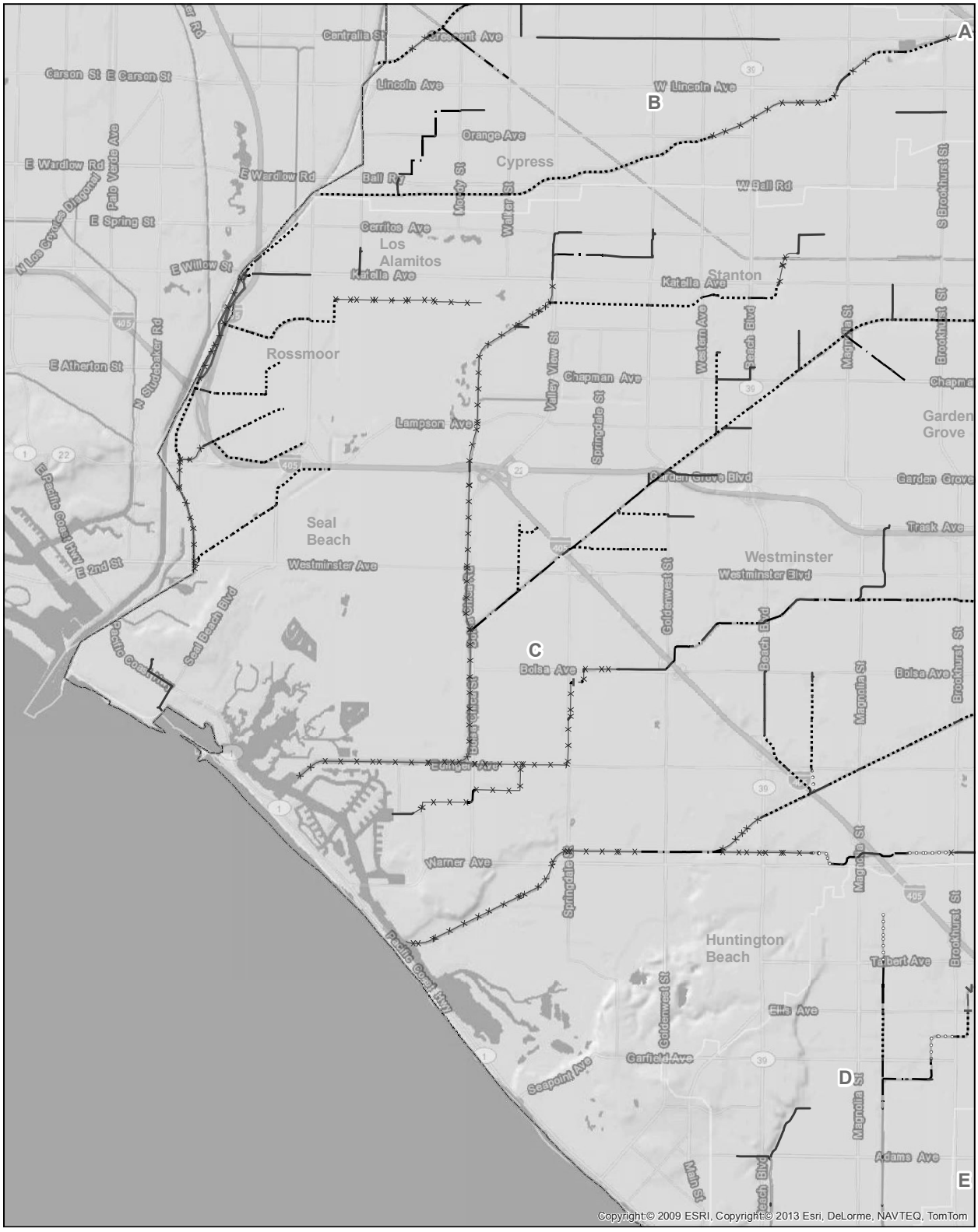
RBF CONSULTING GIS

0 0.5 1 Miles

9/4/2013 JN M:\Mdata\10105607\006-Maintenance\GIS\RGP_mapbookbase11x17_BW.mxd JMCPHERSON

COUNTY OF ORANGE LONG-TERM MAINTENANCE PERMITTING PROGRAM

Project Site - Quad 2



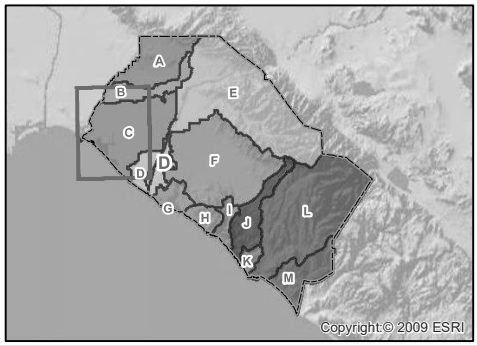
Legend

Channel Type, Channel Slope Type, Channel Bottom Type

- Concrete Box/Pipe, Concrete, Concrete
- Metal Sheet Channel, Concrete, Concrete
- Metal/Steel Pipe, Concrete, Concrete
- Rectangle, Concrete, Concrete
- Rectangle, Concrete, Earthen
- Trapezoidal, Concrete, Concrete
- Trapezoidal, Concrete, Earthen
- Trapezoidal, Earthen, Earthen
- Trapezoidal, Riprap, Concrete
- Trapezoidal, Riprap, Earthen
- Dams/Reservoirs/Basins

WATERSHED

A - Coyote Creek
B - Carbon Creek
C - Westminster
D - Talbert
E - Santa Ana River
F - San Diego Creek
G - Newport Bay
H - Newport Coast
I - Laguna Canyon
J - Aliso Creek
K - Salt Creek
L - San Juan Creek
M -San Clemente



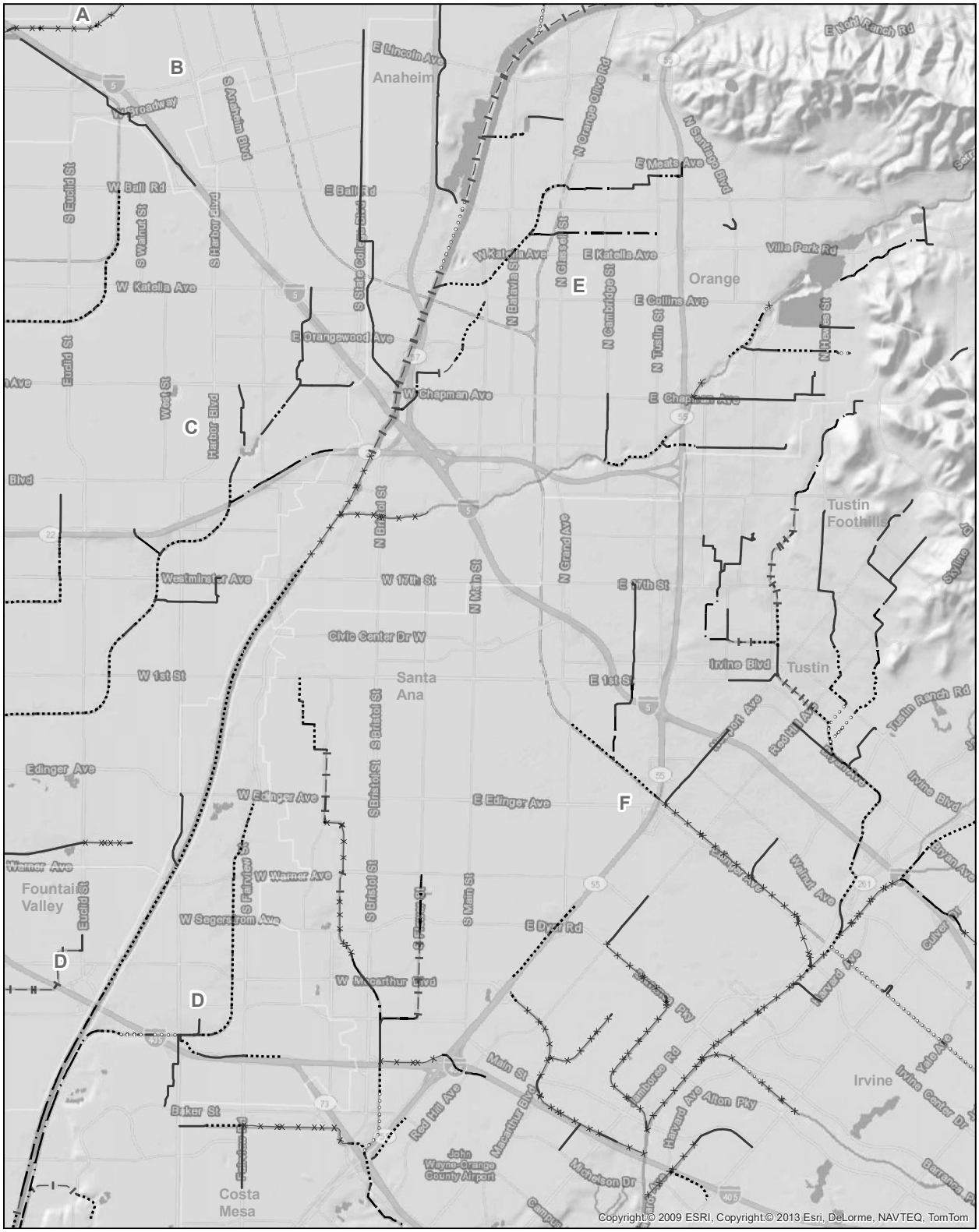
0 0.5 1 Miles

9/4/2013 JN M:\Mdata\10105607\006-Maintenance\GIS\RGP_mapbookbase11x17_BW.mxd JMCPHERSON

COUNTY OF ORANGE LONG-TERM MAINTENANCE PERMITTING PROGRAM

Project Site - Quad 3

Exhibit 6



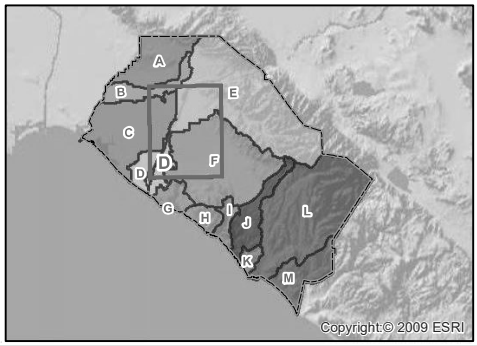
Legend

Channel Type, Channel Slope Type, Channel Bottom Type

- Concrete Box/Pipe, Concrete, Concrete
- Metal Sheet Channel, Concrete, Concrete
- Metal/Steel Pipe, Concrete, Concrete
- Rectangle, Concrete, Concrete
- Rectangle, Concrete, Earthen
- Trapezoidal, Concrete, Concrete
- Trapezoidal, Concrete, Earthen
- Trapezoidal, Earthen, Earthen
- Trapezoidal, Riprap, Concrete
- Trapezoidal, Riprap, Earthen
- Dams/Reservoirs/Basins

WATERSHED

A - Coyote Creek
B - Carbon Creek
C - Westminster
D - Talbert
E - Santa Ana River
F - San Diego Creek
G - Newport Bay
H - Newport Coast
I - Laguna Canyon
J - Aliso Creek
K - Salt Creek
L - San Juan Creek
M -San Clemente



0 0.5 1 Miles

9/4/2013 JN M:\Mdata\10105607\006-Maintenance\GIS\RGP_mapbookbase11x17_BW.mxd JMCPHERSON

COUNTY OF ORANGE LONG-TERM MAINTENANCE PERMITTING PROGRAM

Project Site - Quad 4

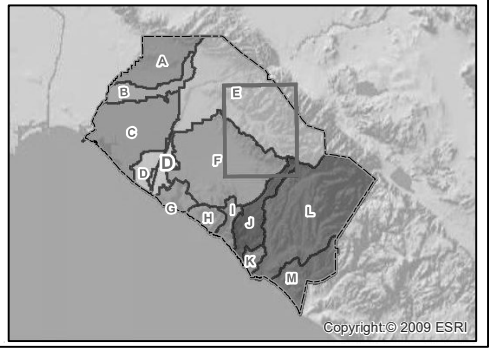
Legend

Channel Type, Channel Slope Type, Channel Bottom Type

- Concrete Box/Pipe, Concrete, Concrete
- Metal Sheet Channel, Concrete, Concrete
- Metal/Steel Pipe, Concrete, Concrete
- Rectangle, Concrete, Concrete
- Rectangle, Concrete, Earthen
- Trapezoidal, Concrete, Concrete
- Trapezoidal, Concrete, Earthen
- Trapezoidal, Earthen, Earthen
- Trapezoidal, Riprap, Concrete
- Trapezoidal, Riprap, Earthen
- Dams/Reservoirs/Basins

WATERSHED

A - Coyote Creek
B - Carbon Creek
C - Westminster
D - Talbert
E - Santa Ana River
F - San Diego Creek
G - Newport Bay
H - Newport Coast
I - Laguna Canyon
J - Aliso Creek
K - Salt Creek
L - San Juan Creek
M -San Clemente



