

CALIFORNIA COASTAL COMMISSION

South Coast Area Office
200 Oceangate, Suite 1000
Long Beach, CA 90802-4302
(562) 590-5071



ADDENDUM

W6b

Click here to go to
original staff report

January 6, 2014

TO: Coastal Commissioners and Interested Parties

FROM: South Coast District Staff

SUBJECT: ADDENDUM TO **ITEM W6b**, COASTAL COMMISSION PERMIT APPLICATION #**5-13-0851** FOR THE COMMISSION MEETING OF **January 8, 2014**.

Corrections to Staff Report

Commission staff recommends a correction to the language of the Administrative Permit to the County of Orange for a Five-year Long Term Routine Maintenance Plan for routine, minimal impact maintenance of existing flood control facilities and bridges crossing waterways within the coastal zone by replacing the word “construction” with “maintenance” throughout the staff report findings and in the recommended special conditions. No new “construction” is proposed or recommended for approval under this CDP application only maintenance of existing structures.

Deleted language is in ~~strike through~~ and new language is shown in **bold, italic underline**:

On the bottom of Page 4 of the staff report:

Biological Resources

As the project areas are over or within creek and river channels there is always the possibility for special status species and habitats of concern to be found in the project(s) vicinity. The type of routine maintenance activities proposed are not expected to cause substantial impacts to special-status species or ESHA. Areas known to be ESHA and areas known to be inhabited by special-status species are included in this proposed manual. Less than significant impacts to coastal resources are expected due to the brief ~~construction~~**maintenance** period and the minimal amount of heavy work proposed for the project area(s). However, due to the potential for some sites to be in proximity to sensitive habitat, there is a potential for indirect impacts during ~~construction~~**maintenance** such as activities of equipment or personnel outside designated construction areas, erosion, water runoff, soil disturbances that enhance germination and proliferation of nonnative and invasive plants species.

To avoid adverse impacts to biological resources during ~~construction~~**maintenance activities**, the applicant proposes general avoidance and minimization BMP measures. As proposed, the applicant plans to conduct work outside of the bird nesting season, erect temporary fencing to keep personnel and equipment outside of any areas identified as sensitive; to have a biologist approve all parking and staging areas; to clean and inspect all ~~construction~~**maintenance**

equipment of mud or other debris that may contain invasive plants/seeds prior to arrival at the site and before leaving the site. Furthermore, parking and staging is proposed to take place along existing paved service roads (outside drainage channel).

On the bottom of page 5:

B. WATER QUALITY

The proposed development has a potential for discharge of polluted runoff from the project site into nearby coastal waters. The storage or placement of ~~construction~~ maintenance material, debris, or waste in a location where it could be discharged into coastal waters would result in an adverse effect on the marine environment. To reduce the potential for ~~construction~~ maintenance related impacts on water quality, the Commission imposes special conditions requiring, but not limited to, the appropriate storage and handling of ~~construction~~ maintenance equipment and materials to minimize the potential of pollutants to enter coastal waters. Therefore, the Commission finds that the proposed development, as conditioned, conforms to Sections 30230 and 30231 of the Coastal Act regarding the protection of water quality to promote the biological productivity of coastal waters and to protect human health.

Special Conditions, on the bottom of page 7:

- 1) **Eelgrass Survey.** Any proposed maintenance activities that would result in bottom sediment disturbance in the coastal zone reaches of Talbert Channel (D02) and Huntington Channel (D01) shall require submittal of pre and post ~~construction~~ maintenance eelgrass surveys as follows:

A. ~~Pre-Construction~~ Maintenance Eelgrass Survey. A valid pre-~~construction~~ maintenance eelgrass (*Zostera marina*) survey shall be completed during the period of active growth of eelgrass (typically March through October). The pre-~~construction~~ maintenance survey shall be completed prior to the beginning of construction and shall be valid until the next period of active growth. The survey shall be prepared in full compliance with the “Southern California Eelgrass Mitigation Policy” Revision 8 (except as modified by this special condition) adopted by the National Marine Fisheries Service and shall be prepared in consultation with the California Department of Fish and Game. The applicant shall submit the eelgrass survey for the review and approval of the Executive Director within five (5) business days of completion of each eelgrass survey and in any event no later than fifteen (15) business days prior to commencement of any development. If the eelgrass survey identifies any eelgrass within the project area which would be impacted by the proposed project, the development shall require an amendment to this permit from the Coastal Commission or a new coastal development permit.

B. ~~Post-Construction~~ Maintenance Eelgrass Survey. If any eelgrass is identified in the project area by the survey required in subsection A of this condition above, within one month after the conclusion of ~~construction~~ maintenance, the applicant shall survey the project site to determine if any eelgrass was adversely impacted. The survey shall be

prepared in full compliance with the “Southern California Eelgrass Mitigation Policy” Revision 8 (except as modified by this special condition) adopted by the National Marine Fisheries Service and shall be prepared in consultation with the California Department of Fish and Game. The applicant shall submit the post-~~construction~~ **maintenance** eelgrass survey for the review and approval of the Executive Director within thirty (30) days after completion of the survey. If any eelgrass has been impacted, the applicant shall replace the impacted eelgrass at a minimum 1.2:1 ratio on-site, or at another location, in accordance with the Southern California Eelgrass Mitigation Policy. All impacts to eelgrass habitat shall be mitigated at a minimum ratio of 1.2:1 (mitigation:impact). The exceptions to the required 1.2:1 mitigation ratio found within SCEMP shall not apply. Implementation of mitigation shall require an amendment to this permit or a new coastal development permit unless the Executive Director determines that no amendment or new permit is required.

- 2) **Pre-~~construction~~ **Maintenance** *Caulerpa Taxifolia* Survey.** Any proposed maintenance activities that would result in bottom sediment disturbance in the coastal zone reaches of Talbert Channel (D02) and Huntington Channel (D01) shall require submittal of pre-~~construction~~ **maintenance** *Calurpa Taxifolia* survey.

Special Conditions, on the bottom of page 7:

- 5) **Storage of ~~Construction~~ **Maintenance** Materials, Mechanized Equipment and Removal of Construction Debris.** The permittee shall comply with the following ~~construction~~**maintenance**-related requirements and shall do so in a manner that complies with all relevant local, state and federal laws applicable to each requirement:
- (a) No demolition or ~~construction~~**maintenance** materials, debris, or waste shall be placed or stored where it may enter sensitive habitat, receiving waters or a storm drain, or be subject to wave, wind, rain, or tidal erosion and dispersion.
 - (b) No demolition or ~~construction~~**maintenance** equipment, materials, or activity shall be placed in or occur in any location that would result in impacts to environmentally sensitive habitat areas, streams, wetlands or their buffers.
 - (c) Any and all debris resulting from demolition or ~~construction~~**maintenance** activities shall be removed from the project site within 24 hours of completion of the project.
 - (d) Demolition or ~~construction~~**maintenance** debris and sediment shall be removed from work areas each day that demolition or ~~construction~~**maintenance** occurs to prevent the accumulation of sediment and other debris that may be discharged into coastal waters.
 - (e) All trash and debris shall be disposed in the proper trash and recycling receptacles at the end of every ~~construction~~**maintenance** day.
 - (f) The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or ~~construction~~**maintenance**.

- (g) Debris shall be disposed of at a legal disposal site or recycled at a recycling facility. If the disposal site is located in the coastal zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place unless the Executive Director determines that no amendment or new permit is legally required.
- (h) All stock piles and ~~construction~~maintenance materials shall be covered with a sheeting material that will prevent dispersal of the stock pile and ~~construction~~maintenance materials, enclosed on all sides, and shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil.
- (i) ~~Construction~~maintenance equipment or activity shall not occur outside the staging or storage area.
- (j) Public parking areas shall not be used for staging or storage of equipment.
- (k) Habitat areas shall not be used as staging or storage areas.
- (l) Machinery and equipment shall be maintained and washed in confined areas specifically designed to control runoff and contaminants. Thinners or solvents shall not be discharged into sanitary or storm sewer systems.
- (m) The discharge of any hazardous materials into any receiving waters shall be prohibited.
- (n) Spill prevention and control measures shall be implemented to ensure the proper handling and storage of petroleum products and other ~~construction~~maintenance materials. Measures shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff. The area shall be located as far away from the receiving waters and storm drain inlets as possible.
- (o) Best Management Practices (BMPs) and Good Housekeeping Practices (GHPs) designed to prevent spillage and/or runoff of demolition or ~~construction~~maintenance-related materials, and to contain sediment or contaminants associated with demolition or ~~construction~~maintenance activity, shall be implemented prior to the on-set of such activity.
- (p) All BMPs shall be maintained in a functional condition throughout the duration of ~~construction~~maintenance activity.

CALIFORNIA COASTAL COMMISSION

South Coast Area Office
200 Oceangate, Suite 1000
Long Beach, CA 90802-4302
(562) 590-5071



W6b

Staff: Liliana Roman – LB

Date: December 19, 2013

ADMINISTRATIVE PERMIT

Application No. **5-13-0851**

Applicant: **County of Orange, Public Works**

Project

Description: Five-year Long Term Routine Maintenance Plan for routine, minimal impact maintenance of existing flood control facilities and bridges crossing waterways within the coastal zone.

Project

Location: Multiple existing flood control facilities within 11 watersheds and four bridges crossing waterways within the coastal zone in Orange County (Refer to Exhibit #2).

EXECUTIVE DIRECTOR'S DETERMINATION

The findings for this determination, and for any special conditions, appear on subsequent pages.

NOTE: P.R.C. Section 30624 provides that this permit shall not become effective until it is reported to the Commission at its next meeting. If one-third or more of the appointed membership of the Commission so request, the application will be removed from the administrative calendar and set for public hearing at a subsequent Commission meeting. Our office will notify you if such removal occurs.

This permit will be reported to the Commission at the following time and place:

Wednesday, January 8, 2014 9:00 am
Catamaran Resort Hotel
3999 Mission Blvd.
San Diego, CA 92109

IMPORTANT - Before you may proceed with development, the following must occur:

Pursuant to 14 Cal. Admin. Code Sections 13150(b) and 13158, you must sign the enclosed duplicate copy acknowledging the permit's receipt and accepting its contents, including all conditions, and return it to our office. Following the Commission's meeting, and once we have received the signed acknowledgement and evidence of compliance with all special conditions, we will send you a Notice of Administrative Permit Effectiveness.

BEFORE YOU CAN OBTAIN ANY LOCAL PERMITS AND PROCEED WITH DEVELOPMENT, YOU MUST HAVE RECEIVED BOTH YOUR ADMINISTRATIVE PERMIT AND THE NOTICE OF PERMIT EFFECTIVENESS FROM THIS OFFICE.

CHARLES LESTER

Executive Director

By: Liliana Roman

Title: Coastal Program Analyst

STANDARD CONDITIONS:

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date on which this permit is voted on by the Commission. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Interpretation. Any questions of intent or interpretation of any term or condition will be resolved by the Executive Director or the Commission.
4. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

SPECIAL CONDITIONS: See pages six to ten.

EXECUTIVE DIRECTOR'S DETERMINATION (continued):

The Executive Director hereby determines that the proposed development is a category of development, which, pursuant to PRC Section 30624, qualifies for approval by the Executive Director through the issuance of an Administrative Permit. Subject to Standard and Special Conditions as attached, said development is in conformity with the provisions of Chapter 3 of the Coastal Act of 1976 and will not have any significant impacts on the environment within the meaning of the California Environmental Quality Act. If located between the nearest public road and the sea, this development is in conformity with the public access and public recreation policies of Chapter 3.

FINDINGS FOR EXECUTIVE DIRECTOR'S DETERMINATION:

A. PROJECT DESCRIPTION

The proposed project is a consolidated Long-Term Routine Maintenance Permitting Program to streamline the resource agencies permitting process for routine maintenance of multiple existing flood control facilities (i.e., channels, storm drain pipes, flap gates, pump stations, sediment basins, etc.) and existing bridges crossing over waterways located in the coastal zone of Orange County. The permit shall be valid for a 5-year period and may be extended for subsequent 5-year periods by amendment to this coastal development permit, if approved. Exhibit #1 provides a vicinity map showing all of Orange County and representative photographs of typical flood control facilities. Exhibit #2 provides tables outlining the coastal facilities (i.e., flood control facilities and bridges) included in the proposed maintenance program. Exhibit #3 provides a list of all proposed maintenance activities. Exhibit #4 includes the proposed Routine Maintenance Manual for facilities within the coastal zone in its entirety. Exhibit #5 is a table of maintenance activities excluded from specific facilities. And Exhibit #6 includes maps of Marine Protected Areas (MPAs) in Orange County and descriptions of activities regulated within the MPAs.

The proposed maintenance manual includes routine maintenance of flood control channels and basins/dams limited to: cleaning, silt removal, slope maintenance/repair, landscape maintenance and vegetation control/removal, insect/rodent control, rip-rap repair, structural inspection/cleaning, fence inspection/replacement, repair of storm drain pipes, underdrains, and headwalls, removal/replacement of concrete lining, and repair/backfill of washouts. Bridge maintenance activities would include maintenance of waterway side slope and invert cladding, repair of concrete bridge elements within the channel and cleaning and painting of steel bridge members. No new facilities or expansion of existing facilities is proposed under this Routine Maintenance Manual.

Proposed maintenance activities would occur on an as-needed basis and are proposed to occur outside of the bird nesting season (maintenance to occur between September 15 and March 15). Should routine maintenance work be necessary during the bird nesting season, adequate mitigation measures will be employed. As proposed and as required by **Special Condition #1**, Routine maintenance activities proposed for the year will be identified during the spring and fall inspections and will be based on annual channel scour surveys. The maintenance criteria is generally based on the need to maintain a channel's designed flood carrying capacity and maintain bridges in good condition to maintain adequate access. As proposed, prior to the start of the maintenance season (July 1), OC Public Works would submit to the Executive Director a detailed Annual Routine Maintenance Activities Report listing the proposed maintenance activities at facilities within the coastal zone for that year for concurrence that the proposed maintenance work meets the requirements of this coastal development permit (i.e., would result in no or less than minimal environmental impact). The Annual Routine Maintenance Activities report would provide site specific information such as type of proposed maintenance, schedule of work, maintenance access and staging plans and equipment; site specific reconnaissance within each of the facilities proposed for maintenance and acreage of jurisdictional impacts, if any, and habitat surveys if any habitat/vegetation has developed at the site over time if there is a risk of adverse impact by the specific type of maintenance proposed at that particular site. The Annual Routine Maintenance Activities Report and reconnaissance surveys would be public documents available for review by the public or any interested parties. The proposed maintenance activities will be deemed approved if

staff does not respond within 60 days of submittal of the Annual Maintenance Activities Report. If the proposed routine maintenance activity is deemed to have a potential risk of adverse environmental impacts, then the applicant agrees to apply for that maintenance activity under a separate coastal development permit for full review.

Additionally, after receiving Commission staff concurrence that the proposed maintenance activity falls within the parameters of this CDP approval, the applicant proposes to submit “as-built/maintenance drawings” within 60 days of completion of each maintenance activity. The drawings would include color photographs that clearly show all components of the maintenance activity along with a site plan noting the location of each photographic viewpoint. If the submit “as-built/maintenance drawings” identify that the maintenance activity was in any way inconsistent with the project as originally propositioned in the Annual Maintenance Activities Report and/or resulted in an unanticipated temporary or permanent adverse impact, the applicant agrees to apply for a separate coastal development permit to mitigate the unanticipated adverse impact (i.e. a restoration and monitoring plan).

Water Quality

To address water quality during maintenance activities, the applicant proposes and **Special Condition #5** requires, implementation of BMPs for temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling and other non-storm water BMPs.

Visual Resources

As proposed, should maintenance activities require fence replacement, the applicant will submit fence plans and consider when feasible, a post and cable fence design, or other similar, visually open design, consistent with the provisions of public safety and minimizing adverse impacts to public views and public access.

Biological Resources

As the project areas are over or within creek and river channels there is always the possibility for special status species and habitats of concern to be found in the project(s) vicinity. The type of routine maintenance activities proposed are not expected to cause substantial impacts to special-status species or ESHA. Areas known to be ESHA and areas known to be inhabited by special-status species are included in this proposed manual. Less than significant impacts to coastal resources are expected due to the brief construction period and the minimal amount of heavy work proposed for the project area(s). However, due to the potential for some sites to be in proximity to sensitive habitat, there is a potential for indirect impacts during construction such as activities of equipment or personnel outside designated construction areas, erosion, water runoff, soil disturbances that enhance germination and proliferation of nonnative and invasive plant species.

To avoid adverse impacts to biological resources during construction, the applicant proposes general avoidance and minimization BMP measures. As proposed, the applicant plans to conduct work outside of the bird nesting season, erect temporary fencing to keep personnel and equipment outside of any areas identified as sensitive; to have a biologist approve all parking and staging areas; to clean and inspect all construction equipment of mud or other debris that may contain

invasive plants/seeds prior to arrival at the site and before leaving the site. Furthermore, parking and staging is proposed to take place along existing paved service roads (outside drainage channel).

Marine Protected Areas (MPAs)

MPAs along the southern California coast (Point Conception to California/Mexico border) have been in effect in state waters since January 1, 2012. State waters in this area cover approximately 2,351 square miles of ocean, estuary and offshore rock/island waters. MPAs in Orange County are identified in Exhibit #6. A number of County of Orange flood control facilities are located within Marine Protected Areas (MPAs).

MPAs provide additional protection of resources than those already provided by the CA Dept. of Fish and Wildlife Code Section 2860 regulating commercial and recreational fishing and any other taking of marine species. Overall, MPAs make it unlawful to injure, damage, take, or possess any living or nonliving marine, geological, or cultural marine resource with certain exemptions. Any human use that would compromise protection of the species of interest, natural community or habitat, or geological, cultural, or recreational features, may be restricted by the CA Dept. of Fish and Wildlife as specified in the CA Code of Regulations (Title 14, Section 632); however, routine operation and maintenance of artificial structures (i.e., flood control facilities and bridges) inside the conservation area is allowed. The proposed project is for routine maintenance of flood control facilities and bridges; proposed maintenance activities would occur within those facilities or within the County's right-of-way and existing maintenance roads.

In order to ensure that the proposed five-year Long Term Routine Maintenance Plan will not result in adverse impacts to sensitive habitat or resources, certain maintenance activities are excluded from areas with known habitat values as noted on Exhibit #5. Furthermore, in areas where eelgrass has been known to thrive, the applicant proposes and **Special Condition #2 and #3** requires pre- and post-maintenance eelgrass and *Calurpa Taxifolia* surveys.

Other Agency Approvals

The applicant has applied for and is in the process of receiving the following regulatory agency approvals:

- Regional General Permit (RGP) from the U.S. Army Corps of Engineers for coverage under Section 404 of the Clean Water Act
- Long Term Streambed Alteration Agreement for Routine Maintenance from the CA Department of Fish and Wildlife for coverage under Section 1602 of the CA Fish and Game Code
- Certification from the State Water Resources Control Board and Santa Ana/San Diego Regional Water Quality Control Boards for coverage under Section 401 of the Clean Water Act

B. WATER QUALITY

The proposed development has a potential for discharge of polluted runoff from the project site into nearby coastal waters. The storage or placement of construction material, debris, or waste in a location where it could be discharged into coastal waters would result in an adverse effect on the marine environment. To reduce the potential for construction related impacts on water quality, the Commission imposes special conditions requiring, but not limited to, the appropriate storage and handling of construction equipment and materials to minimize the potential of pollutants to enter coastal waters. Therefore, the Commission finds that the proposed development, as conditioned, conforms to Sections 30230 and 30231 of the Coastal Act regarding the protection of water quality to promote the biological productivity of coastal waters and to protect human health.

C. LOCAL COASTAL PROGRAM

The proposed development is occurring within areas that cross multiple jurisdictions with that of the Commission's original permit jurisdiction.

Section 30601.3 of the Coastal Act provides for the issuance of coastal development permits directly by the Commission with the agreement of the applicant, the local government and the Commission through its executive director consent to consolidate the permit action, provided that public participation is not substantially impaired by that review consolidation. As the project site crosses jurisdictional boundaries, and the applicant submitted the coastal development permit application directly to the Commission, the applicant and the Cities of Huntington Beach, Dana Point, Laguna Niguel, and Laguna Beach agree to a consolidated permit action by the Commission. Consequently, the standard of review is the Coastal Act and not the local jurisdiction LCPs, which may be used as guidance. As conditioned, the proposed development is consistent with Chapter 3 of the Coastal Act and with the certified LCP for the area.

D. CALIFORNIA ENVIRONMENTAL QUALITY ACT

As conditioned, there are no feasible alternatives or additional feasible mitigation measures available that would substantially lessen any significant adverse effect that the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is the least environmentally damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

This permit is granted subject to the following special conditions:

SPECIAL CONDITIONS:

- 1) **Agreement Regarding Annual Routine Maintenance Activities Report.** As proposed by the applicant, prior to the start of the maintenance season (July 1), OC Public Works will submit to the Executive Director a detailed Annual Routine Maintenance Activities Report listing the proposed maintenance activities at facilities within the coastal zone for that year to all of the resource regulatory agencies for concurrence that the proposed maintenance work meets the requirements of this coastal development permit (i.e., would result in no or less than minimal

environmental impact). At minimum, the Annual Routine Maintenance Activities report shall include:

- (a) Type of proposed maintenance, schedule of work, maintenance access and staging plans and equipment;
- (b) site specific reconnaissance within each of the facilities proposed for maintenance and acreage of jurisdictional impacts, if any;
- (c) habitat surveys if any habitat/vegetation has developed at the site over time if there is a risk of adverse impact by the specific type of maintenance proposed at that particular site;
- (d) the Annual Routine Maintenance Activities Report and reconnaissance surveys shall be public documents available for review by the public or any interested parties;
- (e) the proposed maintenance activities will be deemed approved if staff does not respond within 60 days of submittal of the Annual Maintenance Activities Report;
- (f) if the proposed routine maintenance activity is deemed to have a potential risk of adverse environmental impacts, then the applicant shall apply for that maintenance activity under a separate coastal development permit.
- (g) the applicant shall submit "as-built/maintenance drawings" within 60 days of completion of each maintenance activity.

- 2) **Eelgrass Survey.** Any proposed maintenance activities that would result in bottom sediment disturbance in the coastal zone reaches of Talbert Channel (D02) and Huntington Channel (D01) shall require submittal of pre and post construction eelgrass surveys as follows:

A. Pre-Construction Eelgrass Survey. A valid pre-construction eelgrass (*Zostera marina*) survey shall be completed during the period of active growth of eelgrass (typically March through October). The pre-construction survey shall be completed prior to the beginning of construction and shall be valid until the next period of active growth. The survey shall be prepared in full compliance with the "Southern California Eelgrass Mitigation Policy" Revision 8 (except as modified by this special condition) adopted by the National Marine Fisheries Service and shall be prepared in consultation with the California Department of Fish and Game. The applicant shall submit the eelgrass survey for the review and approval of the Executive Director within five (5) business days of completion of each eelgrass survey and in any event no later than fifteen (15) business days prior to commencement of any development. If the eelgrass survey identifies any eelgrass within the project area which would be impacted by the proposed project, the development shall require an amendment to this permit from the Coastal Commission or a new coastal development permit.

B. Post Construction Eelgrass Survey. If any eelgrass is identified in the project area by the survey required in subsection A of this condition above, within one month after the conclusion of construction, the applicant shall survey the project site to determine if any eelgrass was adversely impacted. The survey shall be prepared in full compliance with the "Southern California Eelgrass Mitigation Policy" Revision 8 (except as modified by this

special condition) adopted by the National Marine Fisheries Service and shall be prepared in consultation with the California Department of Fish and Game. The applicant shall submit the post-construction eelgrass survey for the review and approval of the Executive Director within thirty (30) days after completion of the survey. If any eelgrass has been impacted, the applicant shall replace the impacted eelgrass at a minimum 1.2:1 ratio on-site, or at another location, in accordance with the Southern California Eelgrass Mitigation Policy. All impacts to eelgrass habitat shall be mitigated at a minimum ratio of 1.2:1 (mitigation:impact). The exceptions to the required 1.2:1 mitigation ratio found within SCEMP shall not apply. Implementation of mitigation shall require an amendment to this permit or a new coastal development permit unless the Executive Director determines that no amendment or new permit is required.

- 3) **Pre-construction *Caulerpa Taxifolia* Survey.** Any proposed maintenance activities that would result in bottom sediment disturbance in the coastal zone reaches of Talbert Channel (D02) and Huntington Channel (D01) shall require submittal of pre-construction *Calurpa Taxifolia* survey.
- A. Not earlier than 90 days nor later than 30 days prior to commencement or re-commencement of any development authorized under this coastal development permit (the “project”), the applicant shall undertake a survey of the project area and a buffer area at least 10 meters beyond the project area to determine the presence of the invasive alga *Caulerpa taxifolia*. The survey shall include a visual examination of the substrate.
 - B. The survey protocol shall be prepared in consultation with the Regional Water Quality Control Board, the California Department of Fish and Game, and the National Marine Fisheries Service.
 - C. Within five (5) business days of completion of the survey, the applicant shall submit the survey:
 - (1) for the review and approval of the Executive Director; and
 - (2) to the Surveillance Subcommittee of the Southern California Caulerpa Action Team (SCCAT). The SCCAT Surveillance Subcommittee may be contacted through William Paznokas, California Department of Fish & Game (858/467-4218) or Robert Hoffman, National Marine Fisheries Service (562/980-4043), or their successors.
 - D. If *Caulerpa taxifolia* is found within the project or buffer areas, the applicant shall not proceed with the project until 1) the applicant provides evidence to the Executive Director that all *C. taxifolia* discovered within the project and buffer area has been eliminated in a manner that complies with all applicable governmental approval requirements, including but not limited to those of the California Coastal Act, or 2) the applicant has revised the project to avoid any contact with *C. taxifolia*. No revisions to the project shall occur without a Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

- 4) **Assumption of Risk, Waiver of Liability and Indemnity.** By acceptance of this permit, the applicant acknowledges and agrees (i) that the site(s) may be subject to hazards from slope instability, erosion, and flooding; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.
- 5) **Storage of Construction Materials, Mechanized Equipment and Removal of Construction Debris.** The permittee shall comply with the following construction-related requirements and shall do so in a manner that complies with all relevant local, state and federal laws applicable to each requirement:
- (a) No demolition or construction materials, debris, or waste shall be placed or stored where it may enter sensitive habitat, receiving waters or a storm drain, or be subject to wave, wind, rain, or tidal erosion and dispersion.
 - (b) No demolition or construction equipment, materials, or activity shall be placed in or occur in any location that would result in impacts to environmentally sensitive habitat areas, streams, wetlands or their buffers.
 - (c) Any and all debris resulting from demolition or construction activities shall be removed from the project site within 24 hours of completion of the project.
 - (d) Demolition or construction debris and sediment shall be removed from work areas each day that demolition or construction occurs to prevent the accumulation of sediment and other debris that may be discharged into coastal waters.
 - (e) All trash and debris shall be disposed in the proper trash and recycling receptacles at the end of every construction day.
 - (f) The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or construction.
 - (g) Debris shall be disposed of at a legal disposal site or recycled at a recycling facility. If the disposal site is located in the coastal zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place unless the Executive Director determines that no amendment or new permit is legally required.
 - (h) All stock piles and construction materials shall be covered with a sheeting material that will prevent dispersal of the stock pile and construction materials, enclosed on all sides, and shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil.
 - (i) Construction equipment or activity shall not occur outside the staging or storage area.
 - (j) Public parking areas shall not be used for staging or storage of equipment.
 - (k) Habitat areas shall not be used as staging or storage areas.

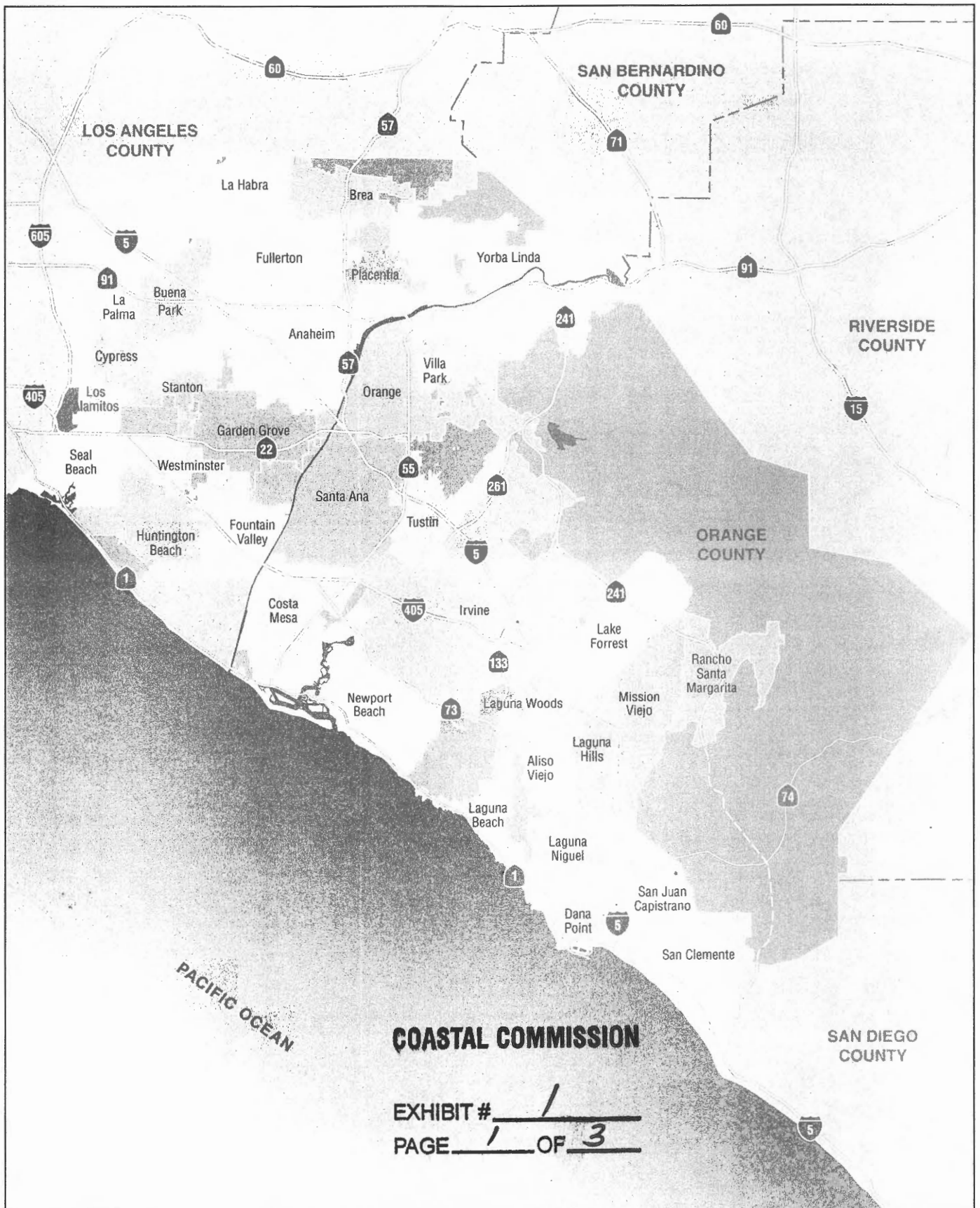
- (l) Machinery and equipment shall be maintained and washed in confined areas, specifically designed to control runoff and contaminants. Thinners or solvents shall not be discharged into sanitary or storm sewer systems.
- (m) The discharge of any hazardous materials into any receiving waters shall be prohibited.
- (n) Spill prevention and control measures shall be implemented to ensure the proper handling and storage of petroleum products and other construction materials. Measures shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff. The area shall be located as far away from the receiving waters and storm drain inlets as possible.
- (o) Best Management Practices (BMPs) and Good Housekeeping Practices (GHPs) designed to prevent spillage and/or runoff of demolition or construction-related materials, and to contain sediment or contaminants associated with demolition or construction activity, shall be implemented prior to the on-set of such activity.
- (p) All BMPs shall be maintained in a functional condition throughout the duration of construction activity.