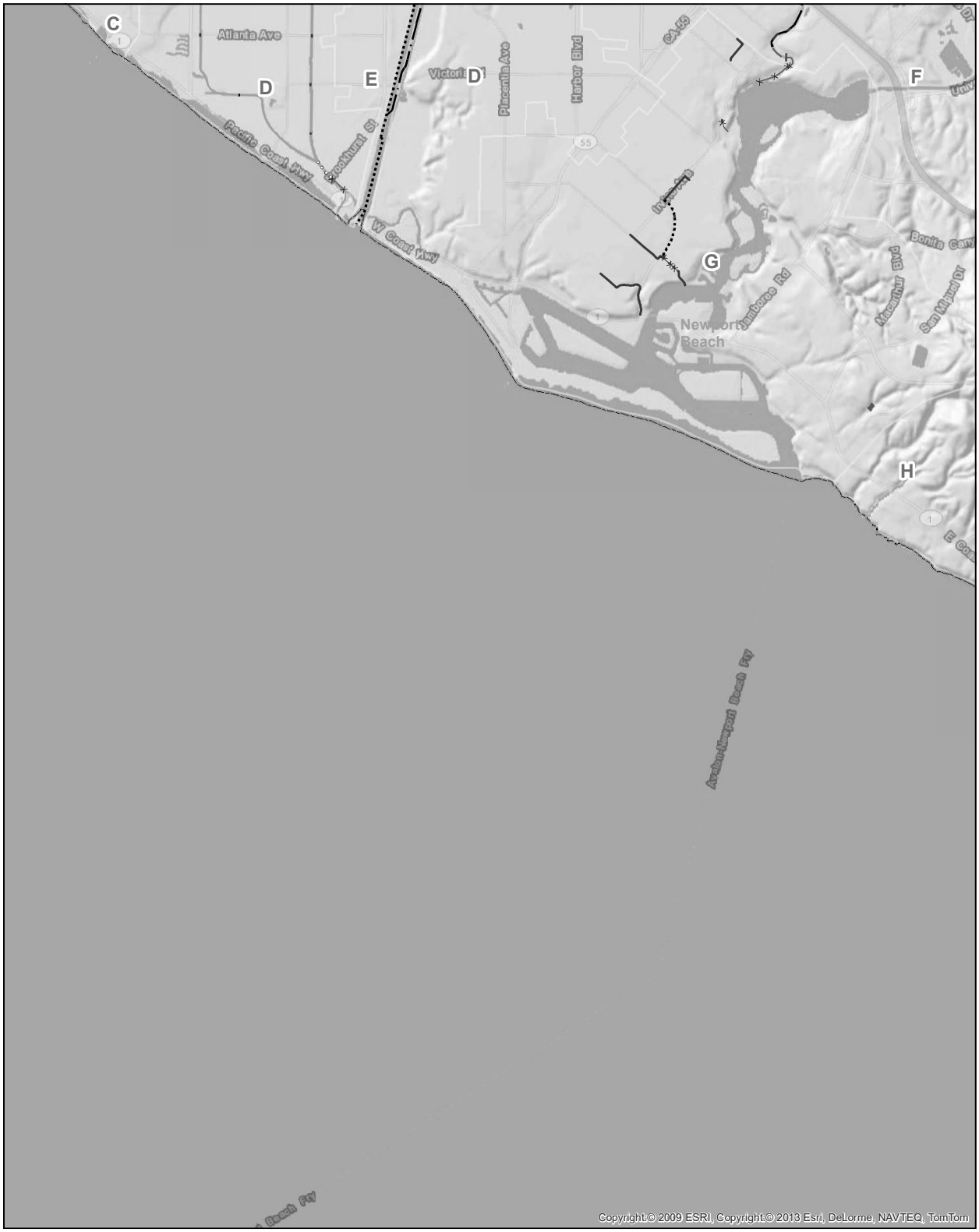
RBF CONSULTING GIS

0 0.5 1 Miles

9/4/2013 JN M:\Mdata\10105607\006-Maintenance\GIS\RGP_mapbookbase11x17_BW.mxd JMCPHERSON

COUNTY OF ORANGE LONG-TERM MAINTENANCE PERMITTING PROGRAM

Project Site - Quad 5



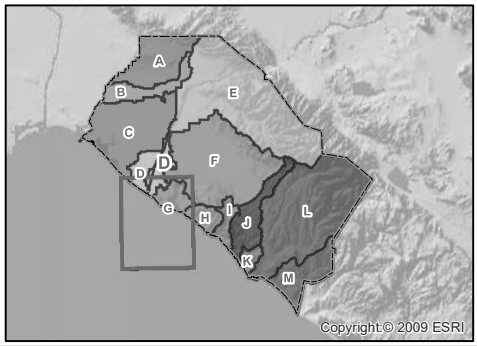
Legend

Channel Type, Channel Slope Type, Channel Bottom Type

- Concrete Box/Pipe, Concrete, Concrete
- Metal Sheet Channel, Concrete, Concrete
- Metal/Steel Pipe, Concrete, Concrete
- Rectangle, Concrete, Concrete
- Rectangle, Concrete, Earthen
- Trapezoidal, Concrete, Concrete
- Trapezoidal, Concrete, Earthen
- Trapezoidal, Earthen, Earthen
- Trapezoidal, Riprap, Concrete
- Trapezoidal, Riprap, Earthen
- Dams/Reservoirs/Basins

WATERSHED

A - Coyote Creek
B - Carbon Creek
C - Westminster
D - Talbert
E - Santa Ana River
F - San Diego Creek
G - Newport Bay
H - Newport Coast
I - Laguna Canyon
J - Aliso Creek
K - Salt Creek
L - San Juan Creek
M -San Clemente



0 0.5 1 Miles

9/4/2013 JN M:\Mdata\10105607\006-Maintenance\GIS\RGP_mapbookbase11x17_BW.mxd JMCPHERSON

COUNTY OF ORANGE LONG-TERM MAINTENANCE PERMITTING PROGRAM

Project Site - Quad 6

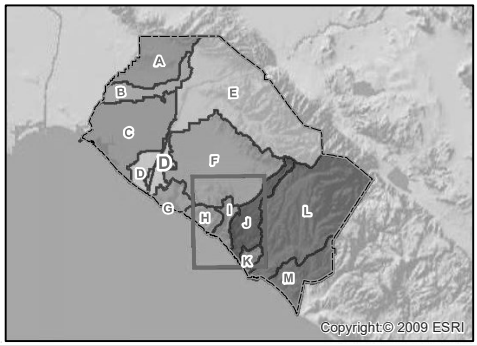
Legend

Channel Type, Channel Slope Type, Channel Bottom Type

- Concrete Box/Pipe, Concrete, Concrete
- Metal Sheet Channel, Concrete, Concrete
- Metal/Steel Pipe, Concrete, Concrete
- Rectangle, Concrete, Concrete
- Rectangle, Concrete, Earthen
- Trapezoidal, Concrete, Concrete
- Trapezoidal, Concrete, Earthen
- Trapezoidal, Earthen, Earthen
- Trapezoidal, Riprap, Concrete
- Trapezoidal, Riprap, Earthen
- Dams/Reservoirs/Basins

WATERSHED

A - Coyote Creek
B - Carbon Creek
C - Westminster
D - Talbert
E - Santa Ana River
F - San Diego Creek
G - Newport Bay
H - Newport Coast
I - Laguna Canyon
J - Aliso Creek
K - Salt Creek
L - San Juan Creek
M -San Clemente



0 0.5 1 Miles

9/4/2013 JN M:\Mdata\10105607\006-Maintenance\GIS\RGP_mapbookbase11x17_BW.mxd JMCPHERSON

COUNTY OF ORANGE LONG-TERM MAINTENANCE PERMITTING PROGRAM

Project Site - Quad 7

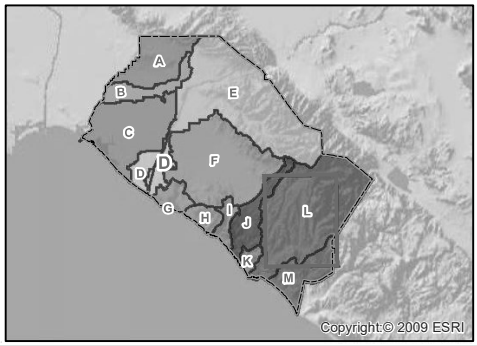
Legend

Channel Type, Channel Slope Type, Channel Bottom Type

- Concrete Box/Pipe, Concrete, Concrete
- Metal Sheet Channel, Concrete, Concrete
- Metal/Steel Pipe, Concrete, Concrete
- Rectangle, Concrete, Concrete
- Rectangle, Concrete, Earthen
- Trapezoidal, Concrete, Concrete
- Trapezoidal, Concrete, Earthen
- Trapezoidal, Earthen, Earthen
- Trapezoidal, Riprap, Concrete
- Trapezoidal, Riprap, Earthen
- Dams/Reservoirs/Basins

WATERSHED

A - Coyote Creek
B - Carbon Creek
C - Westminster
D - Talbert
E - Santa Ana River
F - San Diego Creek
G - Newport Bay
H - Newport Coast
I - Laguna Canyon
J - Aliso Creek
K - Salt Creek
L - San Juan Creek
M -San Clemente

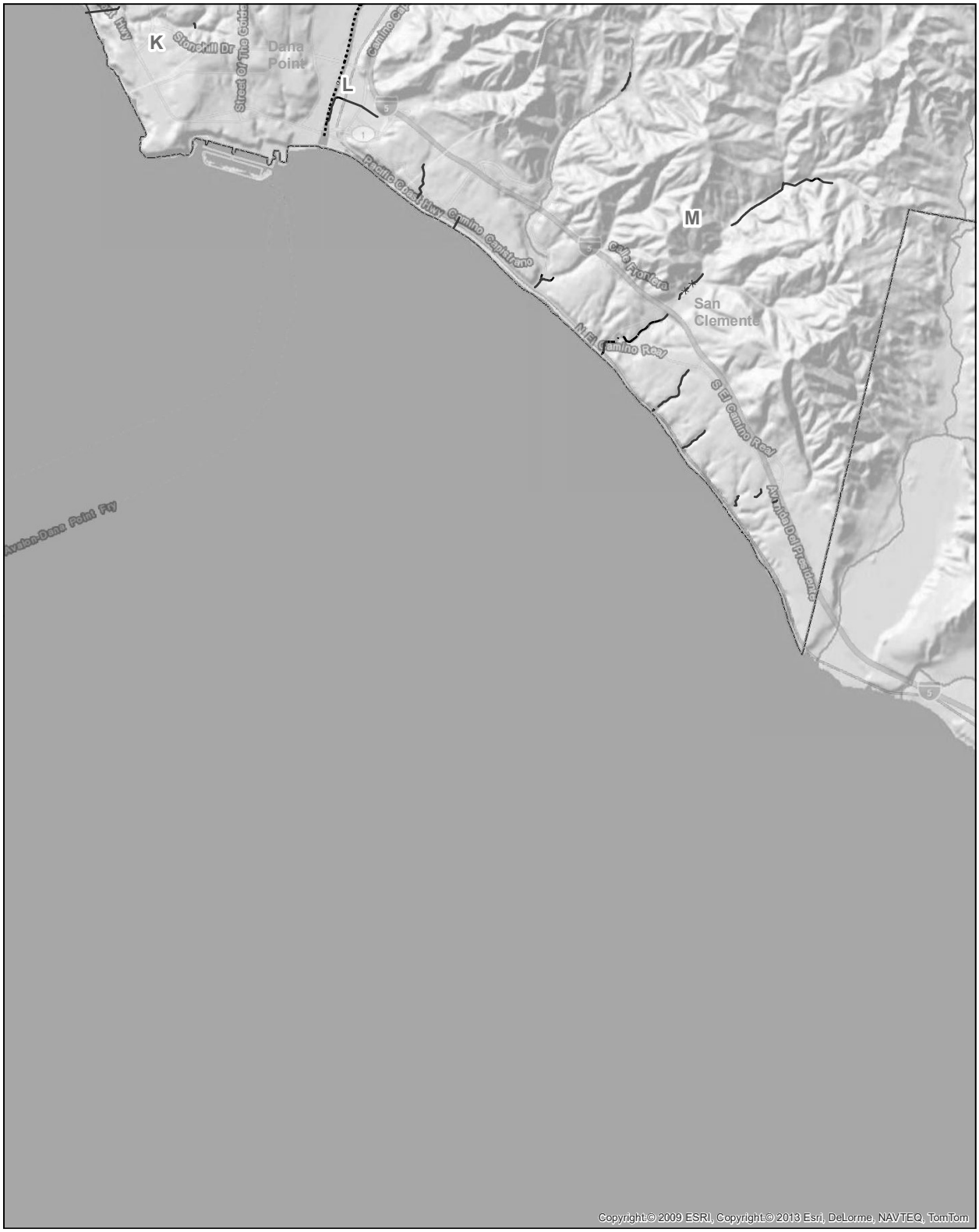


0 0.5 1 Miles

9/4/2013 JN M:\Mdata\10105607\006-Maintenance\GIS\RGP_mapbookbase11x17_BW.mxd JMCPHERSON

COUNTY OF ORANGE LONG-TERM MAINTENANCE PERMITTING PROGRAM

Project Site - Quad 8



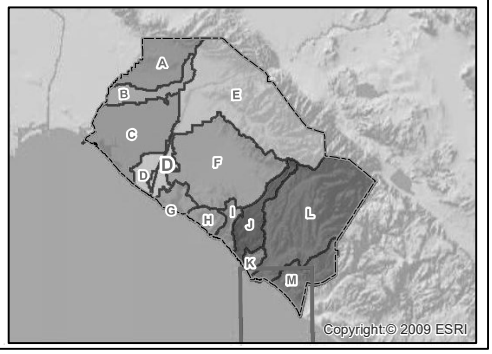
Legend

Channel Type, Channel Slope Type, Channel Bottom Type

- Concrete Box/Pipe, Concrete, Concrete
- Metal Sheet Channel, Concrete, Concrete
- Metal/Steel Pipe, Concrete, Concrete
- Rectangle, Concrete, Concrete
- Rectangle, Concrete, Earthen
- Trapezoidal, Concrete, Concrete
- Trapezoidal, Concrete, Earthen
- Trapezoidal, Earthen, Earthen
- Trapezoidal, Riprap, Concrete
- Trapezoidal, Riprap, Earthen
- Dams/Reservoirs/Basins

WATERSHED

A - Coyote Creek
B - Carbon Creek
C - Westminster
D - Talbert
E - Santa Ana River
F - San Diego Creek
G - Newport Bay
H - Newport Coast
I - Laguna Canyon
J - Aliso Creek
K - Salt Creek
L - San Juan Creek
M -San Clemente