ACKNOWLEDGMENT OF PERMIT RECEIPT/ACCEPTANCE OF CONTENTS:

I/We acknowledge that I/we have received a copy of this permit and have accepted its contents including all conditions.

Applicant's Signature

Date of Signing

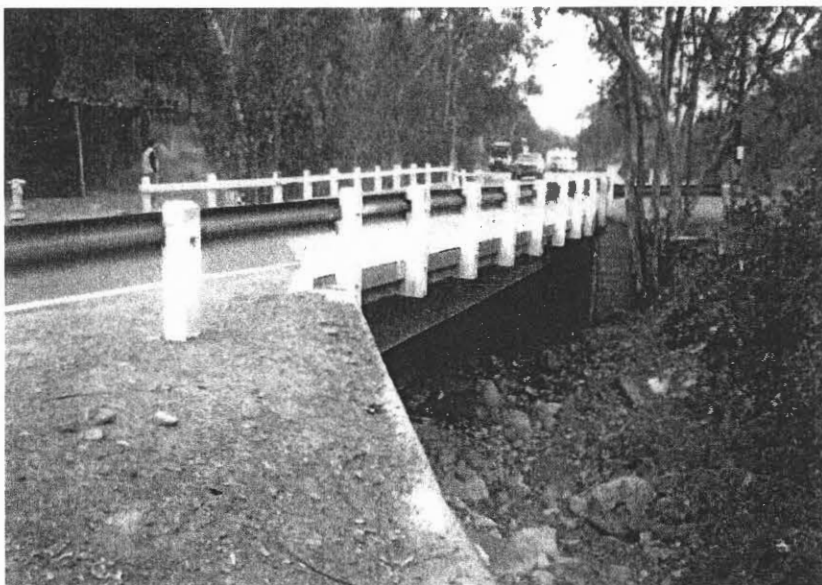




COASTAL COMMISSION

EXHIBIT # 1
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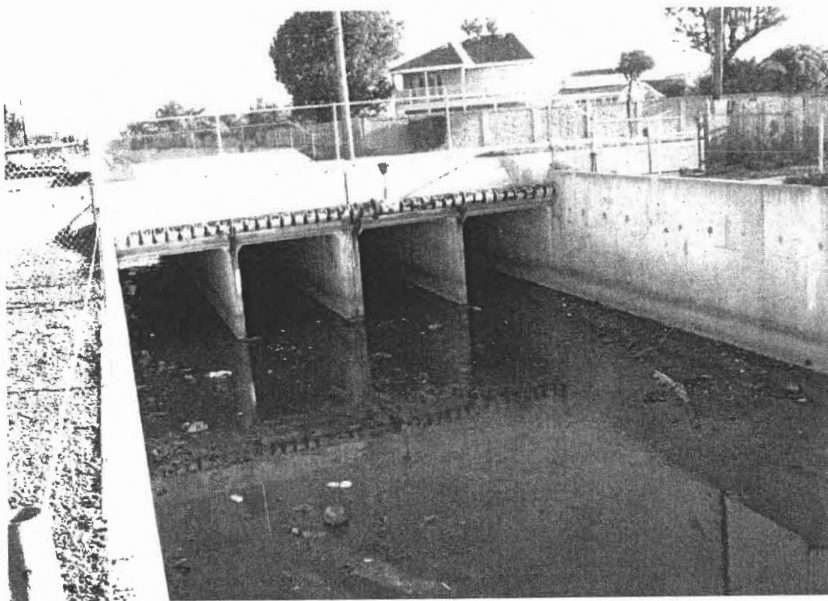
View of CO3 Anaheim-Barber concrete channel
(Bridge 55C0404).



View of natural channel and Bridge 55C0175.



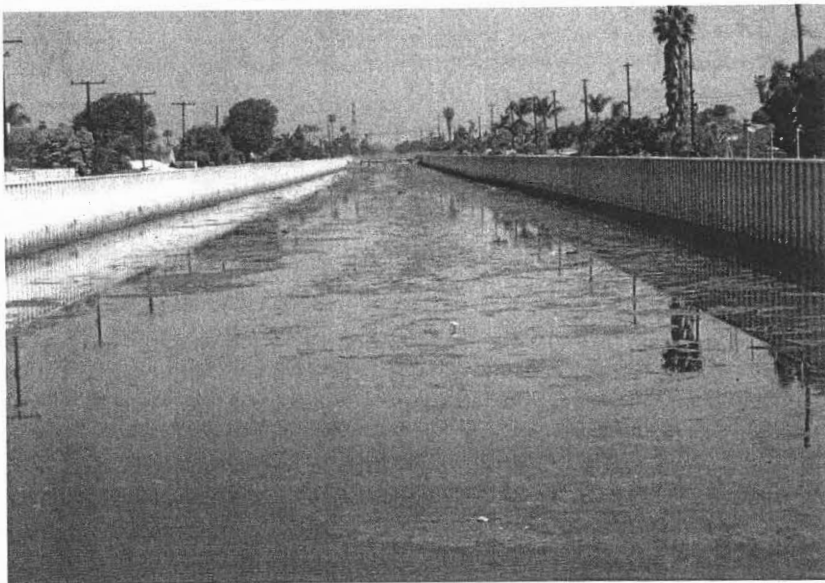
View of F13 Redhill Channel and Bridge 55C0574.



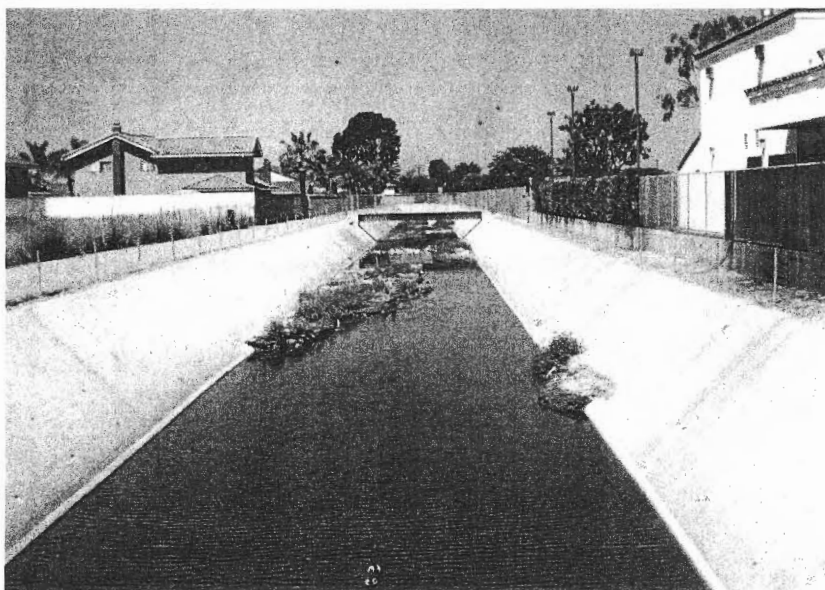
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Representative concrete box facility
(Talbert Channel).



Representative metal sheet channel
(Talbert Channel).



Representative trapezoidal channel with concrete
sides and earthen bottom (Talbert Channel).

Table 1. Orange County Watersheds

Watershed	Main Tributaries Within The Watershed	Total Watershed Acreage	Watershed Acreage In Coastal Zone
A	San Gabriel River/Coyote Creek	31,952	0
B	Carbon Creek	16,534	0
C	Los Alamitos/East Garden/Bolsa Chica	57,421	8,431
D	Tablert/Greenville Banning Channel	16,575	1,744
E	Lower Santa Ana River	118,611	136
F	San Diego Creek	86,881	487
G	East Costa Mesa/Newport Beach	10,258	4,569
H	Los Trancos/Muddy Creek	8,639	8,270
I	Laguna Canyon Channel	8,136	4,826
J	Aliso Creek	23,517	5,457
K	Salt Creek	4,741	971
L	San Juan Creek	103,684	997
M	Prima Deshecha/Segunda Deshecha	24,602	1,873

*Acreages are approximate/Source is digitized mapping

Table 2. List of County-Owned Bridges within the Coastal Zone

Caltrans Bridge No	Structure (Street or Railroad) Name	Intersected Waterway	Drainage Facility No	Facility Description
55C-0400	Edinger Ave	Bolsa-Chica Chan	C02	Trap. Channel. Natural bottom. Riprap sides
55C-0561	Island Way	Dana Pt. Harbor	--	Trap.-channel. Conc. Sides. Soft-bottom
55C-0103	Hamilton Ave-Victoria St	Santa Ana River	E01	Trap-channel. Riprap sides. Soft-bottom
55C-0283	Broadway	Sunset Chan	C07	Sheet pile walls. Soft bottom

Notes:
1. Each bridge is defined by a Caltrans Bridge Number for the sole purpose of Caltrans inspections. These bridge structures are not located within Caltrans right-of-way. Encroachment permits and/or other approvals from Caltrans are not required for OCFCD maintenance and operations.

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Table 5. Flood Control Facilities

County Facility Name	Drainage Name	Watershed	Channel Type	Channel Slope Type	Channel Bottom Type	Within Coastal Zone?	Regional Board	Location (From)	Location (to)	Channel Width (feet)	Channel Height (feet)	Percent Underdrains within 50 Ft.	Percent Unshipped within 100 Ft.	Percent Underdrains within 500 Ft.	303(d) List Water?
COOP02	Not Available	C- Westminster	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	W	Bolsa Ave	54	Not Available	51	57	45	No
COOP02	Not Available	C- Westminster	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	W	Bolsa Ave	66	Not Available	0	3	20	No
COOP02	Not Available	C- Westminster	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	W	Bolsa Ave	78	Not Available	0	0	2	No
COOP02	Not Available	C- Westminster	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	W	Bolsa Ave	54	Not Available	0	0	2	No
COOP51	Sat Beach Pump Station	C- Westminster	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	W	Bolsa Ave	42	Not Available	55	64	58	No
CO01	Los Alamitos Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Westminster Ave	Not Applicable	32	13	16	27	28	No
CO01	Los Alamitos Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Westminster Ave	22	20	13	0	0	5	No
CO02	Bolsa Chica Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Courtney Dr	Bolsa Chica St	84	13	11	16	54	No
CO02	Bolsa Chica Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Edinger Ave	Bolsa Chica St	84	12	0	1	30	No
CO02	Bolsa Chica Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Bolsa Chica	Bolsa Chica St	64	11.5	0	0	1	No
CO02	Bolsa Chica Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Bolsa Chica St	Westminster Ave	120	Not Available	0	0	0	No
CO02	Bolsa Chica Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Bolsa Chica St	Westminster Ave	120	Not Available	0	0	2	No
CO02	Bolsa Chica Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Bolsa Chica St	Westminster Ave	54	13	0	0	3	No
CO03	Anaheim Barber City Channel	C- Westminster	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	Bolsa Chica St	405	16	10	27	29	24	No
CO04	Westminster Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Perimeter Rd	Bolsa Chica St	48	10	0	0	0	No
CO05	East Garden Grove-Wintersburg Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Pacific Coast Hwy	Warner Ave	120	14	45	59	93	No
CO05	East Garden Grove-Wintersburg Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Pacific Coast Hwy	Warner Ave	70	13.5	13	51	89	No
CO05	East Garden Grove-Wintersburg Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Pacific Coast Hwy	Warner Ave	70	13.5	1	48	85	No
CO05	East Garden Grove-Wintersburg Channel	C- Westminster	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Pacific Coast Hwy	Warner Ave	70	13	0	22	47	No
DO01	Huntington Beach Channel	D- Talbert	Metal Sheet Channel	Concrete	Concrete	Yes	Santa Ana Region	Cristine Dr	Maguilla St	50	12	12	35	52	No
DO01	Huntington Beach Channel	D- Talbert	Metal Sheet Channel	Concrete	Concrete	Yes	Santa Ana Region	Newland St	Newland St	80	13	14	20	36	No
DO01	Huntington Beach Channel	D- Talbert	Metal Sheet Channel	Concrete	Concrete	Yes	Santa Ana Region	Newland St	Not Applicable	80	13	35	49	55	No
DO01	Huntington Beach Channel	D- Talbert	Metal Sheet Channel	Concrete	Concrete	Yes	Santa Ana Region	Newland to Allantia	Not Applicable	75	13	100	100	92	No
DO02	Talbert Channel	D- Talbert	Metal Sheet Channel	Concrete	Concrete	Yes	Santa Ana Region	Brookhurst St	Pacific Coast Hwy	150	5	62	69	67	No
DO02	Talbert Channel	D- Talbert	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Brookhurst St	Pacific Coast Hwy	60	11	0	7	40	No
DO02	Talbert Channel	D- Talbert	Trapezoidal	Concrete	Concrete	Yes	Santa Ana Region	Brookhurst St	Not Applicable	60	11	0	19	43	No
DO02	Talbert Channel	D- Talbert	Trapezoidal	Concrete	Concrete	Yes	Santa Ana Region	Banning Ave	Brookhurst St	60	11	7	24	43	No
DO02	Talbert Channel	D- Talbert	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	Banning Ave	Brookhurst St	120	11	0	0	15	No
DO02	Talbert Channel	D- Talbert	Metal Sheet Channel	Concrete	Concrete	Yes	Santa Ana Region	Banning Ave	Not Applicable	9	8	0	0	7	No
DO03	Greenville-Banning Channel	D- Talbert	Rectangle	Concrete	Concrete	Yes	Santa Ana Region	Banning Ave	Hamilton Ave	120	11	2	5	4	No
DO03	Greenville-Banning Channel	D- Talbert	Rectangle	Concrete	Concrete	Yes	Santa Ana Region	Brookhurst St	Swan Dr	60	20.5	0	0	29	No
DO03	Greenville-Banning Channel	D- Talbert	Rectangle	Concrete	Concrete	Yes	Santa Ana Region	Brookhurst St	Swan Dr	60	20.5	0	0	46	No
DO03	Greenville-Banning Channel	D- Talbert	Rectangle	Concrete	Concrete	Yes	Santa Ana Region	Brookhurst St	Swan Dr	60	20	0	0	47	No
EO01	Santa Ana River Channel	E- Santa Ana River	Trapezoidal	Concrete	Concrete	Yes	Santa Ana Region	Pacific Coast Hwy	Victoria St	410	19	1	4	18	No
EO01	Santa Ana River Channel	E- Santa Ana River	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Pacific Coast Hwy	Victoria St	375	20	0	0	0	No
FO01	Santa Ana-Delhi Channel	F- San Diego Creek	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	University Dr	Costa Mesa Fwy	16	15	84	91	73	No
FO01	Santa Ana-Delhi Channel	F- San Diego Creek	Trapezoidal	Riprap	Earthen	Yes	Santa Ana Region	University Dr	Costa Mesa Fwy	16	15	63	62	50	No
FO01	Santa Ana-Delhi Channel	F- San Diego Creek	Trapezoidal	Concrete	Concrete	Yes	Santa Ana Region	University Dr	Costa Mesa Fwy	16	15	52	49	42	No
FO01	Santa Ana-Delhi Channel	F- San Diego Creek	Trapezoidal	Concrete	Concrete	Yes	Santa Ana Region	University Dr	Costa Mesa Fwy	16	Not Available	58	52	41	No
FO01	Santa Ana-Delhi Channel	F- San Diego Creek	Rectangle	Concrete	Concrete	Yes	Santa Ana Region	University Dr	Costa Mesa Fwy	55	15	47	49	40	No
GO0001	Not Available	G- Newport Bay	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	Coast Hwy	Saint James Rd	60	Not Available	47	50	46	No
GOOP01	Not Available	G- Newport Bay	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	Coast Hwy	Saint James Rd	54	Not Available	37	39	33	No
GO02	East Coast Mesa Channel	G- Newport Bay	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	Westciff Dr	Not Applicable	72	Not Available	36	36	40	No
GO02	East Coast Mesa Channel	G- Newport Bay	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Westciff Dr	Not Applicable	12	6	0	0	0	No
GO02	East Coast Mesa Channel	G- Newport Bay	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	Westciff Dr	Not Applicable	15	7	0	0	0	No
GO02	East Coast Mesa Channel	G- Newport Bay	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Westciff Dr	Not Applicable	12	6	0	0	0	No
GO02	East Coast Mesa Channel	G- Newport Bay	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	Westciff Dr	Not Applicable	15	7	0	0	0	No
GO02	East Coast Mesa Channel	G- Newport Bay	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Westciff Dr	Not Applicable	12	6	0	0	0	No
GO03	Santa Isabel Channel	G- Newport Bay	Trapezoidal	Earthen	Earthen	Yes	Santa Ana Region	Wright Ave	Not Applicable	8	5	100	100	76	No
GO03	Santa Isabel Channel	G- Newport Bay	Concrete Box/Pipe	Concrete	Concrete	Yes	Santa Ana Region	Wright Ave	Not Applicable	84	Not Available	84	75	57	No
H005	Not Available	H- Newport Coast	Rectangle	Concrete	Concrete	Yes	Santa Ana Region	Ocean Front	Crest Dr	18	3	78	75	64	No
100P002	Not Available	I- Laguna Canyon	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Ocean Front	Coast Hwy	66	Not Available	22	27	41	No
100P002	Not Available	I- Laguna Canyon	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Glennys St	Wilson St	66	Not Available	0	0	11	No
100P002	Not Available	I- Laguna Canyon	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Glennys St	Wilson St	66	Not Available	0	0	0	No
100P002	Not Available	I- Laguna Canyon	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Wilson St	Saint Anns Dr	42	Not Available	0	0	0	No
100P002	Not Available	I- Laguna Canyon	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Wilson St	Saint Anns Dr	60	Not Available	0	0	0	No
100P002	Not Available	I- Laguna Canyon	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Saint Anns Dr	Griffith Way	54	Not Available	0	0	0	No
100P002	Not Available	I- Laguna Canyon	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Griffith Way	Griffith Way	60	Not Available	0	0	0	No
100P002	Not Available	I- Laguna Canyon	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Griffith Way	Not Applicable	54	Not Available	0	0	0	No
100P002	Not Available	I- Laguna Canyon	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Griffith Way	Park Ave	5	4.5	0	0	0	No
100P003	Bluebird Storm Channel	I- Laguna Canyon	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Park Ave	Wendell Ter	54	Not Available	0	0	13	No
100P003	Bluebird Storm Channel	I- Laguna Canyon	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Not Applicable	Catalina	84	Not Available	19	20	30	No
102	Laguna Canyon Channel	I- Laguna Canyon	Rectangle	Concrete	Concrete	Yes	San Diego Region	Beach St	Ocean Ave	14.5	7.5	0	0	1	No
102	Laguna Canyon Channel	I- Laguna Canyon	Rectangle	Concrete	Concrete	Yes	San Diego Region	Beach St	Acacia Dr	14.5	8	0	0	0	No
102	Laguna Canyon Channel	I- Laguna Canyon	Rectangle	Concrete	Concrete	Yes	San Diego Region	Acacia Dr	Forest Ave	14.5	10	0	0	9	No
102	Laguna Canyon Channel	I- Laguna Canyon	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Forest Ave	Not Applicable	14.5	8	0	0	18	No

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Table 5. Flood Control Facilities

County Facility Name	Drainage Name	Watershed	Channel Type	Channel Slope Type	Channel Bottom Type	Within Coastal Zone?	Regional Board	Location (from)	Location (to)	Channel Width (feet)	Channel Height (feet)	Percent Undersized within 50 Ft.	Percent Undersized within 100 Ft.	Percent Undersized within 500 Ft.	300(d) List Water?
M00501	Not Available	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Pacific Coast Hwy	Not Applicable	54	Not Available	31	30	28	No
M00504	Not Available	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Between Ave La Costa & Los Alamos	Not Applicable	72	Not Available	37	23	26	No
M00505	Not Available	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Not Applicable	Not Applicable	72	Not Available	0	0	3	No
M00507	Marqueta Storm Channel	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Not Applicable	Not Applicable	8	7	93	82	72	No
M00507	Marqueta Storm Channel	M - San Clemente	Trapezoidal	Concrete	Concrete	Yes	San Diego Region	Railroad	Linda Ln	8	2	38	49	65	No
M00507	Marqueta Storm Channel	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Not Applicable	El Camino Real	48	Not Available	5	8	9	No
M00508	Not Available	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Not Applicable	Not Applicable	66	Not Available	43	26	8	No
M01	Debris Barrier near Grande Vista	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Pacific Coast Hwy	Bay Dr	11	11	6	4	10	No
M01	Debris Barrier near Grande Vista	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Pacific Coast Hwy	Vaqueros	10	10	0	0	17	Yes
M01S01	Casadita Storm Channel	M - San Clemente	Rectangular	Concrete	Concrete	Yes	San Diego Region	Vaqueros	Not Applicable	10	9	0	0	18	Yes
M01S01	Casadita Storm Channel	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Bay Dr	Not Applicable	7	7	0	0	14	No
M01S01	Casadita Storm Channel	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Bay Dr	Not Applicable	7	8	13	15	16	No
M02	Segunda Deshecho Channel	M - San Clemente	Rectangular	Concrete	Concrete	Yes	San Diego Region	Palm Dr	Casadita	25	11	88	68	75	Yes
M02	Segunda Deshecho Channel	M - San Clemente	Rectangular	Concrete	Concrete	Yes	San Diego Region	Not Applicable	Not Applicable	25	10	59	48	71	Yes
M02	Segunda Deshecho Channel	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Not Applicable	Not Applicable	25	9	34	38	67	Yes
M02	Segunda Deshecho Channel	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	El Camino Real	Pico	20.7	10	56	55	58	Yes
M02	Segunda Deshecho Channel	M - San Clemente	Rectangular	Concrete	Concrete	Yes	San Diego Region	Pico	Not Applicable	20.7	11.5	50	50	50	Yes
M02	Segunda Deshecho Channel	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Pico	Not Applicable	10	10	34	32	43	Yes
M02	Segunda Deshecho Channel	M - San Clemente	Rectangular	Concrete	Concrete	Yes	San Diego Region	Pico	Not Applicable	18	14	3	9	31	Yes
M02	Segunda Deshecho Channel	M - San Clemente	Rectangular	Concrete	Concrete	Yes	San Diego Region	Pico	Los Molinos Dr	18	15	8	9	20	Yes
M02	Segunda Deshecho Channel	M - San Clemente	Rectangular	Concrete	Concrete	Yes	San Diego Region	Los Molinos Dr	Rincon Ct	18	13	0	0	0	Yes
M02	Segunda Deshecho Channel	M - San Clemente	Rectangular	Concrete	Concrete	Yes	San Diego Region	Rincon Ct	Los Molinos Dr	18	12.5	0	0	1	Yes
M02	Segunda Deshecho Channel	M - San Clemente	Rectangular	Concrete	Concrete	Yes	San Diego Region	Los Molinos Dr	Not Applicable	20.7	10	0	0	1	Yes
M02	Segunda Deshecho Channel	M - San Clemente	Concrete Box/Pipe	Concrete	Concrete	Yes	San Diego Region	Los Molinos Dr	Not Applicable	10	8	0	0	0	Yes
M02	Segunda Deshecho Channel	M - San Clemente	Rectangular	Concrete	Concrete	Yes	San Diego Region	Los Molinos Dr	Pico	20.7	10	0	0	1	Yes

Table 4. Proposed Flood Control Maintenance 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 from the scheduling section. 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, and trailer	Spray from Spring to Fall to eliminate or control weeds not killed by pre-emergent spraying. Spray all channels two or three times per year. Would be performed following a predetermined plan from scheduling.
Manual Removal of Arundo	Cutting, chipping and removal of Arundo. This activity is performed to remove unwanted vegetation from County right-of-way and flood control channels.	Chipper Truck, Chipper, Trash Compactor, Crew Truck with Toilet, 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 weeds not killed by pre-emergent spraying. Will be performed following a predetermined plan from scheduling. During the months of March through August a biologist may be 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. Rodent activity level increases during Spring and Summer.
Insect Control	Application of Insecticides to control insects on flood control properties, roadway right-of-way, contract cities and county parks.	Spray Truck (with 50 gallon spray unit 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 Stakebed and Welder	Performed on a routine basis.
Channel Cleaning	The flood control channel general maintenance cleaning consists of those items 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, inverts, expansion joints,	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.

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
	weep holes and side inlets.		
Graffiti Pressure Wash	Removal of vandalized markings on fences, flood control channel walls and traffic signs with a steam cleaner	Utility Truck and Steam Cleaner	Performed per request from Graffiti Hotline and County Inspection Staff (signs, controller boxes, light posts, etc.= 5 SF each).
Graffiti Paint/Spray	Removal of vandalized markings on fences, flood control channel walls and signs on County flood control facilities.	Utility Truck and Steam Cleaner	Performed per request from Graffiti Hotline and County Inspection Staff (signs= 5 SF each).
Graffiti Hand Roll	Painting over of vandalized markings on fences, flood control 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 (signs, controller boxes, light posts, etc.= 5 SF each).
Flap Gate Inspection/Maintenance	The inspection and maintenance of flap gates, which includes identifying needed repairs on flap gates and the performance of repairs or complete gate replacement.	Utility Truck	Flap gates would be inspected and serviced annually. The work should be started in Spring and completed in time to allow for necessary repairs prior to the next rain season.
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 to eliminate odor and health hazards. Pumps are serviced and overhauled, as required, to provide peak operating efficiency. Improvements, such as electronic controls, would be installed in order to improve operation and reliability.
Operate Pump Stations	The operation and inspection of pump stations during the storm season would be conducted in order to ensure the operation and control of these facilities. Includes work during storm situations.	Utility Truck	Operation would be initialized after moderate to heavy rainfall. 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. The coordination with a vacuum truck crew may be necessary.
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. The use of vacuum trucks would be coordinated with the manual crew.
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	Pickup and Utility Truck	Operations and Maintenance would be performed routinely and on an as-needed basis.

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
	operation, service and cleaning of equipment, instrumentation checks, and periodic inspections.		
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 from scheduling. Recurring problem drains are checked and cleaned, as needed after storm events.
Install Storm Drain Pipe for Flood Alleviation	The installation or repair of pipe would be conducted in order to provide drainage for flood control purposes.	Back hoe, Dump truck with Trailer, Construction Crew Truck, Air Compressor, Flatbed Truck, Mixer, and Excavator	Installation of piping in order to provide adequate drainage. Replace (or repair) pipe where flow is restricted and/or the pipe is damaged and is not functioning as designed, creating a drainage problem.
Install Underdrain	The installation of an underground drainage system to provide effective subsurface ground water control.	Back hoe, Haul Truck with Trailer, Haul Truck, Construction Crew Truck, Air Compressor, Flatbed Truck, Mixer, and Concrete Saw	Installation of underdrain when persistent surface and subsurface ground water is damaging County facilities or creating a hazard.
Fabricate and Install Headwalls	The installation or repair of pipe headwalls in order to provide drainage for park, flood and roadway right-of-way.	Back hoe, Dump truck with Trailer, Construction Crew Truck, Air Compressor, Flatbed Truck, Mixer, and Concrete Saw	Fabrication and installation of headwalls in order to provide adequate drainage. 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.	Crew Cab Truck, Dump Truck, Bobcat, Backhoe and Trailer, Compressor, Excavator, and Concrete Saw	This work would be performed as needed. Repair or replacement lining and reinforcement of steel would be conducted, as directed by the County Engineer.
Install Roadway Storm Drain Pipe	The installation or repair of pipe to provide drainage for park and road right-of-way.	Back hoe, Dump Truck with Trailer, Construction Crew, Truck, Air Compressor, Flatbed Truck,	Installation of roadway storm drain pipe in order to provide adequate drainage. Replace (or repair) pipe where flow is restricted and/or the pipe is damaged and is not functioning as designed, creating a drainage problem.