0 0.5 1 Miles

9/4/2013 JN M:\Mdata\10105607\006-Maintenance\GIS\RGP_mapbookbase11x17_BW.mxd JMCPHERSON

COUNTY OF ORANGE LONG-TERM MAINTENANCE PERMITTING PROGRAM

Project Site - Quad 9

Enclosure 2

Table 1: OCPW Facilities Proposed for Inclusion in RGP

County Facility Name	Drainage Name	Watershed
A01	Coyote Creek Channel	A-Coyote Creek
A01P01	None	A-Coyote Creek
A01P03	Orangethorpe Storm Channel	A-Coyote Creek
A01P09	None	A-Coyote Creek
A01P13	East La Habra Storm Channel	A-Coyote Creek
A01P20	Whittier Storm Drain	A-Coyote Creek
A01P22	None	A-Coyote Creek
A02	Brea Creek Channel	A-Coyote Creek
A03	Fullerton Creek Channel	A-Coyote Creek
A03S01	Buena Park Storm Channel	A-Coyote Creek
A03S02	Houston Storm Channel	A-Coyote Creek
A03S03	Ash Storm Channel	A-Coyote Creek
A04	Brea Canyon Channel	A-Coyote Creek
A04S01	None	A-Coyote Creek
A06	Loftus Diversion Channel	A-Coyote Creek
A07	Imperial Channel	A-Coyote Creek
A08	La Mirada Creek Channel	A-Coyote Creek
B00P01	Carbon Creek Channel	B-Carbon Creek
B01	Carbon Creek Channel	B-Carbon Creek
B01B05	Cypress Retarding Basin	B-Carbon Creek
B01P01	West Anaheim Storm Drain	B-Carbon Creek
B01P08	None	B-Carbon Creek
B01P17	None	B-Carbon Creek
B01P23	None	B-Carbon Creek
B01P25	None	B-Carbon Creek
B01S01	Cypress Storm Channel	B-Carbon Creek
B01S03	Placentia Storm Channel	B-Carbon Creek
B01S23	None	B-Carbon Creek
B02	Moody Creek Channel	B-Carbon Creek
B02P03	Crescent Storm Drain	B-Carbon Creek
B02P04	None	B-Carbon Creek
B02S01	None	B-Carbon Creek
B02S02	Dairyland Storm Channel	B-Carbon Creek
C00P02	None	C-Westminster
C00PS1	Seal Beach Pump Station	C-Westminster
C01	Los Alamitos Channel	C-Westminster
C01P02	None	C-Westminster
C01S01	Kempton Storm Channel	C-Westminster
C01S02	Rossmoor Storm Channel	C-Westminster
C01S03	Montecito Storm Channel	C-Westminster
C01S04	Bixby Storm Channel	C-Westminster
C01S05	Katella Storm Channel	C-Westminster
C01S06	Federal Storm Channel	C-Westminster
C02	Bolsa Chica Channel	C-Westminster
C02P01	None	C-Westminster
C02P03	None	C-Westminster

C02P04	None	C-Westminster
C02P08	None	C-Westminster
C02S01	Stanton Storm Channel	C-Westminster
C02S02	Garden Grove Storm Channel	C-Westminster
C02S03	Jonathan Storm Channel	C-Westminster
C03	Anaheim-Barber City Channel	C-Westminster
C03P01	None	C-Westminster
C03P02	None	C-Westminster
C03P04	None	C-Westminster
C03P05	None	C-Westminster
C03P08	None	C-Westminster
C03P17	None	C-Westminster
C03S01	Milan Storm Channel	C-Westminster
C03S02	Humboldt Storm Channel	C-Westminster
C03S03	Bestel Storm Channel	C-Westminster
C03S04	Rosalia Storm Channel	C-Westminster
C03S05	None	C-Westminster
C04	Westminster Channel	C-Westminster
C04P12	None	C-Westminster
C04S02	None	C-Westminster
C05	East Garden Grove-Wintersburg Channel	C-Westminster
C05P06	None	C-Westminster
C05P07	Van Buren Storm Drain	C-Westminster
C05P12	West Santa Ana Storm Drain	C-Westminster
C05P19	None	C-Westminster
C05P21	None	C-Westminster
C05P22	None	C-Westminster
C05P23	None	C-Westminster
C05P24	Worthy Storm Drain	C-Westminster
C05P27	Newland Storm Drain	C-Westminster
C05P32	Bolsa-Jefferson Storm Drain	C-Westminster
C05P34	Purdy Storm Drain	C-Westminster
C05S01	Newland Street Storm Channel	C-Westminster
C05S05	Edinger Storm Channel	C-Westminster
C05S10	Newhope Storm Channel	C-Westminster
C05S11	Lewis Storm Channel	C-Westminster
C06	Ocean View Channel	C-Westminster
C06P05	Newhope Storm Drain	C-Westminster
C07	Sunset Channel	C-Westminster
D01	Huntington Beach Channel	D-Talbert
D01P05	None	D-Talbert
D01P06	None	D-Talbert
D02	Talbert Channel	D-Talbert
D03	Greenville-Banning Channel	D-Talbert
D03P02	None	D-Talbert
D03P08	None	D-Talbert
D03S03	Gisler Storm Channel	D-Talbert
D04	Fairview Channel	D-Talbert
D05	Fountain Valley Channel	D-Talbert

E01	Santa Ana River Channel	E-Santa Ana River
E01P02	None	E-Santa Ana River
E01P14	None	E-Santa Ana River
E01P63	None	E-Santa Ana River
E01P79	Southpark Storm Drain	E-Santa Ana River
E01S01	East Richfield Storm Channel	E-Santa Ana River
E01S02	Chantilly Storm Channel	E-Santa Ana River
E01S04	Deerfield Storm Channel	E-Santa Ana River
E01S09	Walnut Storm Channel	E-Santa Ana River
E02	Carbon Canyon Diversion Channel	E-Santa Ana River
E03	Carbon Canyon Channel	E-Santa Ana River
E03P01	None	E-Santa Ana River
E03S01	None	E-Santa Ana River
E04	Atwood Channel	E-Santa Ana River
E04P01	None	E-Santa Ana River
E05	Richfield Channel	E-Santa Ana River
E06	Esperanza Channel	E-Santa Ana River
E06S01	Blue Mud Storm Channel	E-Santa Ana River
E07	Collins Channel	E-Santa Ana River
E07S01	Marlboro Storm Channel	E-Santa Ana River
E07S02	None	E-Santa Ana River
E07S03	Buckeye Storm Channel	E-Santa Ana River
E08	Santiago Creek Channel	E-Santa Ana River
E08P01	La Veta Storm Drain	E-Santa Ana River
E08P02	Villa Park Storm Drain	E-Santa Ana River
E08P03	Center Street Storm Drain	E-Santa Ana River
E08P04	Mesa Drive Storm Drain	E-Santa Ana River
E08P06	None	E-Santa Ana River
E08P07	None	E-Santa Ana River
E08P12	None	E-Santa Ana River
E08P14	None	E-Santa Ana River
E08S01	None	E-Santa Ana River
E08S02	Alameda Storm Drain	E-Santa Ana River
E08S06	Handy Creek Channel	E-Santa Ana River
E10	Fletcher Channel	E-Santa Ana River
E10P01	None	E-Santa Ana River
E11	Bitterbush Channel	E-Santa Ana River
E12	None	E-Santa Ana River
E12P01	None	E-Santa Ana River
F01	Santa Ana-Delhi Channel	F-San Diego Creek
F01S01	Airport Storm Channel	F-San Diego Creek
F01S03	Baker Storm Channel	F-San Diego Creek
F02	Santa Ana Gardens Channel	F-San Diego Creek
F03	Paularino Channel	F-San Diego Creek
F03P02	None	F-San Diego Creek
F04P04	Coyote Canyon Storm Drain	F-San Diego Creek
F05	San Diego Creek Channel	F-San Diego Creek
F05S03	None	F-San Diego Creek
F06	Peters Canyon Channel	F-San Diego Creek

F06S02	None	F-San Diego Creek
F06S03	Como Storm Channel	F-San Diego Creek
F07	Modena-Irvine Channel	F-San Diego Creek
F07P01	None	F-San Diego Creek
F07P04	Tustin Heights Storm Drain	F-San Diego Creek
F07P06	Hewes Storm Drain	F-San Diego Creek
F07P08	None	F-San Diego Creek
F07P09	Vanderlip Storm Drain	F-San Diego Creek
F07P14	Crawford Canyon Storm Drain	F-San Diego Creek
F07P19	None	F-San Diego Creek
F07P23	None	F-San Diego Creek
F07P30	None	F-San Diego Creek
F07S01	La Colina-Red Hill Channel	F-San Diego Creek
F07S05	None	F-San Diego Creek
F07SIP12	Warren Avenue Storm Drain	F-San Diego Creek
F08	Lane Channel	F-San Diego Creek
F08P07	None	F-San Diego Creek
F08P20	None	F-San Diego Creek
F08S01	Armstrong Channel	F-San Diego Creek
F09	Barranca Channel	F-San Diego Creek
F09P15	None	F-San Diego Creek
F10	Santa Ana-Santa Fe Channel	F-San Diego Creek
F10P02	None	F-San Diego Creek
F10P07	El Camino Real Storm Drain	F-San Diego Creek
F10S01	None	F-San Diego Creek
F11	Southwest-Tustin Channel	F-San Diego Creek
F12	North Tustin Channel	F-San Diego Creek
F12P02	None	F-San Diego Creek
F12P03	None	F-San Diego Creek
F12P04	Yorba Street Storm Drain	F-San Diego Creek
F12P11	Prospect Storm Drain	F-San Diego Creek
F13	Red Hill Channel	F-San Diego Creek
F13P01	None	F-San Diego Creek
F13P05	Rainbow Storm Channel	F-San Diego Creek
F14	San Joaquin Channel	F-San Diego Creek
F14S01	Culver Storm Channel	F-San Diego Creek
F15	Sand Canyon Channel	F-San Diego Creek
F16	Marshburn Channel	F-San Diego Creek
F16B01	Marshburn Retarding Basin	F-San Diego Creek
F17	Bee Canyon Channel	F-San Diego Creek
F18	Agua Chinon Wash Channel	F-San Diego Creek
F19	Serrano Creek Channel	F-San Diego Creek
F20	Borrego Canyon Channel	F-San Diego Creek
F22	None	F-San Diego Creek
F23	Canada Channel	F-San Diego Creek
F23S02	Veeh Storm Channel	F-San Diego Creek
F24	Bommer Canyon Channel	F-San Diego Creek
F25	Central Irvine Channel	F-San Diego Creek
F25S05	None	F-San Diego Creek

F26	Rattlesnake Canyon Channel	F-San Diego Creek
F26B02	Orchard Estates Basin	F-San Diego Creek
F26P01	East Foothill Channel	F-San Diego Creek
F27	Hicks Canyon Channel	F-San Diego Creek
F27B01	Hicks Canyon Retarding Basin	F-San Diego Creek
F27P01	None	F-San Diego Creek
G00P01	None	G-Newport Bay
G00P07	Bayside Storm Drain	G-Newport Bay
G02	East Costa Mesa Channel	G-Newport Bay
G02P01	None	G-Newport Bay
G02P02	None	G-Newport Bay
G03	Santa Isabel Channel	G-Newport Bay
G03P01	None	G-Newport Bay
G03P02	22nd Street Storm Drain	G-Newport Bay
H05	None	H-Newport Coast
I00P02	None	I-Laguna Canyon
I00P03	Bluebird Storm Channel	I-Laguna Canyon
I02	Laguna Canyon Channel	I-Laguna Canyon
I02P12	None	I-Laguna Canyon
J01	Aliso Creek Channel	J-Aliso Creek
J03	Sulphur Creek Channel	J-Aliso Creek
J03P01	Niguel Storm Drain	J-Aliso Creek
J04	Narco Channel	J-Aliso Creek
J04P02	None	J-Aliso Creek
J04P03	None	J-Aliso Creek
J04P04	None	J-Aliso Creek
J05	Aliso Hills Channel	J-Aliso Creek
J06	Dairy Fork Channel	J-Aliso Creek
J07	English Canyon Channel	J-Aliso Creek
K01	Salt Creek Channel	K-Salt Creek
K01PS1	None	K-Salt Creek
L01	San Juan Creek Channel	L-San Juan Creek
L01S01	Del Obispo Storm Channel	L-San Juan Creek
L01S02	Capistrano Beach Storm Channel	L-San Juan Creek
L01S06	Alipaz Storm Channel	L-San Juan Creek
L02	Trabuco Creek Channel	L-San Juan Creek
L02P02	Casitas Capistrano Storm Drain	L-San Juan Creek
L03	Oso Creek Channel	L-San Juan Creek
L03P18	Oso Diversion Storm Drain	L-San Juan Creek
L03P21	None	L-San Juan Creek
L04	La Paz Channel	L-San Juan Creek
L04P03	None	L-San Juan Creek
L05P01	None	L-San Juan Creek
L11	Tijeras	L-San Juan Creek
M00P01	Capistrano Palisades Storm Drain	M-San Clemente
M00P02	Trafalgar Storm Drain	M-San Clemente
M00S01	None	M-San Clemente
M00S04	Los Lobos Storm Channel	M-San Clemente
M00S05	Riviera Storm Channel	M-San Clemente

M00S07	Marquita Storm Channel	M-San Clemente
M00S08	None	M-San Clemente
M01	Debris Barrier near Grande Vista	M-San Clemente
M01S01	Casadita Storm Channel	M-San Clemente
M02	Segunda Deshecha Cañada Channel	M-San Clemente
M02S02	None	M-San Clemente
County Facility Name	**Dam/Basin/Reservoir Name**	**Watershed**
C01B02	Rossmoor Retarding Basin	C-Westminster
E04D01	Yorba Linda Reservoir	E-Santa Ana River
E08D01	Villa Park Dam	E-Santa Ana River
F06B03	Peters Canyon Dam	F-San Diego Creek
G00D02	Harbor View Dam	G-Newport Bay
J03D0	Sulphur Creek Dam	J-Aliso Creek
L03B02	Galivan Basin	L-San Juan Creek