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Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
		Mixer, and Tender	
Vault Cleaning	The cleaning of sub drain vaults in order 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 <u>Underground Crew - Safety Harness, Life line, Detector (oxygen gas), and hydrogen sulfide</u>	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 with a large loader and may include stockpiling debris removed until dry.	Tender Truck, Dump Truck, and Large Loader	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.
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 the bottom of 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. Rip-rap 24 inches in diameter or smaller should be compacted.
Slope Repair/Rip-Rap Preparation	Mechanical removal of dirt from channel slopes and channel bottom in preparation for rip-rap lining installation in order to restore design cross section. Repair and replace damaged concrete lining, compact channel slope (provide soil or rock compaction into slope in order to inhibit subsequent erosion. Slopes should be compacted to provide a base for the final invert surface)	Tender Truck, Crane, Excavator and Dump Trucks	Performed when erosion is (a) undermining adjacent property, (b) creating a turbulence problem, and/or (c) undercutting drainage structures or access roads. Reoccurring problems are candidates for rock installation.
Install Rip-Rap	The installation-replacement of	Tender Truck,	The installation-replacement of rip-rap would be

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
	rock rip-rap on channel slopes would be conducted in order to stabilize channel slopes and prevent erosion. Preparation of slopes prior to riprap installation; new Rip Rap placement 0.10 acre or less.	Dump Trucks, Crane/Excavator and Dozer	performed in order to protect slopes that have experienced past slope erosion (as identified by inspectors and approved by the County's Operations and Maintenance Manager).
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 channel levees.	Tender Truck, Dump Trucks, Rubber T Roller, and Motor Grader	Performed under direction of engineer to provide flood control capacity.
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 Off Road Water Truck	Arundo would be removed if required per the CEQA.
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. Drains requiring a vac truck are noted in the inventory and referred to scheduling.
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, Water Truck, Tender Truck, Off Road Truck, and Off Road Water Truck	Annual DSOD Inspection

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OC PUBLIC WORKS

OC ENGINEERING

**COUNTY-WIDE ROUTINE MAINTENANCE MANUAL
FOR FACILITIES WITHIN THE COASTAL ZONE**

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1.0 INTRODUCTION

This maintenance manual has been prepared to support a new regulatory permitting approach for routine, minimal impact maintenance throughout the Coastal Zone in the County of Orange. A County-Wide Maintenance Manual (which included inland and coastal facilities) and Adopted Mitigated Negative Declaration was approved by the County Board of Supervisors on May 21, 2013. This manual is a smaller subset of the approved manual and focuses on maintenance of facilities solely within the Coastal Zone in support of the Project's Coastal Development Permit (CDP). The approach seeks to limit the piecemeal of state and federal regulatory permit applications for routine maintenance activities. The proposed County-Wide Long-Term Routine Maintenance Permitting Program would allow routine maintenance to occur within multiple existing flood control facilities and beneath existing bridges crossing over waterways located throughout the County of Orange.

Flood control maintenance activities would include channel and basin/dam maintenance (i.e., cleaning, silt removal, slope maintenance/repair), landscape maintenance and vegetation control/removal, insect/rodent control, rip-rap installation and repair, structural inspection/cleaning, installation of storm drain pipes and underdrains, fabrication and installation of headwalls, removal/replacement of concrete lining, and the repair and backfill of washouts.

Bridge maintenance activities would include maintenance of waterway side slope and invert cladding in the immediate vicinity of the bridge (repair/restoration of cladding immediately upstream, downstream and under the bridge, whose purpose is to prevent stream flow from undermining the bridge structure, including riprap, grouted riprap, and concrete), 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.

1.1 PROJECT LOCATION

Maintenance would occur within multiple existing flood control facilities and beneath existing bridges crossing over waterways located throughout the County of Orange. Refer to Appendix A for Exhibits 3-1 through 3-5d, which illustrate the coastal facilities included in this maintenance program.

1.2 COUNTY WATERSHEDS

The maintenance activities occur within the 13 watersheds located within the County, covering approximately 799.3 square miles; however, only portions of 11 watersheds are located in the Coastal Zone within the County. The watersheds are defined in Table 1, Orange County Watersheds.

**Table 1. Orange County Watersheds**

Watershed	Main Tributaries Within The Watershed	Total Watershed Acreage	Watershed Acreage in Coastal Zone
A	San Gabriel River/Coyote Creek	31,952	0
B	Carbon Creek	16,534	0
C	Los Alamitos/East Garden/Bolsa Chica	57,421	8,431
D	Tablert/Greenville Banning Channel	16,575	1,744
E	Lower Santa Ana River	118,611	136
F	San Diego Creek	86,881	487
G	East Costa Mesa/Newport Beach	10,258	4,569
H	Los Francos/Muddy Creek	8,639	8,270
I	Laguna Canyon Channel	8,136	4,826
J	Aliso Creek	23,517	5,457
K	Salt Creek	4,741	971
L	San Juan Creek	103,684	997
M	Prima Deshecha/Segunda Deshecha	24,602	1,873

*Acreages are approximate/Source is digitized mapping

2.0 PURPOSE OF MANUAL

The mission of the Orange County Flood Control District (OCFCD) is to protect the County of Orange (County) from the threat and damage of flooding. The OCFCD currently owns over 309 miles of flood channels, dams, pump stations, flood control basins, and other infrastructure. Such assets require regular maintenance which is subject to environmental regulations on a project-by-project basis. Periodic maintenance and repair of the County's existing flood control facilities are required in order to meet the following goals:

- Maintain functional capacity of the facility;
- Minimize the risk of damage;
- Optimize flood-control capacity;
- Prevent flooding and erosion of adjacent roadways and properties during storm events;
- Meet the flood control requirements and conditions of the U.S. Army Corps of Engineers' (ACOE) PL84-99 Program; and,
- Meet maintenance requirements set forth by the Division of Safety of Dams (DSOD)

The mission of Orange County Bridge Maintenance unit is to implement repairs recommended by the California Department of Transportation (Caltrans) in its federally-mandated biennial bridge inspections and special inspections. Timely repairs keep the bridges structurally and



functionally safe for public use, and preserve the County's bridge infrastructure investment. The County owns and maintains 54 bridges carrying or crossing over unincorporated County roadways. Forty-nine (49) of these bridges cross over County waterways and one crosses over a wildlife corridor. The remaining four are pedestrian bridges over County highways. Of these bridges, only four (4) are located within the Coastal Zone.

OC Public Works, on behalf of the OCFCD and Bridge Maintenance, is responsible for securing local, state and federal environmental and regulatory approvals for maintenance activities. Generally approvals have included Clean Water Act (Section 404 and 401) permits from the ACOE and California Regional Water Quality Control Boards; Streambed Alteration Agreements (California Fish and Game Code 1600) from the California Department of Fish and Game; and, Coastal Development Permits from the California Coastal Commission. Historically, OC Public Works has obtained environmental and regulatory approvals for maintenance activities on a project-by-project basis, even for activities that have minimal impact due to maintenance type, size, or location. OC Public Works is currently seeking long-term approvals for future routine maintenance activities throughout the County that would accomplish the following objectives:

- Decrease, or in many cases eliminate, drainage-by-drainage applications and associated studies;
- Establish a consistent approach for avoiding and minimizing impacts to regulated environmental resources;
- Provide a comprehensive or "watershed" approach to regulatory approvals; and
- Limit the piecemeal of state and federal regulatory permit applications for routine, minimal impact maintenance activities.

3.0 FACILITIES

3.1 FLOOD CONTROL FACILITIES

Flood control facility types include, but are not limited to the following:

- 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; and,
- Trapezoidal Channel with Riprap Sides and Earthen/ Riprap Bottom.
- Flood Control/Sediment Basins

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The facilities are illustrated on Exhibits 3-1 through 3-5d in Appendix A. Additionally, the breakdown of facilities within the Coastal Zone is included in the facility database contained in Appendix B.

3.2 BRIDGE FACILITIES

The County has four bridge facilities over waterways located within the Coastal Zone, which are listed in Table 2, List of County-Owned Bridges within the Coastal Zone. Each line item includes the watershed drainage facility identifier and a description of the waterway environment at the bridge.

Table 2. List of County-Owned Bridges within the Coastal Zone

Caltrans Bridge No.	Structure (Street or Railroad) Name	Intersected Waterway	Drainage Facility No.	Facility Description
55C-0400	Edinger Ave	Bolsa-Chica Chan	C02	Trap. Channel. Natural bottom. Riprap sides
55C-0561	Island Way	Dana Pt. Harbor	—	Trap.-channel. Conc. Sides. Soft-bottom
55C-0103	Hamilton Ave-Victoria St	Santa Ana River	E01	Trap-channel. Riprap sides. Soft-bottom
55C-0283	Broadway	Sunset Chan	C07	Sheet pile walls. Soft bottom
Notes: 1. Each bridge is defined by a Caltrans Bridge Number for the sole purpose of Caltrans inspections. These bridge structures are not located within Caltrans right-of-way. Encroachment permits and/or other approvals from Caltrans are not required for OCFCD maintenance and operations.				

4.0 PROPOSED FLOOD CONTROL MAINTENANCE ACTIVITIES

The OCFCD proposes routine maintenance activities within OCFCD right-of-way situated throughout the Coastal Zone in the 11 on-site watersheds. Maintenance activities would be performed on an as needed basis unless otherwise specified and would include channel and basin/dam maintenance (i.e., cleaning, silt removal, slope maintenance/repair), landscape maintenance and vegetation control/removal, insect/rodent control, rip-rap installation and repair, structural inspection/cleaning, installation of storm drain pipes and underdrains, fabrication and installation of headwalls, removal/replacement of concrete lining, and the repair and backfill of washouts and slope failures. Refer to Table 3, Proposed Flood Control Maintenance Activities, for a detailed description of all proposed maintenance activities and required equipment. Table C1, located in Appendix C, presents each coastal facility, excluded maintenance activities and best management practices to be employed during each maintenance episode.

The OC Public Works Operations and Maintenance Division have the responsibility for the maintenance of the County's flood control facilities. The *OC Public Works Field Operations Manual*, dated July 2011, is used by County staff to conduct routine maintenance within the flood control facilities. The *2011 Field Operations Manual* is intended to provide, operate, and



maintain the County's facilities and regional resources. The *2011 Field Operations Manual* provides guidance in scheduling annual updates and provides performance methods and activity guidelines. Important management tools provided include:

- Guidelines for work activity;
- Performance-based budgeting;
- Distribution of work;
- Leveling manpower;
- Work control methods; and
- Use of equipment.

Table 3. Proposed Flood Control Maintenance 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 from the scheduling section. 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 from Spring to Fall to eliminate or control weeds not killed by pre-emergent spraying. Spray all channels two or three times per year. Would be performed following a predetermined plan from scheduling.
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 control channels.	Chipper Truck, Chipper, Trash Compactor, Crew Truck with Toilet, 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 weeds not killed by pre-emergent spraying. Will be performed following a predetermined plan from scheduling. During the months of March through August a biologist may be 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. Rodent activity level increases during Spring and Summer.
Insect Control	Application of insecticides to control insects on flood control properties, roadway right-of-way, contract cities and county parks.	Spray Truck (with 50 gallon spray unit 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 Stakebed and Welder	Performed on a routine basis.

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**Table 3. Proposed Flood Control Maintenance Activities
(continued)**

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
Channel Cleaning	The flood control channel general maintenance cleaning consists of those items 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, inverts, expansion joints, weep holes and side inlets.	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 control channel walls and traffic signs with a steam cleaner	Utility Truck, and Steam Cleaner	Performed per request from Graffiti Hotline and County Inspection Staff (signs, controller boxes, light posts, etc. = 5 SF each).
Graffiti Paint/Spray	Removal of vandalized markings on fences, flood control channel walls and signs on County flood control facilities.	Utility Truck and Steam Cleaner	Performed per request from Graffiti Hotline and County Inspection Staff (signs = 5 SF each).
Graffiti Hand Roll	Painting over of vandalized markings on fences, flood control 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 (signs, controller boxes, light posts, etc. = 5 SF each).
Flap Gate Inspection/Maintenance	The inspection and maintenance of flap gates, which includes identifying needed repairs on flap gates and the performance of repairs or complete gate replacement.	Utility Truck	Flap gates would be inspected and serviced annually. The work should be started in Spring and completed in time to allow for necessary repairs prior to the next rain season.
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 to eliminate odor and health hazards. Pumps are serviced and overhauled, as required, to provide peak operating efficiency. Improvements, such as electronic controls, would be installed in order to improve operation and reliability.
Operate Pump Stations	The operation and inspection of pump stations during the storm season would be conducted in order to ensure the operation and control of these facilities. Includes work during storm situations.	Utility Truck	Operation would be initialized after moderate to heavy rainfall. Manual control of the system would be required to completely empty the basin.



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**Table 3. Proposed Flood Control Maintenance Activities
(continued)**

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
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. The coordination with a vacuum truck crew may be necessary.
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. The use of vacuum trucks would be coordinated with the manual crew.
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 from scheduling. Recurring problem drains are checked and cleaned, as needed after storm events.
Install Storm Drain Pipe for Flood Alleviation	The installation or repair of pipe would be conducted in order to provide drainage for flood control purposes.	Back hoe, Dump truck with Trailer, Construction Crew Truck, Air Compressor, Flatbed Truck, Mixer, and Excavator	Installation of piping in order to provide adequate drainage. Replace (or repair) pipe where flow is restricted and/or the pipe is damaged and is not functioning as designed, creating a drainage problem.
Install Underdrain	The installation of an underground drainage system to provide effective subsurface ground water control.	Back hoe, Haul Truck with Trailer, Haul Truck, Construction Crew Truck, Air Compressor, Flatbed Truck, Mixer and Concrete Saw	Installation of underdrain when persistent surface and subsurface ground water is damaging County facilities or creating a hazard.

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**Table 3. Proposed Flood Control Maintenance Activities
(continued)**

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
Fabricate and Install Headwalls	The installation or repair of pipe headwalls in order to provide drainage for park, flood and roadway right-of-way.	Back hoe, Dump truck with Trailer, Construction Crew Truck, Air Compressor, Flatbed Truck, Mixer and Concrete Saw	Fabrication and installation of headwalls in order to provide adequate drainage. 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.	Crew Cab Truck, Dump Truck, Bobcat, Backhoe and Trailer, Compressor, Excavator and Concrete Saw	This work would be performed as needed. Repair or replacement lining and reinforcement of steel would be conducted, as directed by the County Engineer.
Install Roadway Storm Drain Pipe	The installation or repair of pipe to provide drainage for park and road right-of-way.	Back hoe, Dump Truck with Trailer, Construction Crew, Truck, Air Compressor, Flatbed Truck, Mixer and Tender	Installation of roadway storm drain pipe in order to provide adequate drainage. Replace (or repair) pipe where flow is restricted and/or the pipe is damaged and is not functioning as designed, creating a drainage problem.
Vault Cleaning	The cleaning of sub drain vaults in order 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 <u>Underground Crew</u> - Safety Harness, Life line, Detector (oxygen gas), and hydrogen sulfide	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 with a large loader and may include stockpiling debris removed until dry.	Tender Truck, Dump Truck, and Large Loader	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.
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 the bottom of 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.