Table 2: List of County-Owned Bridges Proposed for Inclusion in RGP

Structure (Street or Railroad Name)	Intersected Facility	Characteristics of Facility Under Bridge
Dale Street	Anaheim-Barber Channel	U-shaped, entirely concrete
Edinger Avenue	Bolsa-Chica Channel	Trapezoid, earthen bottom/rip-rap sides
Brea Boulevard	Brea Canyon Channel	Natural, entirely earthen
Brea Boulevard	Brea Canyon Channel	U-shaped, entirely concrete
Brea Boulevard	Brea Canyon Channel	U-shaped, entirely concrete
Tonner Canyon Road	Brea Canyon Channel	Trapezoid, entirely concrete
Island Way	Dana Point Harbor	Trapezoid, earthen bottom/concrete sides
Amapola Avenue	Handy Creek	Natural, earthen bottom/masonry sides
Meads Avenue	Handy Creek	Natural, entirely earthen
Orange Park Boulevard	Handy Creek	U-shaped, entirely concrete under bridge
Silverado Canyon Road	Ladd Canyon	Natural, entirely earthen
Santiago Canyon Road	Limestone Canyon	U-shaped, entirely concrete under bridge
Riverford Road	Redhill Channel	U-shaped, entirely concrete
Bent Twig Lane	Redhill Channel	U-shaped, entirely concrete
Antonio Parkway	San Juan Creek	Natural, entirely earthen
Mason Park	Sand Canyon Wash	U-shaped, entirely concrete
Santa Ana Avenue	Santa Ana-Delhi Channel	Trapezoid, entirely concrete
Santiago Canyon Road	Santiago Creek	Natural, entirely earthen
Santiago Canyon Road	Santiago Creek	Natural, entirely earthen
Modjeska Canyon Road	Santiago Creek	Natural, entirely earthen
Modjeska Canyon Road	Santiago Creek	Natural, entirely earthen
Olive Hill Road	Santiago Creek	Natural, entirely earthen
Villa Park Road	Santiago Creek	Steel pipe culvert
Hicks Canyon Haul Road	Santiago Creek	Natural, entirely earthen
Lincoln Avenue	Santa Ana River	Trapezoid, earthen bottom/rip-rap sides
Talbert Avenue-MacArthur Boulevard	Santa Ana River	Trapezoid, entirely concrete
Hamilton Avenue-Victoria Street	Santa Ana River	Trapezoid, earthen bottom/rip-rap sides
Kraemer Boulevard-Glassell Street	Santa Ana River	Trapezoid, earthen bottom/rip-rap sides
Warner Avenue	Santa Ana River	Trapezoid, entirely concrete
Edinger Avenue	Santa Ana River	Trapezoid, entirely concrete
Adams Avenue	Santa Ana River	Trapezoid, earthen bottom/concrete sides
Slater Avenue-Segerstrom Avenue	Santa Ana River	Trapezoid, entirely concrete
Harbor Boulevard	Santa Ana River	Trapezoid, entirely concrete
Silverado Canyon Road	Silverado Creek	Natural, rocky bottom/masonry sides
Kitterman Drive	Silverado Creek	Natural, rip-rap bottom/masonry sides
Silverado Canyon Road	Silverado Creek	Natural, rocky bottom/concrete sides
Silverado Canyon Road	Silverado Creek	Natural, rocky bottom/earthen sides
Silverado Canyon Road	Silverado Creek	Natural, rocky bottom/earthen sides
Silverado Canyon Road	Silverado Creek	Trapezoid, rocky bottom/concrete sides
Silverado Canyon Road	Silverado Creek	Natural, rocky bottom/masonry sides
Silverado Canyon Road	Silverado Creek	Natural, rocky bottom/masonry sides
Belha Way	Silverado Creek	Trapezoid, entirely concrete
Thisa Way	Silverado Creek	U-shaped, entirely concrete
Sycamore Drive	Silverado Creek	Natural, rip-rap bottom/masonry sides
Broadway	Sunset Channel	U-shaped, earthen bottom/sheet pile sides
Trabuco Canyon Road	Trabuco Creek	U-shaped, entirely concrete
Oso Parkway	Trabuco Creek	Natural, entirely earthen
Crown Valley Parkway	Trabuco Creek	Natural, entirely earthen
Antonio Parkway	Wildlife Corridor	Natural gulley under bridge
Santiago Canyon Road	Williams Creek	Natural, entirely earthen

Enclosure 3

Extent of Tidal Influence in Facilities Proposed for Inclusion in RGP

County Facility Name	Facility Description	Extent of Tidal Influence*	Soil Survey	Substrate Type	Habitat Type
C01	Earth Trapezoidal Channel	extends to State Route 22	BOLSA SILT LOAM, DRAINED; BOLSA SILTY CLAY LOAM, DRAINED	silt loam	open water, bare ground, freshwater marsh
C01S06	Earth Trapezoidal Channel, Underground Conduit (Box/Pipe), Concrete-Lined Trapezoidal Channel	extends to Alderwood Lane	BOLSA SILTY CLAY LOAM; DRAINED	silt loam	open water, bare ground
C02	Earth Trapezoidal Channel	extends to McFadden Avenue	BOLSA SILT LOAM, DRAINED; WATER	silty clay, silty clay loam	open water, saltwater marsh
C04	Earth Trapezoidal Channel	extends to about 800 feet upstream of Bolsa Chica Street	BOLSA SILT LOAM, DRAINED; WATER; BOLSA SILTY CLAY LOAM, DRAINED	silty clay	open water, bare ground
C05	Earth Trapezoidal Channel, Concrete-Lined Rectangle Channel	extends to Diane Lane	TIDAL FLATS; WATER; THAPTO-HISTIC FLUVAQUENTS; BOLSA SILTY CLAY LOAM; BOLSA SILTY CLAY LOAM, DRAINED	silty clay loam	open water, patches of freshwater marsh
C07	Underground Conduit	extends to Saybrook Lane	BEACHES	Not Accessible	None
D01	Concrete Sides/Soft Bottom Rectangle Channel, RipRap Rectangle Channel with Bridge, Underground Conduit, Earth/RipRap Rectangle Channel with Bridge, Earth Irregular Trapezoidal Channel, Natural Watercourse	extends to Adams Avenue Pump Station	TIDAL FLATS; CHINO SILTY CLAY LOAM; BOLSA SILT LOAM, DRAINED; BOLSA SILT LOAM	silty clay loam	open water, eelgrass, saltwater marsh
D02	Concrete-Lined Rectangle Channel, Concrete Sides/Soft Bottom Rectangle Channel, Underground Conduit	extends between Adams Avenue and Yorktown Avenue	TIDAL FLATS; BOLSA SILT LOAM, DRAINED; HUENEME FINE SANDY LOAM, DRAINED;	Not Accessible	open water, bare gorund, eelgrass
E01	Concrete Lined Rectangle Channel, RipRap Trapezoidal Channel	extends up to Adams Avenue	RIVERWASH	Sand, silt loam	bare gorund, saltwater marsh, open water
D03	Concrete Lined Rectangle Channel	extends up to Adams Avenue	METZ LOAMY SAND, MODERATELY FINE SUBSTRATUM; HUENEME FINE SANDY LOAM, DRAINED	Not Accessible	open water
D04	Earth Trapezoidal Channel	extends to Placentia Ave	METZ LOAMY SAND, MODERATELY FINE SUBSTRATUM; HUENEME FINE SANDY LOAM, DRAINED	sand, cobble on channel bars	bare ground, patches of freshwater marsh
F01	Earth Channel, Concrete-Lined Trapezoidal Channel, Concrete-Lined Trapezoidal Channel	extends to Mesa Drive	CIENEBA SANDY LOAM, 30 TO 75 PERCENT SLOPES, ERODED; MYFORD SANDY LOAM, 9 TO 15 PERCENT SLOPES; MYFORD SANDY LOAM, 2 TO 9 PERCENT SLOPES; WATER	sandy loam	open water, bare ground, saltwater marsh
J01	Natural Watercourse	extends to Hwy-1	RIVERWASH; TIDAL FLATS; BEACHES;	sand	open water
L01	Concrete sides/soft bottom Trapezoidal Channel	extends to about 600 feet upstream of Camino Las Ramblas	RIVERWASH	sand, cobble	open water, bare ground
L01S02	Underground Conduit	extends to about 600 feet upstream of Camino Las Ramblas	RIVERWASH	Not Accessible	None
M01	Concrete-Lined Rectangle Channel	extends to PCH	BEACHES	sand	open water
M02	Concrete-Lined Rectangle Channel, Underground Conduit	extends to Avenida Estacion	BEACHES	concrete, sand	open water

* NOTE: In locations where the County did not have tidal data avialable, RBF utilized the tides data available from the National Oceanic and Atmospheric Administration (http://tidesandcurrents.noaa.gov). The maximum extent of the high tide line over the past 10 years were used to determine the tidal influence. Data Inventory was reviewed for Los Angeles, CA (Station ID: 9410660), which is the closest station to the project sites. Based on the tidal data available, the maximum high tide line is 10.65 feet. This elevation was approximatley located within each facility on Google Earth, and that was used to determine the extend of the tidal influence. This approach was confirmed by Adam Obaza in an e-mail dated March 19, 2014.

Enclosure 4

Maintenance Framework for Implementation of the Orange County Public Works Long-Term Routine Maintenance Program

April 11, 2019

PROGRAM LOCATION

The Orange County Public Works (OCPW) Long-Term Routine Maintenance Program (Maintenance Program) is located within multiple streams in Orange County. Project sites include a wide range of stream channels that were constructed or adopted from other public and private entities. Specific sites where OCPW is responsible for stream channel and flood management basin maintenance are identified in the Facility Report table, (submitted to the resource agencies at time of application submittal and subsequent updates), which identifies stream channels and flood management basins throughout Orange County. Project sites where OCPW is responsible for maintenance also include 49 bridges that cross streams. Due to sensitive biological resources, maintenance activities at some of the sites are not authorized under the Maintenance Program and may be authorized under separate individual agreements/notifications/permits/certifications. Additional project sites may be added to the Maintenance Program as OCPW assumes responsibility for stream channel maintenance after being transferred from a private or public entity during the term of this agreement/notification/certification. Adding sites to the Maintenance Program requires a granted request to amend said agreement/notification/permit/certification.

PROGRAM DESCRIPTION

The OCPW Maintenance Program is limited to routine maintenance activities within multiple streams, beneath existing bridges crossing over streams, and within constructed flood management basins located throughout Orange County. The Maintenance Program consists of a wide variety of site conditions, existing project designs, and maintenance requirements. Maintenance activities would include channel and basin/dam maintenance (i.e., cleaning, silt removal, in-kind slope maintenance/repair), landscape maintenance and vegetation control/removal, insect/rodent control, rip-rap repair, structural inspection/cleaning, removal/in-kind replacement of concrete lining, and the repair and backfill of washouts. Bridge maintenance activities would include maintenance of stream bed, bank, and channel in the immediate vicinity of the bridge, repair of concrete bridge elements within the channel (spalled and cracked wingwalls, abutments, piers, girders and underside of deck), and cleaning and painting of steel bridge members. A comprehensive list of activities is provided in Table 1.

The U.S. Army Corps of Engineers (Corps) would issue Regional General Permit (RGP) No. 100 authorizing Corps-regulated activities associated with the Maintenance Program activities identified in Table 1. RGP No. 100 would be subject to the channel category restrictions and avoidance/minimization requirements detailed in this Maintenance Framework.

The Orange County Flood Control District (OCFCD) is tasked with the goal of protecting Orange County from the threat and damage of flooding. The OCFCD currently owns over

309 miles of streams, dams, pump stations, flood management basins, and other infrastructure. Periodic maintenance of the County's existing streams and flood management facilities have been deemed necessary in order to: maintain functional capacity of facilities, minimize the risk of damage, optimize flood management capacity, prevent flooding and erosion of roadways and properties during storm events, and meet the flood management requirements and conditions of the U.S. Army Corps of Engineers (Corps).

For areas often within or near streams, the goal of the Orange County Bridge Maintenance Unit is to implement repairs recommended by the California Department of Transportation in its federally mandated biennial bridge inspections and special inspections. Timely repairs are deemed necessary to keep the 49 bridges identified for this project structurally and functionally safe for public use, and preserve the County's bridge infrastructure investment.

Maintenance activities would occur within the following channel types:

- Concrete Box/Pipe
- Metal/Steel Pipe
- Metal Sheet Channel
- Rectangular Channel with Concrete Sides and Concrete Bottom
- Rectangular Channel with Concrete Sides and Earthen Bottom
- Trapezoidal Channel with Concrete Sides and Concrete Bottom
- Trapezoidal Channel with Concrete Sides and Earthen Bottom
- Trapezoidal Channel with Earthen Sides and Earthen Bottom
- Trapezoidal Channel with Rip-rap Sides and Earthen/Rip-rap Bottom
- Earthen Flood Management Basins with Associated Concrete Inlet/Outlet Structures
- Natural watercourses maintained by OCPW for flood management purposes

DEFINITIONS

The following definitions are used herein:

Temporary impacts to aquatic resources – Impacts to aquatic resources from maintenance activities within the maintenance baseline (e.g. impacts necessary to maintain conveyance of floodwaters, as designed) and impacts to aquatic resources outside of the maintenance baseline that are short-term (e.g., waters temporarily filled, excavated, or drained where the area, contours, and uses of the impacted aquatic resource is typically restored to pre-project conditions within one year of disturbance). However, the agencies may determine on a project-specific basis that specific timeframes for restoration must be achieved to avoid permanent loss of aquatic functions.

Sparse native vegetation – Relative to the percent cover value of the majority of the vegetation within the channel at the proposed work site. In order to be considered sparse, no more than 20% of the total vegetation cover within the channel can be native. For example: If the total vegetation cover (both native and non-native) within the channel at the proposed work site is 60% (40% is unvegetated), then native vegetation could occupy no more than 12% of the area in order to qualify as sparse.

Adjacent – Within 500 feet.

Sensitive Species – A species fully protected under state or federal law; a candidate species or species listed as threatened or endangered under the California Endangered Species Act (CESA; Fish & G. Code §2050 et seq.) and/or Federal Endangered Species Act (ESA; 16 U.S.C. §1531 *et seq.*); or a species identified by the California Department of Fish and Wildlife (CDFW) as a species of special concern. It should be noted that facilities that have the potential for sensitive species are not included in the Maintenance Program. Findings for sensitive species would be defined during the biological review/survey prior to the maintenance activity.

Suitable Habitat – Habitat where there is at least moderate potential that an identified species or group of species could occur.

Biological Monitor or Qualified Biologist – A biological monitor or qualified biologist is an individual experienced with construction level biological monitoring and who is able to recognize species occurring near the project area and who is familiar with the lifecycle and behaviors of those species. Biological monitors or qualified biologists shall have documented and verified academic and professional experience in biological sciences and related resource management activities as it pertains to the project.

Agencies – As referenced in this report, the agencies include the Corps, the U.S. Fish and Wildlife Service (USFWS), the State Water Resources Control Board (SWRCB), the Santa Ana and San Diego Regional Water Quality Control Boards (RWQCB), and CDFW.

Channel – As used in this report, a channel is a section of bed, bank, and/or channel of a stream or flood management basin identified in the Facility Report table, or any additional agency-approved updated facility report table.

Category 1 Channels – Channels with little or no vegetation that are concrete-lined (concrete bed and banks). Category 1 channels also include those areas of existing grouted rip-rap bank protection or energy dissipation structures. Additionally, Category 1 channels include concrete and metal closed storm drains, excluding culvert inlets, culvert outlets, and stream crossings. Channels otherwise fitting this description that are adjacent (i.e., within 500 feet) to suitable habitat for sensitive species are excluded from this category. Channels otherwise fitting this description that are identified as wildlife corridors are excluded from this category.

This classification includes existing concrete-lined (concrete bed and banks) channels with sparse or no vegetation cover. Sparse means no more than 20% of the total vegetation cover within the channel can be native; for example, if total cover equals 60%, native vegetation must be less than or equal to 12%. Prior to maintenance activities, the Permittee shall mark the authorized maintenance area to identify the limits of disturbance. Vegetation must not include trees, non-native or native, over 3 inches in diameter at breast height (DBH).

Category 2 Channels – Channels that are in all respects as defined under Category 1, except they possess either an earthen or un-grouted rip-rap bank or earthen or un-grouted rip-rap channel bottom. Channels otherwise fitting this description that are adjacent to

suitable habitat for sensitive species are excluded from this category.

Category 3 Channels – Channels that are in all respects defined under Category 2, except native vegetation exceeds the limitations of Category 1 and 2. This category also includes channels that would otherwise fit in Category 1, but are culvert inlets, culvert outlets, or stream crossings.

Category 3 Exclusions:

- channels otherwise fitting this description that are adjacent (within 500 feet) to suitable habitat for sensitive species are excluded from this category.
- channels otherwise fitting this description that are identified as wildlife corridors for sensitive species are excluded from this category

Category 4 Channels – Channels that support native riparian vegetation or other suitable habitat for sensitive species. Category 4 also includes all channels located adjacent to suitable habitat for sensitive species. **Maintenance activities performed within Category 4 Channels are not authorized under this Maintenance Program and must be permitted under separate actions.**

AUTHORIZED ACTIVITIES

Pursuant to Section 404 of the Clean Water Act (33 USC 1344; 33 CFR parts 323 and 330) and Section 10 of the Rivers and Harbors Act (33 USC 403), RGP No. 100 shall authorize activities that: 1) would result in a discharge of dredged and/or fill material into waters of the United States and/or would place structures or consist of work in or affecting navigable waters of the United States and 2) would be associated with the Maintenance Program activities identified in Table 1. Furthermore, activities authorized under RGP No. 100 shall be subject to the channel category restrictions and avoidance/minimization requirements detailed in this Maintenance Framework.

Table 1: Maintenance Program Activities

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
Pre-Emergent Weed Control	Application of herbicides to control growth of unwanted vegetation on flood control property.	Spray Truck, Spray Tank, All-Terrain Vehicle (ATV) and Trailer	Performed annually from early Fall to late Spring following a predetermined plan. Spraying is conducted from right-of-way to right-of-way.
Weed Control	Application of herbicides to control unwanted vegetation on flood control properties.	Spray Truck, Spray Tank, ATV and Trailer	Spray year round to eliminate or control weeds not killed by pre-emergent spraying. Generally, spray 4-6 times per year.
Manual Removal of *Arundo*	Cutting, chipping and removal of *Arundo*. This activity is performed to remove unwanted vegetation from County right-of-ways and flood management channels.	Chipper Truck, Chipper, Trash Compactor, and Hand tools	Remove as directed.
Arundo Treatment	Application of herbicides to control unwanted vegetation on flood control properties.	Spray Truck, Spray Tank, ATV and Trailer	Spray two to five times per year to eliminate or control *Arundo*. During the months of February through August a biologist is required to monitor bird nesting activity.
Rodent Control	Control of rodents in flood right-of-way by the use of toxicants or fumigation to prevent erosion problems, public and safety hazards.	Pickup Truck, ATV and Trailer	All channels would follow a predetermined plan from scheduling.
Insect Control	Application of Insecticides to control insects on flood control properties, roadway right-of-way, contract cities and county parks.	Spray truck or backpack sprayer and a Bee Suit	Spray as needed for public safety or to protect landscape plants.
General Fence Maintenance	Inspection and general repair of fences to ensure control of access to flood channels.	Fence Truck and Welder	Performed on a routine basis.
Channel Cleaning	General maintenance cleaning consists of work necessary to maintain channel flow and permit access of maintenance vehicles and personnel. Work includes the removal of trash, debris, obstructions, and silt from the channel; trimming and clearing of vegetation along the vehicular and pedestrian access roads; and the removal of vegetation from channel slopes and inverts.	Inmate Crew Truck, Dump Truck, Trash Compactor Truck, Chipper and Chipper Truck	Completed whenever location prohibits use of equipment and work needed to restore facility to operating capacity and/or acceptable appearance.
Graffiti Pressure Wash	Removal of vandalized markings on fences, flood management channel walls and traffic signs with a steam cleaner.	Utility Truck and Steam Cleaner	Performed per request from Graffiti Hotline and County Inspection staff.
Graffiti Paint/Spray	Removal of vandalized markings on fences, flood management channel walls and signs on County flood control facilities.	Utility Truck and Steam Cleaner	Performed per request from Graffiti Hotline and County Inspection staff.
Graffiti Hand Roll	Painting over of vandalized markings on fences, flood management channel walls and signs on County flood control facilities using a hand roller.	Utility Truck and Van with Toilet	Performed per request from Graffiti Hotline and County Inspection staff.
Flap Gate Inspection/ Maintenance	Inspection and maintenance of flap gates includes identifying repairs on gates and performance of repairs or complete gate replacement.	Utility Truck	Flap gates would be inspected and serviced annually.
Maintain Pump Stations	The maintenance of mechanical, electrical, and other aspects of pumps and/or pump station facilities to insure proper functioning of these drainage systems.	Utility Truck	Periodic cleaning and debris removal is required. Pumps are serviced and overhauled, as required, to provide peak efficiency.
Operate Pump Stations	The operation and inspection of pump stations would be conducted to ensure the operation	Utility Truck	Operation would be initialized after moderate rainfall.

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
	and control of these facilities. Includes work during storm situations.		Manual control of the system would be required to completely empty the basin.
Pump Station Cleaning	The manual cleaning of pump station wet wells and grates would be conducted in order to ensure that the pumps are functioning at full capacity.	Utility, Crew Truck, Dump Truck and Trash Compactor	Pump stations are checked and cleaned annually. Recurring problem pump stations are checked and would be cleaned (as required) after storm events.
Pump Station Cleaning Sump (via Vacuum Truck)	The pump stations would be cleaned in order to ensure that the pumps are functioning at full capacity.	Vacuum Truck	Pump stations are checked and cleaned annually. Recurring problem pump stations are checked and would be cleaned (as required) after storm events.
Pump Station Inspection	Inspection of pump stations would be conducted in order to ensure the proper working condition and a safe environment.	Utility Truck	Work would be performed weekly.
Inspect/Maintain Diversions	Routine inspections and the maintenance of diversions in on-site channels.	Utility Truck	Inspections are performed routinely and the maintenance would be performed, on an as-needed basis.
Dam Operations and maintenance	Proper operations and maintenance of the County's dams, which would include gate operation, service and cleaning of equipment, instrumentation checks, and periodic inspections.	Pickup and Utility Truck	Operations and Maintenance would be performed routinely and on an as-needed basis.
Clean Drains (via vacuum truck)	The cleaning of drainage inlets, pipes, down drains and storm drainage lines with a vacuum truck to ensure the drainage system is functioning at full capacity. This activity excludes maintenance yard drains.	Vacuum Truck, Oxygen Meter, and Pickup with Arrowboard	Drains are checked and would be cleaned in accordance with an annual plan. Recurring problem drains are checked and cleaned, as needed after storm events.
Repair Storm Drain Pipe for Flood Alleviation	The repair of pipe would be conducted in order to provide drainage for flood management purposes.	Back hoe, Dump truck with Trailer, Air Compressor, Flatbed Truck, Mixer, and Excavator	Replace (or repair) pipe where flow is restricted and/or the pipe is damaged and is not functioning as designed, creating a drainage problem.
Repair Headwalls	The repair of pipe headwalls in order to provide drainage for park, flood and roadway right-of-way.	Back hoe, Dump truck with Trailer, Air Compressor, Flatbed Truck, Mixer, and Concrete Saw	Replace (or repair) pipe headwalls where flow is restricted and/or is damaged and is not functioning as designed, creating a drainage problem.
Remove/Replace Concrete Lining	Repair of concrete channel lining would be conducted in order to restore damaged channel lining per County standards.	Dump Truck, Bobcat, Backhoe, Compressor, Excavator and Concrete Saw	This work would be performed as needed. Repair or replacement lining and reinforcement of steel would be conducted.
Vault Cleaning	The cleaning of sub drain vaults to allow the system to fully operate. The intent of the system is to assist in the removal of the hydrostatic pressure on concrete slopes, walls, toeline, and the bottom of the channels. This task includes both an annual inspection and routine maintenance.	Vacuum Truck, Pick up with Wench, and Oxygen Meter. Underground Crew-Safety gear	Inspect annually and clean 1/3 of all vaults located on-site each year.
Concrete Channel Silt Removal-Loader	Mechanical removal of silt and debris from channel bottom to provide for normal flow of water. This activity applies to silt and debris removal from the bottom of a concrete channel	Tender Truck, Dump Truck, and Large Loader	Normally conducted from April to October but can be performed throughout the year. Performed when the

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
	with a large loader and may include stockpiling debris removed until dry.		capacity of a channel is impaired or adjacent drainage structures are restricted.
Concrete Channel Silt Removal-Bobcat	Mechanical removal of silt and debris from channel bottom to provide for normal flow of water. This activity applies to silt and debris removal from a concrete channel with a Bobcat or skip loader and may include stockpiling debris removed until dry.	Tender Truck, Dump Truck, Bobcat/Skip Loader, Mobile Crane and Trailer	Normally conducted from April to October but can be performed throughout the year. Performed when the capacity of a channel is impaired or adjacent drainage structures are restricted.
Dirt Channel Silt Removal	Mechanical removal of silt, vegetation and/or debris that has been removed and stockpiled to restore dirt channels and roadways, and to provide proper flow of water.	Tender Truck, Dump Trucks, Crane, Excavator, and Dozer	Stockpiled materials have drained sufficiently to allow loading and hauling.
Compact Channel Slope	Provide soil or rock compaction (into slope) in order to inhibit subsequent erosion.	Crane, Excavator, Tender Truck, and Badger	Slopes should be compacted whenever major repairs occur and earth is imported to provide a base for the final invert surface.
Back Fill/Repair Washout	The in-kind repair and/or back fill of washouts would be conducted in order to stabilize slopes or hinder water flow.	Back hoe, Dump Truck, Crane, Equipment Trailer, and Tender	This work would be performed as needed. High priority would be given to concrete or asphalt structures that require backfill for stabilization.
Aggregate-Base (AB) Maintain Levee	Prepare roadway and plate AB and compact with rubber tire roller to increase the channel roadways to all weather facilities. This activity also includes placement of AB to maintenance of channels.	Tender Truck, Dump Trucks, Rubber T Roller and Motor Grader	Performed under direction of engineer to provide maintenance access.
Tractor Removal of *Arundo*	Removal of *Arundo* would be conducted using excavators. A large loader with a clam bucket would be utilized to stockpile material at a processing area and a water truck would be utilized for dust and fire control.	Excavator, Large Loader, Water Truck, Tender Truck, Off Road Truck, and Crew	*Arundo* would be removed if required as mitigation.
Manual Cleaning/ Inspection of Drains	The inspection and manual cleaning of drainage inlets, pipes, down drains, and storm drainage lines would be conducted in order to ensure that the drainage system is functioning at full capacity. This activity excludes maintenance yard drains.	Stakebed/Crew cab, Oxygen Meter and Mini Vac	Drains are manually checked and cleaned. Recurring problem drains are checked and cleaned (as necessary) after storm events.
Landscape maintenance	Maintenance of County- landscaped areas including ground cover, trees, and shrubs often in undeveloped areas. This work effort includes the removal of trash, elimination of right-of-way encroachment, and provides security clearance in flood channels and right-of-ways.	Road Truck, Inmate and Contract Crews	This work would be performed as needed, generally outside of the bird nesting season.
Right-of-Way Pruning	Trim and prune trees and shrubs to provide equipment access, and provide right-of-way clearance.	Road Truck, Inmate and Contract Crews	This work would be performed as needed, generally outside of the bird nesting season.
Annual DSOD Inspection/Repairs	Inspection and maintenance of dams	Excavator, Large Loader, and Off Road Water Truck	Annual Division of Safety of Dams (DSOD) Inspection.
Repair concrete structure damage below deck level	Pressure-Epoxy-Inject Cracks - below deck or on side of bridge	Air compressor, air & high- pressure water guns, Epoxy gun, variable reach forklift, boom lifts	Performed as recommended by inspection reports or OCPW bridge maintenance staff.