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**Table 3. Proposed Flood Control Maintenance Activities
(continued)**

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
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. Rip-rap 24 inches in diameter or smaller should be compacted.
Slope Repair/Rip-Rap Preparation	Mechanical removal of dirt from channel slopes and channel bottom in preparation for rip-rap lining installation in order to restore design cross sections. Repair and replace damaged concrete lining, compact channel slope (provide soil or rock compaction into slope in order to inhibit subsequent erosion. Slopes should be compacted to provide a base for the final invert surface).	Tender Truck, Crane, Excavator and Dump Trucks	Performed when erosion is (a) undermining adjacent property, (b) creating a turbulence problem, and/or (c) undercutting drainage structures or access roads. Reoccurring problems are candidates for rock installation.
Install Rip-Rap	The installation of rock rip-rap on channel slopes would be conducted in order to stabilize channel slopes and prevent erosion. Preparation of slopes prior to riprap installation, new rip-rap placement 0.10 acre or less.	Tender Truck, Dump Trucks, Crane/Excavator and Dozer	The installation of rip-rap would be performed in order to protect slopes that have experienced past slope erosion (as identified by inspectors and approved by the County's Operations and Maintenance Manager).
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 channel levees.	Tender Truck, Dump Trucks, Rubber T Roller and Motor Grader	Performed under direction of engineer to provide flood control capacity.
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 Off Road Water Truck, Inmate and Contract Crews	Arundo would be removed if required as mitigation.

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**Table 3. Proposed Flood Control Maintenance Activities
(continued)**

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
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. Drains requiring a vac truck are noted in the inventory and referred to scheduling. 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 provide 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, Water Truck, Tender Truck, Off Road Truck, and Off Road Water Truck	Annual DSOD Inspection

5.0 PROPOSED BRIDGE MAINTENANCE ACTIVITIES

OC Public Works Bridge Maintenance proposes routine maintenance activities for existing County bridge facilities. Maintenance activities would include bridge concrete repair, cleaning and painting of bridge steel, and restoration of bridge scour protection measures. Refer to the following Table 4, *Proposed Bridge Maintenance Activities*, for a detailed description of each maintenance activity.

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Table 4. Proposed Bridge Maintenance Activities

Maintenance Type	Maintenance Description	Equipment Needed	Performance Criteria
Graffiti Paint/Spray	Removal of vandalized markings on fences, walls and traffic signals in the road right of way	Utility Truck	Performed per request from Graffiti Hotline and County Inspection staff (signs, controllers boxes, lights posts, etc. = 5 SF each).
Graffiti Hand Roll	Painting over vandalized markings on fences, walls and traffic signals in County right of way using a hand roller	Utility Truck	Performed per request from Graffiti Hotline and County Inspection staff (signs, controller boxes, light posts, etc. = 5 SF each).
Repair concrete structure damage below deck level	Pressure-Epoxy-Inject Cracks – below deck or on side of bridge	Air compressor, air & high-pressure water spray guns, Epoxy pressure-grout gun	Performed as recommended by Caltrans Bridge Inspection Reports or OC Public Works Bridge Maintenance staff
Repair concrete structure damage below deck level	Remove & replace unsound or spalled concrete – below deck level	Air compressor, air, sandblast & high-pressure water spray guns, generator, man-lift (access-permitting), concrete saw, chipping gun, towable concrete pump, ready-mix truck or drum mixer	
Repair concrete structure damage below deck level	Remove & replace unsound or spalled concrete – below deck level (temp. support required)	Air compressor, air, sandblast & high-pressure water spray guns, generator, man-lift (access-permitting), concrete saw, chipping gun, towable concrete pump, ready-mix truck or drum mixer, and temporary support system consisting of heavy timber or steel posts on timber cribbing and steel or wood cross-members	
Clean & paint bridge steel (above and/or below deck level)	Clean and paint steel girders – above or below deck	Air compressor, air & sandblast guns, man-lift (access-permitting), light scaffold, paint gun, tarps	
Restore scour protection measures at bridge	Slurry-fill scour recesses and restore eroded invert with grouted riprap	Bobcat or loader, dump truck, ready-mix truck, towable concrete pump	
Restore scour protection measures at bridge	Slurry-fill scour recesses and restore eroded invert with ungrouted riprap	Bobcat or loader, dump truck, ready-mix truck, towable concrete pump	
Restore scour protection measures at bridge	Slurry-fill scour recesses and restore eroded invert with concrete invert (including cutoff walls) extending to limits of bridge wingwalls, and grouted or ungrouted riprap aprons upstream and downstream	Bobcat or loader, dump truck, ready-mix truck, towable concrete pump	

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6.0 REGULATORY APPROVALS REQUIRED

Rather than continue to obtain individual maintenance coverage on a project-by-project basis from the regulatory agencies, the project proposes to obtain the above mentioned approvals, which would allow for County-wide reoccurring maintenance activities on an as-needed basis. In order to implement the proposed maintenance activities, OCFCD, with the assistance of OC Public Works proposes to obtain the following regulatory agency approvals:

- Regional General Permit(s) (RGP) from the U.S. Army Corps of Engineers (ACOE) for coverage under Section 404 of the a Clean Water Act (CWA);
- Long-Term Streambed Alteration Agreement for Routine Maintenance from the California Department of Fish and Wildlife (CDFW) for coverage under Section 1602 of the California Fish and Game Code;
- Water Quality Standards Certification from the State Water Resources Control Board (SWRCB), along with coordination with the Santa Ana and San Diego Regional Water Quality Control Boards (RWQCB), for coverage under Section 401 of the CWA; and
- Coastal Development Permit (CDP) from the California Coastal Commission (CCC) for coverage under the California Coastal Act.

7.0 MAINTENANCE ACTIVITIES AND PHASING

7.1 MAINTENANCE AND CONSTRUCTION

All haul/service routes would be designated along each of the channel's existing paved service roads (situated outside of the drainage channel). All sediment/debris created during maintenance would be hauled to an approved County facility (i.e. stockyard or landfill). Wet sediment would be left in an approved stockpile site or an OCFCD parcel to dry out (outside of jurisdictional areas and prior to transport) using the appropriate Best Management Practices (BMPs). When possible, and if conditions allow (determined on a project by project basis), sand use for beach replenishment may occur when approved by the regulatory agencies.

All activities and staging would be done within the existing OCFCD/OC Public Works right-of-way (or within the limits of prescriptive rights road right-of-way, using a temporary construction easement, where the County lacks an official right-of-way easement) using appropriate BMPs per the State General Construction Permit and Santa Ana/San Diego Regional Water Quality Control Board MS4 Permits. For some bridge maintenance, such as scour repairs, the work area may extend into temporary construction easements immediately adjacent to the roadway right-of-way. Per the County's *Operations Manual*, each area of staging would be sited as close as possible to the maintenance activity in order to maximize efficiency.

7.2 PHASING

Proposed maintenance activities would occur on an as-needed basis throughout the on-site facilities similar to present day. New facilities, nor the expansion of facilities, are proposed.

**7.3 SCHEDULE OF INSPECTION AND MAINTENANCE ACTIVITIES**

The proposed maintenance includes activities that will result in a minimal impact to the environment based on existing conditions of the facility and/or lack of environmental resources. Scheduling generally varies by maintenance type and facility type. It should be noted that this schedule is a guide and schedule times may vary. Although the proposed routine maintenance would not impact special status species, maintenance (other than surveys and inspection) in vegetated facilities should be completed outside of the nesting season (maintenance to occur between September 15 and March 15). Inspection activities shall be performed in compliance with the Endangered Species Act and Migratory Bird Treaty Act.

7.4 ROUTINE MAINTENANCE ACTIVITIES

Required routine maintenance activities will be identified during the spring and fall inspections and based on the annual channel scour surveys. The criteria for the necessary maintenance activities will vary across all facilities, and will be generally based on the need to provide the required flood carrying capacity, access and facility maintenance (e.g., inlets/outlets).

Prior to the start of the maintenance season (July 1), OC Public works will submit the proposed facilities and maintenance activities for that year to the regulatory agencies. At that time, a site reconnaissance will be conducted within each of the facilities that are proposed for maintenance. Information to be provided to the agencies prior to maintenance includes maintenance type, schedule of work, acreage of jurisdictional impacts, habitat present (if any), etc.

8.0 MITIGATION MEASURES

The following mitigation measures will be implemented.

MM-1, Nesting Birds. Prior to commencement of any maintenance activities between February 15 through August 31, a qualified biologist shall conduct a breeding behavior and nesting survey for birds protected by the United States Fish and Wildlife Service, California Department of Fish and Wildlife, the Migratory Bird Treaty Act, and California species of special concern within 300 feet of the project site (500 feet for raptors and owls). If any occupied nests of any sensitive species are discovered, construction activities within 300 feet of the nest (500 feet for raptors and owls) shall be monitored to ensure that construction noise levels do not exceed 65 dB peak within 100 feet of the nest until the nest is vacated and juveniles have fledged and there is no longer evidence of a second attempt at nesting. OC Public Works shall implement a larger buffer if the biologist recommends a larger buffer from the nest area.

MM-2, Maintenance Responsibilities and Debris Removal. OC Public Works shall comply with the following construction related requirements:

- A. No maintenance materials, equipment, debris, or waste shall be placed or stored where it may enter sensitive habitat, receiving waters or storm drain, or be subject to wave, wind, rain, or tidal erosion and dispersion.

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- B. Any and all debris resulting from maintenance activities, and any remaining maintenance materials, shall be removed from the project site within 24 hours of completion of the project.
- C. Maintenance debris and sediment shall be removed from work areas each day that demolition or construction occurs to prevent the accumulation of sediment and other debris that may be discharged into the coastal waters.
- D. Machinery or material not essential for project maintenance will not be allowed at any time in the intertidal zone.
- E. If turbid conditions are generated during maintenance a silt curtain will be utilized to control turbidity.
- F. Floating booms will be used to contain debris discharged into coastal waters and any debris will be removed as soon as possible but no later than the end of the each day.
- G. Non buoyant debris discharged into coastal waters will be recovered by divers as soon as possible after loss.
- H. All trash and debris shall be disposed in the proper trash and recycling receptacles at the end of every construction day.
- I. The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or construction.
- J. Debris shall be disposed of at a legal disposal site or recycled at a recycling facility. If the disposal site is located in the coastal zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place unless the Executive Director determines that no amendment or new permit is legally required.
- K. All stock piles and maintenance materials shall be covered, enclosed on all sides, shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil.
- L. Machinery and equipment shall be maintained and washed in confined areas specifically designed to control runoff. Thinners or solvents shall not be discharged into sanitary or storm sewer systems.
- M. The discharge of any hazardous materials into any receiving waters shall be prohibited.
- N. Spill prevention and control measures shall be implemented to ensure the proper handling and storage of petroleum products and other construction materials. Measures shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff. The area shall be located as far away from the receiving waters and storm drain inlets as possible.
- O. Best Management Practices (BMPs) and Good Housekeeping Practices (GHPs) designed to prevent spillage and/or runoff of demolition or maintenance-related materials, and to contain sediment or contaminants associated with any maintenance activity, shall be implemented prior to the on-set of such activity.
- P. All BMPs shall be maintained in a functional condition throughout the duration of the construction activity.

MM-3, Maintenance Drawings. Within 60 days of completion of the project, the applicant shall submit two copies of As-Built Plans or maintenance drawings showing maintenance activities pursuant to this coastal development permit with all relevant property lines depicted. The drawings shall be consistent with the approved maintenance plan. The drawings shall include color photographs (in hard copy and jpg format) that clearly show all components of the maintenance activity, and that are accompanied by a site plan that notes the location of each photographic viewpoint and the date and time of each photograph.



If the as-built plans identify that the maintenance activity has been implemented inconsistent with the approved drawings, the applicant shall submit an application for an amendment to this coastal development permit, or a new coastal development permit, if legally required, within 30 days of receiving the Executive Director's notice that the as-built plans are inconsistent with the final approved plans for restoration of any impacts to coastal resources resulting from the identified unpermitted maintenance activity.

MM-4, Fence Design Alternatives (for fence repairs).

- A. Prior to commencement of the maintenance activity, the applicant shall submit, for the review and approval of the Executive Director, two (2) sets of final revised project plans. The revised final project plans and project description shall reflect the following:
1. When feasible and proposed for replacement, the fence shall be a post and cable fence, or other similar, visually open design, consistent with the provisions of public safety, subject to the review and approval of the Executive Director, when applicable and determined on a project by project basis. Alternative designs may be allowed if the Executive Director determines that such designs are consistent with the intent of this condition and serve to minimize adverse effects to public views.
 2. The proposed fence shall be designed to be the minimum possible height that would be consistent with the requirements of the resource agencies and the provisions of public safety, but in no event shall be higher than 6 foot 1 inch.
- B. OC Public Works will undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to the coastal development permit unless the Executive Director determines that no amendment is legally required.

MM-5, Final Habitat Mitigation and Monitoring Program.

- A. When habitat is permanently impacted (e.g., vegetation clearing), OC Public Works will develop and submit for review and written approval of the Executive Director, a final detailed habitat mitigation and monitoring program to mitigate proposed temporary and permanent impacts, when applicable and determined on a project by project basis. A qualified biologist shall design the mitigation and monitoring program. The mitigation and monitoring program shall at a minimum include the following:
1. Plans for the site preparation and preservation of native seed bank;
 2. Restoration plan including planting design, plant palette, source of plant material, plant installation, watering, erosion control, soil fertilization and weed abatement;
 3. Description of the monitoring program (quantitative sampling methods such as quadrats, transects, etc. and statistical analysis) that will be employed to determine the progress and ultimate success of the mitigation/restoration.



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4. Final Success Criteria.
 5. Provisions assessing the initial biological and ecological status of the "as built" restoration site within 30 days of establishment of the restoration site in accordance with the approved restoration program.
 6. Provisions for monitoring and remediation of the restoration site in accordance with the approved final restoration program for a period of three years or until it has been determined that success criteria have been met or have failed to be met, whichever comes first.
 7. Provisions for submission of annual reports of monitoring results to the Executive Director for the duration of the required monitoring period, beginning the first year after submission of the "as-built" assessment. Each report shall be a cumulative report that summarizes all previous reports. Each report shall document the condition of the restoration with photographs taken from the same fixed points in the same directions. Each report shall also include a "Performance Evaluation" section where information and results from the monitoring program are used to evaluate the status of the restoration project in relation to the performance standards.
 8. Provisions for submission of a final monitoring report to the Executive Director at the end of the reporting period. The final report must be prepared in conjunction with a qualified biologist. The report must evaluate whether the restoration site conforms to the goals, objectives, and performance standards set forth in the approved final restoration program.
- B. If the final report indicates that the restoration project has been unsuccessful, in part, or in whole, based on the approved performance standards, OC Public Works shall submit within 90 days a revised or supplemental restoration program to compensate for those portions of the original program that were necessary to offset project impacts which did not meet the approved performance standards. The revised restoration program, if necessary, shall be processed as an amendment to this coastal development permit.
- C. OC Public Works shall monitor and remediate the restoration site in accordance with the approved monitoring program, including any revised restoration program approved by the Commission or its staff. Any proposed changes to the approved monitoring program shall be reported to the Executive Director. No changes to the approved monitoring program shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

MM-6, Maintenance Access and Staging Plans. Prior to commencement of maintenance, OC Public Works shall submit a plan for the review and approval of the Executive Director which indicates that the construction staging area(s) and construction corridor(s)/access will avoid impacts to public access or sensitive habitat areas, except as specifically authorized in this coastal development permit. The plan shall demonstrate that maintenance and staging would occur within the OC Public Work's right-of-way (ROW). Should the activity not occur within the ROW, a follow-up plan shall be submitted that demonstrates:



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1. Construction equipment or activity shall not occur outside the staging area and construction corridor identified on the site plan required by this condition.
2. Staging or storage areas shall not be located in or result in impacts to habitat areas.
3. The construction staging/storage area shall not be located in public beach parking areas during the peak summer period (Memorial Day to Labor Day).
4. The size of the construction staging/storage area will be minimized and will be gradually reduced as less materials and equipment are necessary.
5. The construction access corridor is the minimum width necessary, boundaries of the corridor have been flagged for avoidance of sensitive habitat and public access ways, and measures to protect the soil from disturbance such as temporary driving surfaces are utilized.

A. The plan shall include, at a minimum, the following components:

1. A site plan that depicts:
 - a) limits of the staging area(s)
 - b) construction corridor(s)
 - c) construction site
 - d) location of construction fencing and temporary job trailers
2. Written documentation from the owner of the staging area site that the permittee is authorized to use the site, as conditioned by the Coastal Commission, for the period the project is under construction or needed to complete post construction restoration work.

OC Public Works shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

MM-7, Cultural Resources. OC Public Works shall comply with the following cultural resources related requirements:

- A. If evidence of archeological resources is found during maintenance activities, activities in that area shall cease and the Contractor shall immediately contact the OC Public Works Director. The OC Public Works Director, or his/her designee, shall ensure that a County-approved Archeologist has been retained to explore, salvage, and catalogue archeological resources, as necessary. If the archeological resources are found to be significant, the Archeologist shall determine appropriate actions in cooperation with the Contractor in order to ensure proper exploration and/or salvage.

Within 30 days of the completion of maintenance activities, the OC Public Works Director, or his/her designee, shall confirm that the Archeologist's follow up report has been approved. The report shall include the inspection period, an analysis of any artifacts found, and the present repository of the artifacts. The Contractor shall prepare excavated materials to the point of identification and offer excavated finds for curatorial purposes to the OC Public Works Director, or his/her designee, on a first-refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to approval by the OC Public Works Director, or his/her designee.



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- B. If evidence of subsurface paleontological resources is found during maintenance activities, activities in that area shall cease and the Contractor shall immediately contact the OC Public Works Director. The OC Public Works Director, or his/her designee, shall ensure that a County-certified Paleontologist has been retained to explore, salvage, and catalogue fossils, as necessary. If the paleontological resources are found to be significant, the Paleontologist shall determine appropriate actions in cooperation with the Contractor in order to ensure proper exploration and/or salvage.

Within 30 days of the completion of maintenance activities, the Contractor shall submit the Paleontologist's follow up report for approval by the County Construction Engineer. The report shall include the period of inspection, a catalogue and analysis of the fossils found, and the present repository of the fossils. The Contractor shall prepare excavated materials to the point of identification and offer excavated finds for curatorial purposes to the OC Public Works Director, or his/her designee, on a first-refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to approval by the OC Public Works Director, or his/her designee.

- C. In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found during maintenance activities, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains.

The County Coroner shall make such a determination within two working days of notification of the discovery. The County Coroner shall be notified within 24 hours of the discovery. If the County Coroner determines that the remains are, or are believed to be, Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with Section 5097.98 of the Public Resources Code, the NAHC must immediately notify those persons it believes to be the most likely descended from the deceased Native American. The descendants shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the County Construction Engineer, the treatment and disposition of the human remains.

TABLE C1. COASTAL FACILITIES

County Facility Name	Facility Description	Excluded Maintenance Activities*	EXHIBIT # Activity Best Management Practices** PAGE 1 OF 4
C00P02	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
C00PS1	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
C01	Trapezoidal channel, earthen side, earthen bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Remove/ Replace Concrete Lining, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
C02	Trapezoidal channel, earthen side, earthen bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Remove/ Replace Concrete Lining, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
C03	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
C04	Trapezoidal channel, earthen side, earthen bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Remove/ Replace Concrete Lining, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
C05	Trapezoidal channel, earthen side, earthen bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Remove/ Replace Concrete Lining, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Annual DSOD Inspection/Repairs, Channel Cleaning, Manual/Tractor Removal of Arundo, Install Storm Drain Pipe & Underdrain, Fabricate and Install Headwalls, Remove/Replace Concrete Lining, Concrete Channel Silt Removal, Dirt Channel Silt Removal, Slope Repairs, Installation of Rip-Rap, and Activities relating to dams & basins	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
D01	Metal Sheet Channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs, Channel Cleaning, Manual/Tractor Removal of Arundo, Install Storm Drain Pipe & Underdrain, Fabricate and Install Headwalls, Remove/Replace Concrete Lining, Concrete Channel Silt Removal, Dirt Channel Silt Removal, Slope Repairs, Installation of Rip-Rap, and Activities relating to dams & basins	MM-1, MM-2, MM-3, MM-4, MM-6
D02	Metal Sheet Channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs, Channel Cleaning, Manual/Tractor Removal of Arundo, Install Storm Drain Pipe & Underdrain, Fabricate and Install Headwalls, Remove/Replace Concrete Lining, Concrete Channel Silt Removal, Dirt Channel Silt Removal, Slope Repairs, Installation of Rip-Rap, and Activities relating to dams & basins	MM-1, MM-2, MM-3, MM-4, MM-6
D02	Trapezoidal channel, earthen side, earthen bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Remove/ Replace Concrete Lining, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
D02	Trapezoidal channel, concrete side, earthen bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
D02	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6

TABLE C1. COASTAL FACILITIES

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County Facility Name	Facility Description	Excluded Maintenance Activities*	Activity Best Management Practices**
D03	Rectangle channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
E01	Trapezoidal channel, concrete side, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
F01	Trapezoidal channel, earthen sides, earthen bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Remove/ Replace Concrete Lining, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
F01	Trapezoidal channel, riprap sides, earthen bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
F01	Trapezoidal channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs, Channel Cleaning, Manual/Tractor Removal of Arundo, Install Storm Drain Pipe & Underdrain, Fabricate and Install Headwalls, Remove/Replace Concrete Lining, Concrete Channel Silt Removal, Dirt Channel Silt Removal, Slope Repairs, Installation of Rip-Rap, and Activities relating to dams & basins	MM-1, MM-2, MM-3, MM-4, MM-6
F01	Rectangle channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
G00P01	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
G02	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
G02	Trapezoidal channel, earthen sides, earthen bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Remove/ Replace Concrete Lining, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
G03	Trapezoidal channel, earthen sides, earthen bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Remove/ Replace Concrete Lining, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
G03	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
H05	Rectangle channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
I00P02	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
I00P03	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6

TABLE C1. COASTAL COASTAL COMMISSION

County Facility Name	Facility Description	Excluded Maintenance Activities # 5 PAGE 3 OF 4	Activity Best Management Practices**
I02	Rectangle channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
I02	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
I02	Trapezoidal channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
J01	Trapezoidal channel, earthen sides, earthen bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Remove/ Replace Concrete Lining, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Annual DSOD Inspection/Repairs, Channel Cleaning, Manual/Tractor Removal of Arundo, Install Storm Drain-Pipe & Underdrain, Fabricate and Install Headwalls, Remove/Replace Concrete Lining, Concrete Channel Silt Removal, Dirt Channel Silt Removal, Slope Repairs, Installation of Rip-Rap, and Activities relating to dams & basins	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
J04	Trapezoidal channel, earthen sides, earthen bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Remove/ Replace Concrete Lining, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
K01	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
K01PS1	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
L01	Trapezoidal channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
L01S02	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
L01S02	Rectangle channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M00P01	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M00P02	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M00S01	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6

COASTAL COMMISSION

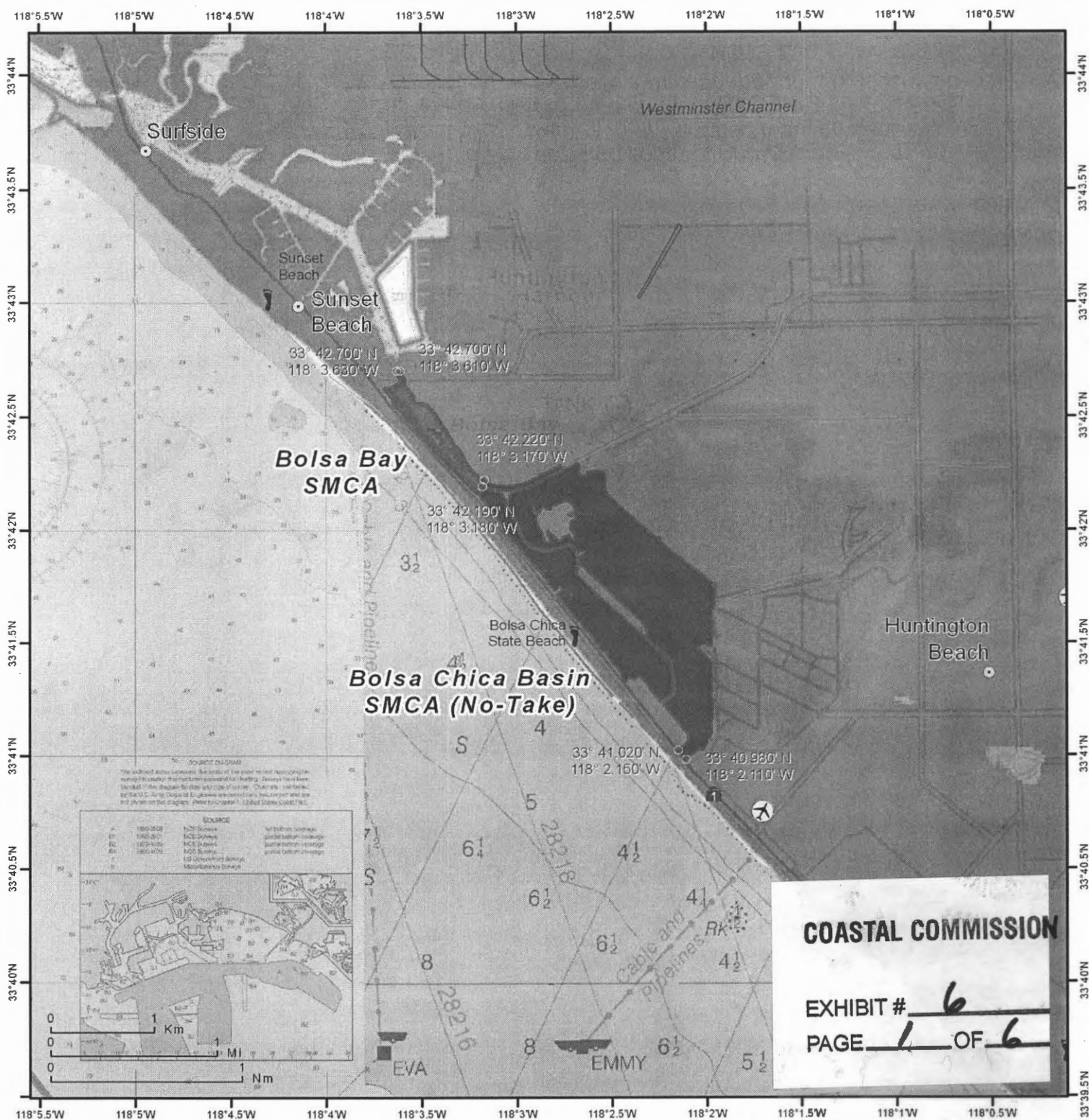
TABLE C1. COASTAL FACILITIES

County Facility Name	Facility Description	Excluded Maintenance Activities	Activity Best Management Practices**
M00S04	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M00S05	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M00S07	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M00S07	Trapezoidal channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M00S08	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M01	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M01	Rectangle channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M01S01	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M01S01	Rectangle channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M02	Concrete Box/Pipe	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Concrete Channel Silt Removal - Loader, Concrete Channel Silt Removal - Bobcat, Dirt Channel Silt Removal, Compact Channel Slope, Slope Repair/Rip-Rap Preparation, Install Rip-Rap, Aggregate-Base (AB) Maintain Levee, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-6
M02	Rectangle channel, concrete sides, concrete bottom	Maintain Pump Stations, Operate Pump Stations, Pump Station Cleaning, Pump Station Cleaning Sump (via Vacuum Truck), Pump Station Inspection, Dam Operations and Maintenance, Flap Gate Inspection/ Maintenance, Dirt Channel Silt Removal, Annual DSOD Inspection/Repairs	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6
Bridge 55C-0400	Over trapezoidal channel, riprap sides, earthen bottom	N/A	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
Bridge 55C-0561	Over trapezoidal channel, concrete sides, earthen bottom	N/A	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
Bridge 55C-0103	Over trapezoidal channel, riprap sides, earthen bottom	N/A	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7
Bridge 55C-0283	Over channel with sheet pile walls, earthen bottom	N/A	MM-1, MM-2, MM-3, MM-4, MM-5, MM-6, MM-7

* The following maintenance activities will be excluded from these facilities. Refer to Tables 3 and 4 in the *County-Wide Routine Maintenance Manual for Facilities within the Coastal Zone* for a complete list of all activities that will be performed within channels and bridges.