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
Repair concrete structure damage below deck level	Remove & replace unsound or spalled concrete - below deck level	Air compressor, air, variable reach forklift, boom lifts, sandblast & high-pressure water guns, concrete saw, chipping gun, concrete pump, concrete mixer	Performed as recommended by inspection reports or OCPW bridge maintenance staff.
Clean & paint bridge steel (above and/or below deck level)	Clean and paint steel girders- above or below deck	Air compressor, air & sandblast guns, variable reach forklift, boom lifts, light scaffold, paint gun	Performed as recommended by inspection reports or OCPW bridge maintenance staff.
Restore in-kind scour protection measures at bridge	Slurry-fill scour recesses and restore eroded invert with grouted riprap	Bobcat or loader, Backhoe, dump truck, ready-mix truck, concrete pump	Performed as recommended by inspection reports or OCPW bridge maintenance staff.
Restore scour protection measures at bridge	Slurry-fill scour recesses and restore eroded invert with concrete invert (including cutoff walls) Within as-built footprint	Bobcat or loader, Backhoe, dump truck, ready-mix truck, concrete pump	Performed as recommended by inspection reports or OCPW bridge maintenance staff.
In-kind slope repair and/or preparation for riprap installation	In-kind repair of slopes that have eroded and/or mechanical removal of dirt from channel slopes and channel bottom to restore to as-built cross section.	Crane, excavator, dump trucks	Performed as recommended by inspection reports or OCPW /O&M Maintenance Inspectors.
In-kind Riprap installation	In-kind installation (replacement of existing rip-rap areas) of rock rip-rap on channel slopes to stabilize channel slopes and prevent erosion.	Crane, excavator, Dozer, dump trucks	Performed as recommended by inspection reports or OCPW /O&M Maintenance Inspectors.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources, Permittee shall implement each measure listed below.

Resource Protection

1.1 Resource Education. Permittee shall conduct an annual education program for all persons employed or otherwise working on the project site prior to performing any work on site. The program shall consist of a presentation from a qualified biologist that includes a discussion of the biology of the habitats and species under this project. The qualified biologist shall also include as part of the education program information about the distribution and habitat needs of any special status species that may be present, legal protections for those species, penalties for violations and project-specific protective measures. Interpretation shall be provided for non-English speaking workers, and the same instruction shall be provided for any new workers prior to their performing work on site. Upon completion of the education program, employees shall sign a form stating they attended the program and understand all protection measures.

1.2 Maintenance Area Demarcation. Prior to maintenance activities in Category 1, the Permittee shall mark the authorized maintenance area to identity the agreed limits of disturbance. For Category 2 or 3 Channels, a qualified biologist shall mark the authorized maintenance area to identify the agreed limits of disturbance and prevent damage to nearby riparian habitat. No vegetation shall be removed during maintenance activities outside of this marked area and no construction debris, equipment, or soils shall be placed outside of the marked area. Permittee shall have a qualified biologist on-site daily during clearing of vegetation to ensure no impacts occur to the nearby habitat. The name and contact information of the qualified biologist shall be provided to the agencies in the Annual Work Plan or prior to work.

1.3 Woody Perennial Vegetation Avoidance. No living native vegetation within the bed, bank, or channel of the stream with a DBH in excess of 3 inches shall be removed or damaged without prior consultation and approval from the agencies.

1.4 Native Tree Avoidance. No equipment shall be operated or parked within the dripline of native trees (e.g., oaks, sycamore, cottonwood) except where access roads already exist and routine maintenance work is required as part of the project. Temporary fencing or flagging for native trees that could potentially be impacted as a part of the project shall be placed 5 feet (20 feet for oak trees) outside of the dripline of the trees to prevent compaction of the root zone.

1.5 Riparian Vegetation Avoidance. The disturbance or removal of vegetation shall not exceed the minimum necessary to complete the identified activities for each

maintenance activity. Appropriate precautions shall be taken to avoid inadvertent damage to vegetation by people or equipment.

1.6 Leave Patches of Vegetation in Channel. Permittee shall minimize vegetation removal or reduction from earthen or earthen bottom channels to the minimal amount necessary. Vegetation removal in the Category 2 channels shall be conducted in a non-continuous manner, as feasible, allowing small patches of in- channel vegetation to persist provided it would not adversely affect conveyance capacity.

1.7 Herbaceous Vegetation Avoidance Between Sediment Removal Activities. Permittee shall avoid removal of emergent herbaceous vegetation on the channel bottom that is rooted in or near the low flow channel or a pond in order to provide cover for aquatic wildlife, where feasible. Native non-woody vegetation that does not interfere with designed flood management capacity shall be allowed to grow between sediment removal activities within Category 2 channels. If necessary to alleviate flood risk between sediment removal activities, native non-woody vegetation may be cut down to a level above the water line or root zone.

1.8 Maximum 8-foot Vegetation-Free Zone at the Toe of the Bank. When removing vegetation from channels for the sole purpose of visual access to inspect the toe of slopes, Permittee shall treat a maximum 8-foot-wide zone from the toe of the bank.

1.9 Staging Areas. Staging/storage areas for equipment and materials shall be located outside of the stream/lake, including overnight staging/storage, wherever feasible.

1.10 Work During Dry Weather Only. If work is performed within the stream channel during the winter storm period, Permittee shall monitor the 5-day weather forecast. If greater than 20% of precipitation is forecasted, work activities shall include securing of the site, so as no materials may enter or be washed into the stream. The site shall be completely secured 24 hours prior to precipitation, unless prior written approval has been provided by the Corps, SWRCB, and CDFW. During period of precipitation, no in-stream maintenance activities may occur; activities involving the prevention of materials from entering the stream or being washed downstream, or environmentally benign activities conducted by hand-crews, may be conducted.

1.11 Project Lighting. Lighting required to complete project activities at night shall not illuminate Category 3 channels.

1.12 Personnel Compliance on Site. Permittee, its contractors, subcontractors, employees, and visitors to the site are prohibited from 1) feeding wildlife, 2) bringing domestic pets to the project site, 3) collecting native plants (unless the collection is for propagating/replanting associated with restoration or mitigation), or 4) harassing wildlife. It shall be the responsibility of Permittee to ensure compliance with this measure.

1.13 Prohibited Plant Species. Permittee shall not plant, seed or otherwise introduce invasive exotic plant species. Prohibited exotic plant species include those identified in the California Exotic Pest Plant Council's database, which is accessible at:

http://www.cal-ipc.org/ip/inventory/weedlist.php.

Wildlife and Habitat Protection

1.14 Sensitive Species. Approvals do not authorize take, incidental or otherwise, of any sensitive species. For the purpose of this project, "sensitive species" means the following: a species fully protected under state or federal law; a candidate species or species listed as threatened or endangered under CESA and/or ESA; a species identified by CDFW as a species of special concern; or any other species for which take is prohibited under state or federal law. No direct or indirect impacts shall occur to any sensitive species, except as may be authorized by a Natural Community Conservation Plan or one or more separate permits that authorize such impacts.

1.15 Active Breeding and/or Nest. If the nesting season cannot be avoided and construction or vegetation removal occurs between March 1st to September 15th (January 1st to July 31st for Raptors), the restricted time period, a qualified biologist with experience in conducting bird breeding surveys shall conduct a minimum of 3 weekly focused surveys for nesting birds before work, including a survey completed 3 days prior to the work in the area to ensure no nesting birds in the project area would be impacted by the project. If an active nest is identified the Permittee will do one of the following to avoid and minimize impacts to nesting birds.

a) Implement a 300-foot minimum avoidance buffers for all passerine birds (500- foot for protected species) and 500-foot minimum avoidance buffer for all raptors species. The breeding habitat/nest site shall be fenced and/or flagged in all directions. The nest site area shall not be disturbed until the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, and the young will no longer be impacted by the project."

b) Develop a project-specific Nesting Bird Management Plan (NBMP). The site- specific nest protection plan shall be submitted to the agencies prior to commencement of project activities within the minimum avoidance buffers described above. The NBMP should include detailed methodologies and definitions to enable a qualified avian biologist to monitor and implement nest- specific buffers based upon the life history of the individual species; species sensitivity to noise, vibration, and general disturbance; individual bird behavior; current site conditions (screening vegetation, topography, etcetera), ambient levels of human activity; the various project-related activities necessary to construct the project, and other features. The NBMP shall be supported by survey documentation including: dates of survey, total field time of survey efforts, map of survey routes, names of investigators, and if any active nests were found.

The NBMP shall be submitted to the agencies prior to the commencement of project activities. If this option is chosen, project activities may not commence until the agencies have acknowledged receipt of survey results and any established buffers. The NBMP shall be supported by a Nest Log which tracks each nest and its outcome. Each nest identified in the NBMP shall be monitored until the nest becomes inactive, including nests that remain active after September 15. The Nest Log will be submitted to the agencies at the end of each week during project activities and/or until all nests identified in the NBMP are no longer active.

c) The Permittee may propose an alternative plan for avoidance of nesting birds for agency concurrence.

1.16 Sensitive Species Locations. Several streams in Orange County support native riparian vegetation or other suitable habitat for sensitive species. Sensitive species have been known to occur within some of the identified areas of the Maintenance Program. Streams (or portions of streams and/or tributaries) where sensitive species have the potential to occur or streams and/or tributaries adjacent to suitable habitat for sensitive species include, but are not limited to: San Juan Creek (including tributaries Canada Chiquita and Canada Gobernadora), Trabuco Creek, Coyote Creek, San Diego Creek (including tributaries Sand Canyon wash, Borrego Canyon wash, and Agua Chinon), Aliso Creek (including tributary English Creek), Santa Ana River, East Garden Grove-Wintersburg Channel, Santiago Creek, Silverado Creek and tributaries thereto. Maintenance activities within or adjacent to habitat where there is at least a moderate potential for a sensitive species to occur, as determined by a qualified biologist, are not authorized as a part of the Maintenance Program and shall be subject to separate notification. Where maintenance activities are required in these streams, OCPW shall demonstrate to the agencies that the proposed maintenance locations do not contain, and are not adjacent to, habitat suitable for sensitive species.

1.17 Pile Driving. To avoid impacts to nesting birds, maintenance activities adjacent to nesting habitat between March 1 and August 31 shall not include pile driving.

1.18 Leave Wildlife Unharmed. If any wildlife is encountered during the course of maintenance activities, said wildlife shall be allowed to leave the maintenance area unharmed. If any sensitive wildlife species is encountered, Permittee shall immediately inform the agencies of the observation and additional measures taken to ensure the safety of the wildlife.

1.19 Native Amphibian Eggs and Larvae. To the extent practicable, Permittee shall avoid the disturbance or destruction of eggs and larvae of native amphibians.

1.20 Open Trenches. At the end of each work day, an escape ramp shall be placed at each end of any open trench or excavated pit to allow any animals that may have become entrapped in the trench or excavated pit to climb out overnight. The ramp may be constructed of earthen fill, wood planking or other suitable material that is placed at an angle no greater than 30 degrees. If an escape ramp is not feasible, other appropriate wildlife exclusionary devices shall be employed to avoid entrapping wildlife.

Vegetation Removal

1.21 Vegetation Removal by Category. Vegetation removal, after appropriate biological surveys, is proposed as follows:

Category 1 channels may be cleared of all vegetation, except as otherwise restricted in this report.

Category 2 channels may be cleared of vegetation as follows:

a. Vegetation removal in the Category 2 channels shall be conducted in a non-continuous manner, as feasible, allowing small patches of in-channel vegetation to persist provided it will not adversely affect conveyance capacity.
b. When vegetation removal is deemed necessary, mowing and/or trimming of vegetation, or herbicide treatment if necessary, in this channel category shall be done whenever practicable to maintain soil stability.
c. Permittee shall avoid removal of emergent herbaceous vegetation on the channel bottom that is rooted in or near the low flow channel or a pond to provide cover for aquatic wildlife, where feasible. Native nonwoody vegetation that does not interfere with designed flood control capacity shall be allowed to grow between sediment removal activities within Category 2 channels. If necessary to alleviate flood risk between sediment removal activities, native non-woody vegetation may be cut down to a level above the water line or root zone.
d. No living native vegetation with a diameter at breast height more than 3 inches above the maintenance baseline shall be removed or damaged without prior consultation and approval from the agencies to prevent loss of vegetation that could result in violation of water quality standards.

Category 3 channels may be cleared of vegetation as follows:

a. Vegetation removal requirements shall be in all respects like Category 2 with the additional requirements cited here.
b. Native vegetation removed from Class 3 channels shall not exceed the minimum necessary to complete the identified activities for each maintenance activity. Appropriate precautions shall be taken to avoid inadvertent damage to native vegetation by people or equipment.
c. Native vegetation removal shall be subject to appropriate restoration, maintenance, and monitoring requirements applicable to temporary impacts (i.e., see Sections 1.29-1.33 below.