** Refer to Section 8.0 of the *Maintenance Manual* for a description of each mitigation measure.

California Marine Protected Areas



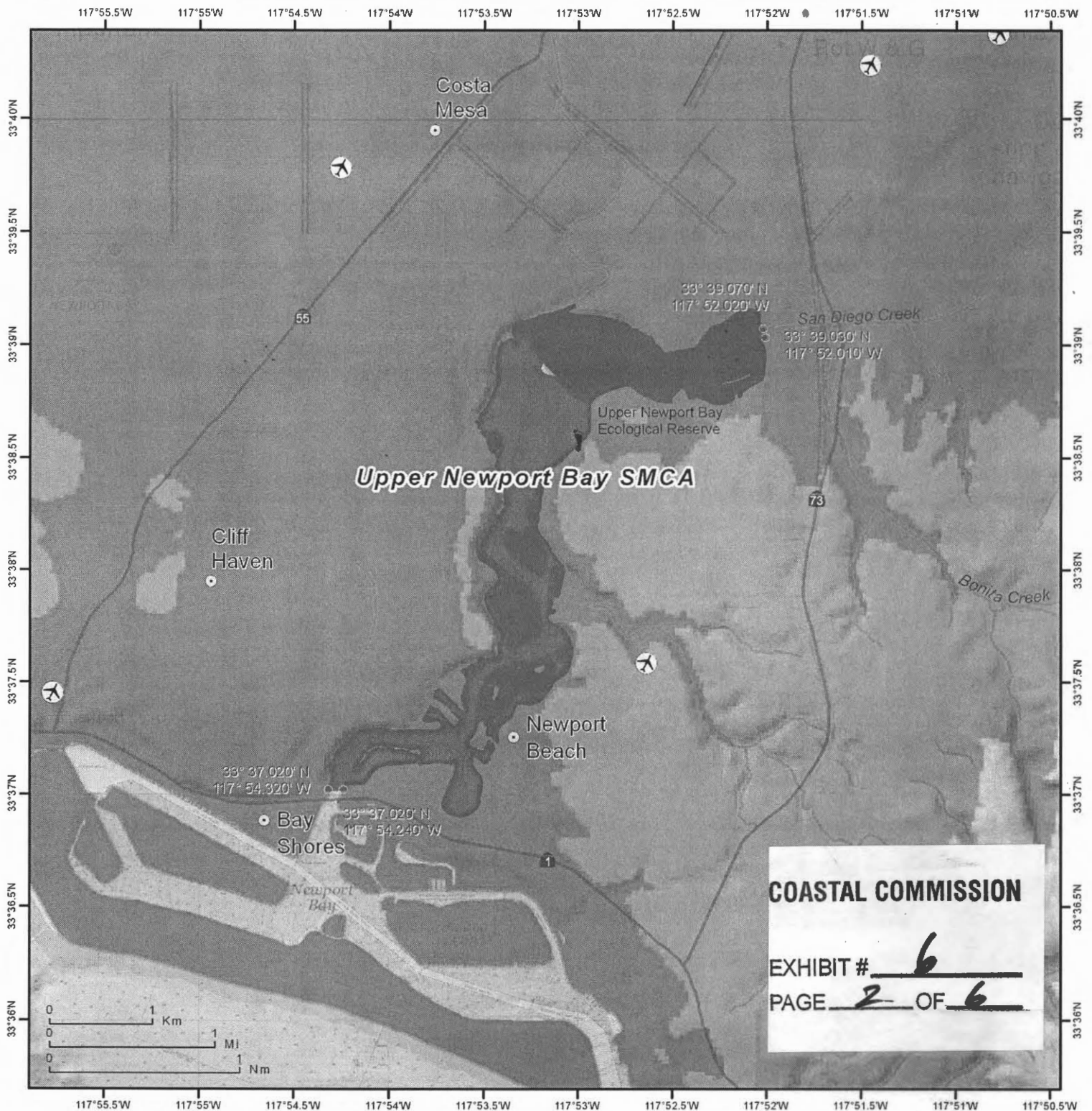
THIS CHART DOES NOT REPLACE THE LEGAL DESCRIPTION FOUND IN TITLE 14, CALIFORNIA CODE OF REGULATIONS

- | | | | |
|---|---|---|---|
| State Marine Reserve (SMR) | State Marine Recreational Management Area (SMRMA) | Dual Designation (SMCA and SMP) | Three Nautical Mile Maritime Limit (State Water Jurisdiction) |
| State Marine Conservation Area (SMCA - No Take) | State Marine Park (SMP) | Federal Marine Conservation Area (FMCA) | Coastal Access |
| State Marine Conservation Area (SMCA) | Special Closure | Federal Marine Reserve (FMR) | |

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California Marine Protected Areas



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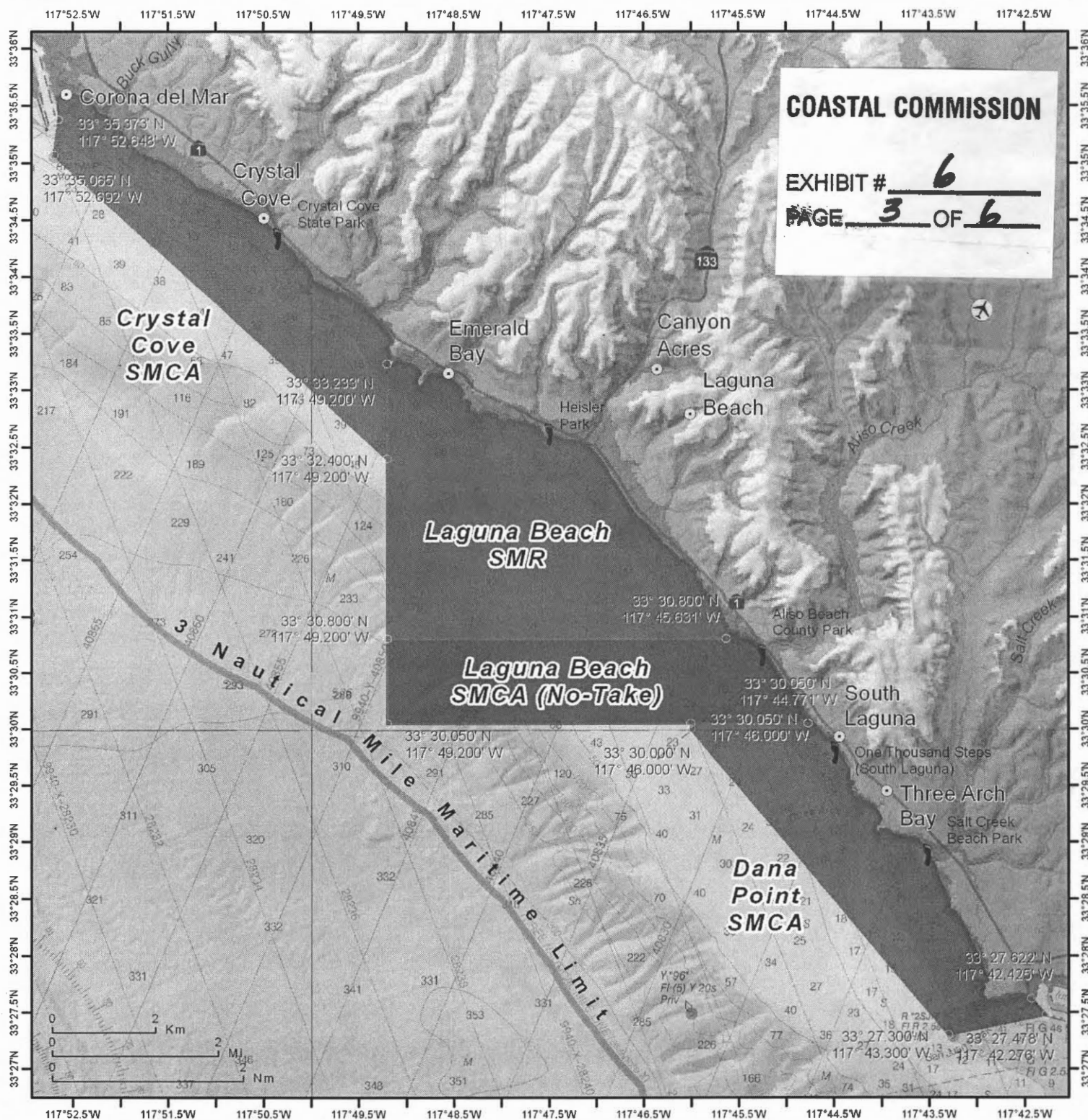
- | | | | |
|---|---|---|---|
| State Marine Reserve (SMR) | State Marine Recreational Management Area (SMRMA) | Dual Designation (SMCA and SMP) | Three Nautical Mile Maritime Limit (State Water Jurisdiction) |
| State Marine Conservation Area (SMCA - No Take) | State Marine Park (SMP) | Federal Marine Conservation Area (FMCA) | Coastal Access |
| State Marine Conservation Area (SMCA) | Special Closure | Federal Marine Reserve (FMR) | |

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California Marine Protected Areas



COASTAL COMMISSION

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THIS CHART DOES NOT REPLACE THE LEGAL DESCRIPTION FOUND IN TITLE 14, CALIFORNIA CODE OF REGULATIONS

- | | | | |
|---|---|---|---|
| State Marine Reserve (SMR) | State Marine Recreational Management Area (SMRMA) | Dual Designation (SMCA and SMP) | Three Nautical Mile Maritime Limit (State Water Jurisdiction) |
| State Marine Conservation Area (SMCA - No Take) | State Marine Park (SMP) | Federal Marine Conservation Area (FMCA) | Coastal Access |
| State Marine Conservation Area (SMCA) | Special Closure | Federal Marine Reserve (FMR) | |

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(121) Bolsa Bay State Marine Conservation Area.

(A) This area includes the waters below the mean high tide line within Bolsa Bay estuary southward of a line that approximates the Warner Avenue bridge located between the following two points:

33° 42.70' N. lat. 118° 03.63' W. long.; and

33° 42.70' N. lat. 118° 03.61' W. long.;

and northward of a line that approximates the pedestrian bridge located between the following two points:

33° 42.22' N. lat. 118° 03.17' W. long.; and

33° 42.19' N. lat. 118° 03.18' W. long.

(B) Take of all living marine resources is prohibited except the recreational take of finfish [subsection 632(a)(2)] by hook and line from shore in designated areas only, or take pursuant to activities authorized under subsection 632(b)(121)(F) is allowed.

(C) Boating, swimming, wading, and diving are prohibited within the conservation area.

(D) No person, except state and local law enforcement officers, fire suppression agencies and employees of the department in the performance of their official duties or persons possessing written permission from the department or employees of Signal Corporation and its invitees for the purpose of carrying out oil and gas operations, shall enter this conservation area and remain therein except on established trails, paths, or other designated areas.

(E) No person shall enter this conservation area between the hours of 8:00 p.m. and 6:00 a.m.

(F) Routine operation and maintenance, habitat restoration, maintenance dredging, research and education, and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or activities pursuant to Section 630, or as otherwise authorized by the department.

(122) Bolsa Chica Basin State Marine Conservation Area.

(A) This area includes the waters below the mean high tide line within the Bolsa Chica Basin estuary northeastward of the Pacific Coast Highway Bridge, approximated by a straight line between the following two points:

33° 41.02' N. lat. 118° 02.15' W. long.; and

33° 40.98' N. lat. 118° 02.11' W. long.;

and southeastward of a straight line between the following two points:

33° 42.22' N. lat. 118° 03.17' W. long.; and

33° 42.19' N. lat. 118° 03.18' W. long.

(B) Take of all living marine resources is prohibited, except for take pursuant to activities authorized under subsection 632(b)(122)(F).

(C) Boating, swimming, wading, and diving are prohibited within the conservation area.

(D) No person, except state and local law enforcement officers, fire suppression agencies and employees of the department in the performance of their official duties or persons possessing written permission from the department or employees of Signal Corporation and its invitees for the purpose of carrying out oil and gas operations, shall enter this conservation area and remain therein except on established trails, paths, or other designated areas.

(E) No person shall enter this conservation area between the hours of 8:00 p.m. and 6:00 a.m.

(F) Routine operation and maintenance, habitat restoration, maintenance dredging, research and education, and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or activities pursuant to Section 630, or as otherwise authorized by the department.

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(132) Upper Newport Bay State Marine Conservation Area.

(A) This area includes the waters below the mean high tide line within Upper Newport Bay northeastward of Pacific Coast Highway approximated by a line between the following two points:

33° 37.02' N. lat. 117° 54.24' W. long.;

33° 37.02' N. lat. 117° 54.32' W. long.; and southwestward of Jamboree Road approximated by a line between the following two points:

33° 39.07' N. lat. 117° 52.02' W. long.; and

33° 39.03' N. lat. 117° 52.01' W. long.

(B) Take of all living marine resources is prohibited except the recreational take of finfish [subsection 632(a)(2)] by hook and line from shore only, or take pursuant to activities authorized under subsection 632(b)(132)(D), is allowed.

(C) In waters below the mean high tide line inside the Upper Newport Bay Ecological Reserve, northeastward of a line connecting Shellmaker Island (33° 37.20' N. lat. 117° 53.51' W. long.) and North Star Beach (33° 37.38' N. lat. 117° 53.60' W. long.) the following restrictions apply:

(1) Swimming is allowed only in the area between North Star Beach and mid-channel.

(2) Boats are limited to speeds less than five miles per hour.

(3) Shoreline access is limited to established trails, paths, or other designated areas.

(D) Maintenance dredging, habitat restoration, research and education programs, maintenance of artificial structures, and operation and maintenance of existing facilities inside the conservation area is allowed pursuant to any required federal, state and local permits, or activities pursuant to Section 630, or as otherwise authorized by the department.

(133) Crystal Cove State Marine Conservation Area.

(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:

33° 35.373' N. lat. 117° 52.648' W. long.;

33° 35.065' N. lat. 117° 52.692' W. long.;

33° 32.400' N. lat. 117° 49.200' W. long.; and

33° 33.233' N. lat. 117° 49.200' W. long.

(B) Take of all living marine resources is prohibited except:

1. The recreational take of finfish [subsection 632(a)(2)] by hook and line or by spearfishing [Section 1.76], and lobster and sea urchin is allowed.

2. The commercial take of coastal pelagic species [Section 1.39] by round haul net [Section 8750, Fish and Game Code], spiny lobster by trap, and sea urchin is allowed.

3. Take pursuant to activities authorized under subsection 632(b)(133)(C) is allowed.

(C) Beach nourishment and other sediment management activities, and operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(D) Take of all living marine resources from inside tidepools is prohibited. For purposes of this section, tidepools are defined as the area encompassing the rocky pools that are filled with seawater due to retracting tides between the mean higher high tide line and the mean lower low tide line.

(134) Laguna Beach State Marine Reserve.

(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:

33° 33.233' N. lat. 117° 49.200' W. long.;

33° 30.800' N. lat. 117° 49.200' W. long.; and

33° 30.800' N. lat. 117° 45.631' W. long.

(B) Take of all living marine resources is prohibited.

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(135) Laguna Beach State Marine Conservation Area.

(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:

- 33° 30.800' N. lat. 117° 45.631' W. long.;
- 33° 30.800' N. lat. 117° 49.200' W. long.;
- 33° 30.050' N. lat. 117° 49.200' W. long.; and
- 33° 30.050' N. lat. 117° 44.771' W. long.

(B) Take of all living marine resources is prohibited except take pursuant to activities authorized under subsection 632(b)(135)(C).

(C) Operation and maintenance of artificial structures and facilities, beach grooming, maintenance dredging, and habitat restoration inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(136) Dana Point State Marine Conservation Area.

(A) This area is bounded by the mean high tide line and straight lines connecting and the following points in the order listed:

- 33° 30.050' N. lat. 117° 44.771' W. long.;
- 33° 30.050' N. lat. 117° 46.000' W. long.;
- 33° 30.000' N. lat. 117° 46.000' W. long.;
- 33° 27.300' N. lat. 117° 43.300' W. long.;
- 33° 27.478' N. lat. 117° 42.276' W. long.; and
- 33° 27.622' N. lat. 117° 42.425' W. long.

(B) Take of all living marine resources is prohibited except:

1. Only the following species may be taken recreationally below the mean lower low tide line only: finfish [subsection 632(a)(2)] by hook and line or by spearfishing [Section 1.76], and lobster and sea urchin.
2. The commercial take of coastal pelagic species [subsection 1.39] by round haul net [Section 8750, Fish and Game Code], and spiny lobster and sea urchin only is allowed.
3. Take pursuant to activities authorized under subsection 632(b)(136)(C) is allowed.

(C) Operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(D) Take of all living marine resources from inside tidepools is prohibited. For purposes of this section, tidepools are defined as the area encompassing the rocky pools that are filled with seawater due to retracting tides between the mean higher high tide line and the mean lower low tide line.

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