1.22 Removal and Disposal of Non-Native Vegetation. Non-native vegetation removed from work areas shall be disposed of legally in a manner which prevents its reestablishment and in a manner that does not negatively affect other native habitat communities.

1.23 Maintenance Access Roads/Ramps. Permittee may remove sparse native vegetation, fallen trees, and branches from existing maintenance access roads and existing access ramps. Minor pruning of trees and brush growing on the stream side slope of access roads is acceptable, except that such pruning shall be limited to the removal of vegetation that interferes with vehicle access/visual survey along existing access roads.

1.24 Fuel Modification Areas. Vegetation trimming or removal for fuel modification is not a covered activity of this project. As such, a separate Notification would be required for such work.

1.25 Herbicides - General. Only herbicides containing a harmless dye and registered with the California Department of Pesticide Regulation (DPR) shall be used. All herbicides shall be applied in accordance with regulations set by DPR. All herbicides shall be used according to labeled instructions. Herbicide mixing sites shall only be located in areas devoid of vegetation, and where there is no potential of a spill reaching a vegetated area or stream.

1.26 Vehicle-Based Herbicide Sprayers. Vehicle-based sprayers or boom trucks may be used only where existing roads abut non-native vegetation or unvegetated channels and where non-native vegetation is growing in large clumps with no perennial native vegetation within 10 feet (unless hose attachment used by pedestrian crews can specifically target non-native species). Herbicide applied via vehicle based sprayers shall not damage native vegetation.

1.27 Backpack Herbicide Sprayers. Backpack sprayers or hose attachments used by pedestrian crews which can specifically target specific non-natives shall be used in all situations where non-native vegetation exists within 10 feet of native vegetation. The application of herbicides shall be conducted in such a manner to minimize overspray of herbicide onto native vegetation. Herbicide shall be applied only on calm days to prevent airborne transfer of the herbicide. Any native vegetation inadvertently damaged during herbicide application shall be left to re-sprout.

1.28 Native Vegetation Intermixed with Non-Native Vegetation. In areas where native vegetation is intermixed with invasive vegetation (e.g., isolated stands of giant reed, *Arundo*, among native species), invasive vegetation shall be removed by hand-operated tools.

Temporary Impacts

1.29 Replace Temporary Impacts. For maintenance activities in Category 3 channels that result in the temporary disturbance to native riparian vegetation, Permittee shall allow for revegetation where root systems remain intact. Should vegetation within temporary impact areas be completely removed, restoration shall include planting and/or seeding native plant species that were present prior to the work and/or are compatible with existing riparian vegetation near the work area. Permittee shall prepare a Habitat Restoration Plan (HRP) for each repair project that specifies the limits of temporary impact, the limits of restoration, planting mix and densities where necessary, performance criteria for survival and growth, and maintenance and monitoring procedures. Habitat restoration shall only be required if the temporary impact areas support native vegetation; no restoration is required for barren areas or areas of sparse native vegetation. Permittee shall submit an HRP to the agencies with the Annual Work Plan (preferably) or at least 30 days prior to each temporary impact. Permittee shall receive written approval of the HRP from the Corps, SWRCB, and CDFW prior to each temporary impact.

1.30 Restoration Maintenance and Monitoring. The restoration of habitat shall be maintained and monitored for 5 years (3 years for herbaceous species) after installation by an experienced, licensed habitat restoration contractor, or until established success criteria identified in the HRP are met. Remedial action (e.g., additional planting, weeding, erosion control, use of container stock, supplemental watering, etc.) shall be taken by an experienced, licensed habitat restoration contractor during the maintenance and monitoring period if necessary to ensure the success of the restoration. Maintenance and monitoring reporting for each temporary impact shall be submitted annually with the Annual Monitoring Project Report (see Measure 3.2). If the restoration fails to meet the established success criteria after the maintenance and monitoring period, maintenance and monitoring will extend beyond the 5-year/3-year period until the criteria are met or unless otherwise approved by the Corps, SWRCB, and CDFW. Alternative restoration sites or methods of compensatory mitigation may be proposed by OCPW, including the purchase of credits from approved mitigation banks or in-lieu fee programs.

1.31 Temporary Impact Restoration Timing. To the extent practicable, Permittee shall restore temporarily impacted sites requiring restoration by the end of the first April following completion of project activity. When restoration is not feasible by April (due to drought, access or other restrictions), then restoration for temporary sites shall occur no later than one calendar year from the completion of project activity.

1.32 Restoration Success Criteria. Restoration success criteria shall be determined on a site-specific basis and submitted to the Corps, SWRCB, and CDFW for review and approval. If the survival and cover requirements have not been met, Permittee is responsible for replacement planting to achieve requirements. Replacement plants shall be monitored with the same survival and growth requirements for the duration of the monitoring period. At the completion of the monitoring period, the restoration site shall have received no supplemental watering for a period of 2 consecutive years; the site shall display species richness of native species, divided between annuals and perennials; bare ground shall be equal to or less than documented bare ground present at the impact site prior to maintenance activities; the site shall be free of invasive exotic plant species such as tamarisk; and there shall be no trash.

1.33 Annual Monitoring Reports for Temporary Impacts. Mitigation, maintenance, and monitoring reporting for each temporary impact shall be submitted annually with the Annual Monitoring Project Report (see Measure 3.2) to the agencies during the 5-year/3-year maintenance and monitoring period or until restoration has been deemed physically and functionally successful by the Corps, SWRCB, and CDFW. Monitoring reports shall include, but not be limited to, the following:

a. Identifying specific site boundaries and time period for which the monitoring report is applicable for each site;
b. A list of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities;
c. Compiled data, summary statistics and graphs;
d. Survival, % cover, and height of both tree and shrub species;
e. Methods used to assess these parameters;
f. Number by species of plants replaced;
g. Progress photographs taken from the same vantage point as baseline photographs; and

h. Detailed remedial maintenance to be performed.

If, after 5 years, the planting area has failed to meet success criteria, Permittee shall develop a restoration plan which shall be submitted to the Corps, SWRCB, and CDFW for approval along with the Annual Monitoring Project Report. Alternative restoration sites or methods of compensatory mitigation may be proposed by OCPW, including the purchase of credits from approved mitigation banks or in-lieu fee programs.

Structures

1.34 Repair to Existing Bank Protection. Permittee may repair damage to existing bank protection structures such as rip-rap or concrete lining. Such repair shall employ the same type of material used in the original construction or existing conditions and shall occur only in the locations of existing bank protection. New sites requiring bank protection, expansions in the size of protected sites, or changes in the materials to be used, are not proposed with this Maintenance Program. As such, a separate Notification would be required for such work. Repair work shall be accomplished without damaging vegetation or altering the stream bed or banks more than fifteen (15) feet in any direction beyond the area of the original bank protection. Where vehicles are required, the work area limit is extended to seventy-five (75) feet. The temporarily impacted area shall be passively or actively restored and monitored according to all measures in this agreement.

1.35 Grouted Rip-Rap and Gabions. Grouted rip-rap is not an authorized material to replace un-grouted rip-rap. Gabions are not an authorized replacement for any structure in the stream. Grouting un-grouted rip-rap and construction or reconstruction of gabions are not authorized activities under this Maintenance Program. As such, a separate notification would be required for such work. However, removing grouted rip-rap or gabions, then replacing with un-grouted rip-rap are authorized activities, provided there is no increase in footprint of the permanent structure.

1.36 Rock Slope Protection. Un-grouted rock slope protection and energy dissipater materials shall consist of clean rock sized and properly installed to resist washout. Rock slope protection shall be supported with competent boulders keyed into a footing trench with a depth sufficient to properly seat the footing course boulders and prevent instability. Voids between rocks may be planted with riparian species native to the area.

1.37 Stream Crossing Replacement. Replacement of an existing stream crossing structure is not proposed. As such, a separate Notification would be required for such work.

1.38 Remove Structures Before High Water Flow. Structures and associated materials not designed to withstand high water flows shall be moved to areas above high water before such flows occur.

Dewatering and Temporary Diversions

1.39 Diversion Plan. No equipment shall be operated in ponded or flowing areas. When work in a flowing stream is unavoidable, the entire stream flow shall be diverted around the

work area by a barrier, temporary culvert, new channel, or other means approved by the Corps, SWRCB, and CDFW. Location of the upstream and downstream diversion points shall be approved by the Corps, SWRCB, and CDFW. Construction of the barrier and/or the new channel shall normally begin in the downstream area and continue in an upstream direction, and the flow shall be diverted only when construction of the diversion is completed. Channel bank or barrier construction shall be adequate to prevent seepage into or from the work area. Diversion berms shall be constructed of onsite alluvium of low silt content, inflatable dams, sand bags, or other approved materials. Channel banks or barriers shall not be made of earth or other substances subject to erosion unless first enclosed by sheet piling, rock rip-rap, or other protective material. The enclosure and the supportive material shall be removed when the work is completed and removal shall normally proceed from downstream in an upstream direction. Permittee shall obtain written approval (E- mail is sufficient) of the temporary diversion structure from the Corps, SWRCB, and CDFW prior to each diversion.

1.40 Maintain Flows. Flow diversions shall be done in a manner that shall prevent pollution and/or siltation and which shall provide flows to downstream reaches. Flows to downstream reaches shall be provided during all times that the pre- existing flow would have supported aquatic life. Said flows shall be sufficient quality and quantity, and of appropriate temperature to support fish and other aquatic life both above and below the diversion. Diversions shall be engineered, installed, and maintained to assure resistance to washout and erosion of the stream bed and banks. Normal flows shall be restored to the affected stream immediately upon completion of work at that location.

1.41 Pump Intakes. Pump intakes placed in any stream water shall be fitted with 1/8- inch or smaller mesh screens.

1.42 Excavation Dewatering. If an excavation site must be dewatered, any muddy, or otherwise contaminated, water shall be pumped into a holding facility or into a settling pond located in flat stable areas outside of the stream channel or pumped up on a stable grassy area where the water clears prior to flowing back into the stream.

1.43 Stranded Aquatic Life. Permittee shall check daily for stranded aquatic life as the water level in the dewatering area drops. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Capture methods may include fish landing nets, dip nets, buckets and by hand. Captured aquatic life shall be released immediately in the closest body of water to the work site. This measure does not allow for the take or disturbance of any sensitive species.

1.44 Rewatering. Permittee shall take appropriate measures to contain sediment and reduce stream turbidity when a work area is rewatered. Permittee shall install an appropriate sediment control device downstream of the work area to contain sediment.

Erosion and Turbidity

1.45 Prepare Erosion Control Plan. Permittee shall submit (E-mail is sufficient) an Erosion Control Plan (ECP) for the Maintenance Program to the Corps, SWRCB, and CDFW for approval prior to the commencement of project activities. The ECP shall include performance standards, monitoring and reporting programs, and corrective actions to be taken if necessary. The ECP shall be implemented by Permittee before, during, and at the completion of project activities. The ECP shall be approved in writing to the Corps, SWRCB, and CDFW prior to commencement of project activities (preferably with the Annual Work Plan).

1.46 Contaminated Water. Water containing mud, silt, or other pollutants used during maintenance activities shall not be allowed to enter a flowing stream or placed in locations that may be subjected to high storm flows.

1.47 Minimize Turbidity and Siltation. Permittee shall take precautions to minimize turbidity and siltation during and after maintenance activities. Precautions shall include, but are not limited to: pre-construction planning to identify site specific turbidity and siltation minimization measures and best management erosion control practices; best management erosion control practices during project activity; and settling, filtering, or otherwise treating silty and turbid water prior to discharge into a stream or storm drain.

1.48 Silt Settling Barriers. If silt catchment barriers are used, the basin(s) shall be constructed across the stream immediately downstream of the project site. Catchment barriers shall be constructed of materials which are free from mud and silt. Upon completion of the project, all basin materials along with the trapped sediments shall be removed from the stream in such a manner that does not introduce sediment to the stream.

1.49 Erosion Control Measures. Permittee shall utilize erosion control measures throughout all phases of projects where sediment runoff from exposed slopes threatens to enter the stream.

1.50 Erosion Control Monitoring. Permittee or shall monitor erosion control measures before, during, and after each storm event and repair and/or replace ineffective measures immediately.

Existing Bridges and Culverts

1.51 Bat Protection - Bridges. Prior to maintenance activities at any bridge, the bridge shall be surveyed for bats by a qualified bat biologist. If bats are found, maintenance activities on the bridge shall not commence. Bats shall not be disturbed without specific notice to and consultation with the CDFW. Bat surveys and consultation with CDFW shall be conducted prior to project commencement. Additional provisions deemed necessary by CDFW shall be implemented prior to project activities.

1.52 Bats at Culverts. Prior to maintenance activities at culvert inlets and outlets or other

water conveyance structures which may support bat habitat, the site shall be surveyed for bats by a qualified bat biologist. If bats are found, there shall be no disturbance to the culvert until CDFW has been consulted. Bat surveys and consultation with CDFW shall be conducted prior to project commencement. Additional provisions deemed necessary by CDFW shall be implemented prior to project activities.

1.53 Swallow Nesting at Bridges. Maintenance activities on existing bridges shall either occur outside of the swallow nesting period (March 15 through August 31), or the suitable bridge nesting habitat shall be netted by Permittee before initiation of the breeding season to prevent nesting. The netting shall remain in place until August 1 or until maintenance activities at the site are complete, after which the netting shall be removed. The netting shall be anchored such that swallows cannot attach nests to the structure through gaps in the net. If swallows begin building nests on the structure after net installation, the mud placed by the swallows shall be removed and the integrity of the net repaired. At no time shall an occupied nest be destroyed as a result of maintenance activities.

Flood Management Basins

1.54 Leave Vegetation on Basin Slopes. Permittee shall not remove vegetation on flood management basin slopes except as follows: (1) the vegetation is non- native; (2) shrubs and trees become hazards to the stability and function of the basin, or preclude visual survey; (3) the vegetation/sediment meets or exceeds the 20 percent capacity line (or specific line designated by Operation and Maintenance Manual (approved by the Department) for specific facility; or (4) slope maintenance is required to correct rill erosion or other slope damage.

1.55 Leave Patches of Vegetation in Basin. Permittee shall minimize vegetation removal or reduction from flood management basins to the least amount necessary to achieve the specific maintenance objectives for the site. When feasible, vegetation removal (excludes herbicide treatments) shall be conducted in a non-continuous manner, allowing small patches of vegetation to persist provided it will not adversely affect conveyance capacity.

1.56 Herbaceous Vegetation Avoidance Between Sediment Removal Activities. Permittee shall avoid removal or reduction of emergent herbaceous vegetation within flood management basins in order to provide cover for wildlife, where feasible. Native non-woody vegetation that does not interfere with designed flood management capacity shall be allowed to grow between sediment removal activities within flood management basins. If necessary to alleviate flood risk between sediment removal activities, native non-woody vegetation may be cut down to a level above the root zone.

Equipment and Access

1.57 Avoid Road Base Discharge. Permittee shall implement appropriate BMP measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road when working near channels or flood management basins.

1.58 Equipment Access. Access to the work site shall be via existing roads and access ramps. If no ramps are available in the immediate area, a temporary ramp within the project footprint may be constructed. Any temporary ramp shall be removed upon completion of the project. The temporarily impacted area shall be monitored.

1.59 Speed Limit. A 15-mile per hour speed limit shall be observed on dirt access roads to reduce dust and allow reptiles and small mammals to disperse.

1.60 Excavation Equipment. Prior to working within the bed, bank, or channel of the stream, all equipment shall be closely examined for oil and fuel discharges. Any contaminants shall be cleaned prior to any work and all equipment shall be examined daily for new oil and fuel discharges and cleaned as needed. Ground protection pads shall be required for any construction vehicles stored overnight within waters of the United States (see Measure 1.9)

1.61 Wildlife Sheltered in Construction Material. All sections of pipe shall be visually checked for the presence of wildlife sheltering within them prior to the pipe sections being placed in a trench and attached together, or shall have the ends capped while stored on site so as to prevent wildlife from entering. After attachment of the pipe sections to one another, whether in the trench or not, the exposed end(s) of the pipeline shall be capped at the end of each day during maintenance activities to prevent wildlife from entering and being trapped within the pipeline. Any pipe or post installed vertically as a part of the project shall not have an exposed opening at the top. Any opening shall be capped or otherwise permanently covered.

Fill and Spoil

1.62 Alluvium Fill. Fill materials other than on-site alluvium shall consist of clean gravel or river rock.

1.63 Cover Spoil Piles. Permittee shall have readily available plastic sheeting to cover exposed spoil piles and exposed areas in order to prevent loose soil from moving into the stream. These covering materials shall be applied when it is evident rainy conditions threaten to erode loose soils into the stream.

1.64 Temporary Stockpiles. Temporary stockpiles located near channels or flood management basins shall be stabilized by compacting or other measures if present near the stream from December 1 to April 1. Silt fences, berms, or other methods shall be used to prevent sediment from being eroded from the temporary stockpile into the stream. Temporary stockpiles may be placed in channel bottoms or flood management basins only if they are located on barren soil or areas with only non-native vegetation, and are not placed in such a manner that they would be exposed to flowing water. All temporary stockpiles within the bed or banks of the channel shall be removed from the stream before the end of the same workday. Stockpiles shall not remain in any stream overnight.

Pesticides, Pollution, Litter, and Clean-Up

1.65 Rodent Control. Rodent control pesticides are known to cause secondary exposure to non-target wildlife. Permittee shall use rodent control methods only as deemed necessary. Secondary exposure to other wildlife can be minimized by utilizing qualified professionals that apply the rodenticide in a manner specifically described on the product label and monitor application areas until pesticides are removed or no longer in use. The qualified applicator shall conform to all applicable federal, State, and local regulations.

1.66 Insect Control. Insect control pesticides shall be applied only when necessary by licensed personnel according to product label instructions and in compliance with all local, state, and federal regulations. Proper applications maximize a product's effectiveness while avoiding or minimizing any adverse impacts to the public fish and wildlife resources.

1.67 Concrete. Permittee shall implement appropriate waste management practices during concrete repair or replacement. Waste management practices shall be applied to the stockpiling of concrete, curing and finishing of concrete, as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or flood management basin. Concrete waste shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged into the channel or flood management basin. Permittee shall determine the appropriate waste management practices based on considerations of expected flow velocities, site conditions, and availability of erosion control materials.

1.68 Litter and Pollution. Permittee shall comply with all litter and pollution laws. All contractors, subcontractors and employees shall also obey these laws and it shall be the responsibility of the Permittee to ensure compliance.

1.69 Secure Trash Receptacles. Permittee shall use fully covered trash receptacles with secure lids (wildlife proof) to contain all food, food scraps, food wrappers, beverage and other miscellaneous trash.

1.70 Stationary Equipment. Stationary equipment such as motors, pumps, generators, and welders located within or near the stream shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak.

1.71 Equipment Maintenance and Fueling. No equipment maintenance or fueling shall be done within or near any stream channel where petroleum products or other pollutants from the equipment may enter these areas.

1.72 Equipment and Vehicle Spills and Contaminants. Any equipment or vehicles driven or operated within or near the stream shall be checked daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life. Permittee shall maintain all vehicles and equipment in proper working condition to minimize fugitive emissions and accidental spills from motor oil, antifreeze, hydraulic fluid, grease, and other fluids or hazardous materials. All fuel or hazardous waste leaks, spills, or releases shall be stopped or repaired immediately and cleaned up at the time of occurrence. Permittee shall be responsible for spill material removal and disposal to an approved offsite landfill and spill reporting to the permitting agencies. Service construction equipment

shall be stored at designated areas only. Maintenance vehicles shall carry appropriate equipment and materials to isolate and remediate leaks or spills. A spill containment kit shall be available on site for all maintenance activities.

1.73 Site Cleanup. When operations are completed, any excess materials or debris shall be removed from the work area.

2. General Conditions for Covered Activities

The following general measures apply to any covered maintenance activity pursuant to the project activities:

2.1 Category Evaluation. As part of preparing each Annual Work Plan (see Section 3.1 below), OCPW Operations and Maintenance will submit a written request to OCPW Regulatory Permits for maintenance projects deemed necessary within stream channels, containing the location and dimension of the channel, volume and type of materials proposed, and site photographs. A qualified biologist will evaluate site for potential impacts to fish and wildlife resources, particularly those considered sensitive, and shall determine if the stream is in Category 1, 2, 3, or 4. If the activity is proposed within a Category 2 or Category 3 channel, additional limitations or measures will be imposed by the qualified biologist if required to protect those resources. The qualified biologist will quantitatively describe the rationale for the determination of the category, and any additional limitations or conditions imposed on the work. If the activity is proposed within a Category 4 channel, the activity is not authorized by the Maintenance Program and is subject to separate authorization.

2.2 Biological Surveys in Appropriate Habitat Prior to Maintenance Activities. Prior to any sediment removal, vegetation control (by herbicide application, mowing, or

discing), or repair work in channels or flood management basins that contain habitat suitable for fish and wildlife resources, Permittee shall conduct appropriate desk and field investigations (as determined by a qualified biologist) to determine if any sensitive species have the potential to occur. This information, including the name and contact information of the qualified biologist, shall be submitted to the agencies with the Annual Work Plan.

2.3 Pre-Project Wildlife Habitat Surveys. At least thirty (30) days prior to the commencement of any regulated activity within a Category 2 or 3 Channel, Permittee shall have a qualified biologist perform wildlife habitat surveys. Data collected during the surveys shall include at least: a written description of the general habitat types occurring within the channel, identification of observed wildlife species, a list of sensitive species known to occur within the region, and a description of the potential for sensitive species to occur on-site. This information, along with copies of all field notes taken during the surveys, shall be made available upon request from the agencies. The document can be in memorandum format and provided via e-mail.

2.4 Pre-Project Vegetation Surveys. At least thirty (30) days prior to the commencement of any regulated activity, Permittee shall have a qualified biologist perform vegetation surveys of the portion of the channel where maintenance activities are proposed. Data collected during surveys shall include at least: quantitative data of native and non-native vegetation coverage of the channels, identification of observed native species, acreages of vegetation types occurring within the channel, a list of sensitive species known to occur within the region, and a description of the potential for sensitive species to occur on-site. This information, along with copies of all field notes taken during the surveys, shall be made available upon request from the agencies.

2.5 Project Photo-Documentation. Prior to commencement of work within the channel, Permittee shall photograph the project site and associated habitat. Spatial information shall be obtained with each photograph location (photopoint). Photopoints shall be collected in a repeatable manner and identified as permanent photopoints for additional maintenance activity reporting. Upon completion of maintenance activities, Permittee shall photograph the project site from the same identified photopoints, as described above. This information shall be made available to the agencies upon request.

3. Reporting Measures

Permittee shall meet all reporting measures described below and submit to the agencies.

3.1 Annual Work Plan. Permittee shall submit a Draft Annual Work Plan (AWP) to the agencies by May 1 of each year describing all maintenance projects proposed for the following year. The plan shall include at least the following information for each work site:

a. Identification of the channel and specific location of the work area within the channel, including aerial views of the site;
b. Identification of channel categories within and adjacent to the work area;
c. Dimensions of any existing structures, including slope measurements of constructed stream banks;
d. Total acreage within the channel impacted by the project;
e. Known biological constraints;
f. A quantitative description of acreage and habitat type of any areas to be temporarily impacted as a part of the maintenance activity;
g. Approximate volumes of types of material(s), that will be removed from or deposited within the channel;
h. Site-specific measures recommended by a qualified biologist that will occur prior to and during maintenance activities to reduce impacts to the maximum extent practicable; and
i. Pre-project photo-documentation

Upon receipt of the Draft AWP, the agencies shall have 30 calendar days to respond with any objections they may have to the proposed maintenance activities or stream category determinations stated in the Draft AWP. Any maintenance activities or stream category determinations for which agency objections have not been resolved within 30 calendar days of receipt of the Draft AWP shall be omitted from the Draft AWP. OCPW shall issue to the agencies a Final AWP containing the maintenance activities and stream category determinations for which the agencies have no objections no earlier than 31 calendar days after the date of issuance of the Draft AWP but no later than June 14 of each year.

The Final AWP shall be authorized only after OCPW has obtained a formal response from the SWRCB. If the SWRCB has no objections to the Final AWP, SWRCB shall issue a Notice of Applicability (NOA) to OCPW verifying the acceptability of the Final AWP. If the SWRCB objects to one or more maintenance activities or stream category determinations, SWRCB shall issue a Notice of Exclusion (NOE) to OCPW documenting these objections. Any objections stated in the SWRCB's NOE shall be excluded from the Authorized AWP. If the SWRCB does not issue an NOA or NOE to OCPW 60 calendar days after receipt of the Draft AWP then OCPW may presume that SWRCB does not object to the AWP and may proceed with the activities included in the Final AWP.

Additional work within approved waterbodies or bridges can be added to the Final Annual Work Plan throughout the year, as needed, through written requests to the agencies.

3.2 Annual Monitoring Project Report. Permittee shall submit an Annual Monitoring Project Report to the agencies by September 1 of each year in which an AWP is completed. The report shall include at least the following:

a. Maintenance projects completed as identified in the AWP, verification that all maintenance activities conducted were accomplished in accordance with the applicable permit, or clarification of differences between proposed impacts identified in the AWP versus actual impacts; Maintenance projects completed under this project

that were not anticipated as a part of the AWP. Information for these projects should include at least the information required as a part of the AWP, above;

b. Data collected as described in General Conditions 2.3, 2.4 and 2.5 for maintenance activities identified in the AWP as well as maintenance activities that were completed that were not anticipated as part of the AWP;

c. For projects where revegetation was a component, the report shall include a detailed description of the revegetation efforts in light of the defined performance criteria, representative photographs taken from designated photo-stations, remedial measures enacted or planned if necessary to ensure revegetation success. Projects from previous years shall also be included in each annual report until revegetation success has been achieved;

d. An evaluation of the success or failure of the avoidance measures designed to protect the fish and wildlife resources that the proposed projects this permit covers may substantially adversely affect; and

e. A discussion of any factors that could increase the predicted adverse impacts on fish and wildlife resources, and a description of the resources that may be adversely affected.

3.3 Notification Prior to Work. Covered maintenance activities identified in Table 1, when performed within Category 1 and Category 2 channels shall not require further notice to the agencies. Covered maintenance activities within a Category 3 Channel require Permittee to notify the agencies, in writing, at least 30 days prior to initiation of maintenance activities. A notice to proceed would be required in writing (email or letter) from the Corps for covered maintenance activities within a Category 3 Channel prior to regulated activities within waters of the United States.

3.4 Crossing Maintenance Report. When maintenance is proposed at a stream crossing or its associated structure(s), Permittee shall submit a Crossing Maintenance Report (CMR) to the agencies. The CMR shall be submitted at least 30 days prior to any work at the crossing. The CMR shall include at least: identification of proposed activities; existing conditions within the vicinity; information regarding previous Notifications or Notifications of Emergency Work near the crossing; additional measures to protect fish and wildlife resources; a determination regarding the adequacy of the crossing to pass peak flows without increasing flow velocities; and information regarding the crossing's compliance with FGC sections 5901 (fish passage) and 5937 (sufficient water for fish).

3.5 Sensitive Species Observations. Permittee shall be responsible for reporting all observations of threatened /endangered species or of species of special concern to CDFW's Natural Diversity Data Base (CNDDB) within ten (10) days of sighting.