

Los Angeles Regional Water Quality Control Board

ORDER NO. R4-2018-0059
WASTE DISCHARGE REQUIREMENTS AND
CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION

Effective Date: June 14, 2018

Program Type: Fill/Excavation

Project Type: Channel Construction and Maintenance¹

Project: Maintenance Clearing of Engineered Earth-Bottom Channels for Flood Control (Project)

Applicant: Los Angeles County Flood Control District

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¹ Project type is selected from a preset list of project types to allow for calculation of statewide summary statistics. While this project is most appropriately categorized as “Channel Construction and Maintenance,” note that these waste discharge requirements (WDRs) and Clean Water Act section 401 water quality certification does not authorize any new channel construction.

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The California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board) finds that:

I. Order

This Order for Waste Discharge Requirements and Clean Water Act section 401 Certification (Order) is issued at the request of Los Angeles County Flood Control District (LACFCD) for the Project. This Order is for the purpose described in the application and supplemental information submitted by the LACFCD.

The application was received on March 21, 2018. On March 30, 2018, Los Angeles Water Board staff issued a notice of incomplete application and the LACFCD responded to the request for application information on April 10, 2018. The application was deemed complete on April 13, 2018.

II. Public Notice

The Los Angeles Water Board has notified the LACFCD and other interested agencies and persons of its intent to prescribe waste discharge requirements (WDRs) and issue a Clean Water Act Section 401 Water Quality Certification for this discharge and has provided an opportunity to submit comments. The Los Angeles Water Board provided public notice of the draft order pursuant to California Code of Regulations, title 23, section 3858 and Water Code section 13167.5. A tentative order was released for public comment on April 18, 2018. Written comments were accepted until 5:00 p.m. on May 18, 2018. The Los Angeles Water Board, in a public meeting on June 14, 2018, heard and considered all comments pertaining to this Order.

III. Project Purpose

The purpose of the Project is to maintain adequate capacity in engineered earth-bottom channels (also referred to as engineered soft-bottom channels), which are a critical part of the LACFCD's flood control facilities in order to reduce the risk of loss of life or property that could result from flooding during large storm events, while simultaneously protecting water quality and beneficial uses of these channels.

IV. Project Description and Background

a. General Background

1. LACFCD (Discharger) is responsible for providing flood control throughout Los Angeles County to enhance public safety. LACFCD is responsible for more than 2,700 square miles and approximately 2.1 million land parcels within 6 major watersheds. This includes flood control facilities consisting of 3,380 miles of underground storm drains; an estimated 173 debris basins; an estimated 82,000 catch basins; 14 major dams and reservoirs; and 483 miles of open channel including natural, earthen-bottom (i.e., concrete or riprap sides with a natural bottom that may support vegetation), and concrete channels.
2. In order to reduce the risk of loss of life or property that could result from flooding during large storm events, LACFCD conducts activities to maintain adequate capacity in flood control facilities. LACFCD is authorized to perform such maintenance pursuant to the Los Angeles County Flood Control Act (Water Code Appendix § 28-2).
3. Many of the channels, basins and reservoirs maintained by LACFCD as flood control facilities are Waters of the United States (U.S.) and Waters of the State of California.

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4. Maintaining the flood control system in Waters of the U.S. and Waters of the State of California requires discharge permits for these dredge and fill activities from the Army Corps of Engineers (ACOE), California Department of Fish and Wildlife (CDFW) and the Los Angeles Water Board. For dredge and fill activities such as channel clearing, the Clean Water Act (CWA) requires permitting from ACOE under CWA section 404 (404 permit) and Water Quality Certification by the State under CWA section 401 (401 Certification). In addition, under California Fish and Game Code section 1600, such activities are also regulated by a Streambed Alteration Agreement (SAA) issued by the CDFW.
5. WDRs and 401 Certifications issued by the Los Angeles Water Board to LACFCD for maintenance of its flood control facilities are designed to allow maintenance of established flood control function through removal of recent accumulated sediment or vegetation and routine minor structural repairs. The WDRs and 401 Certifications do not allow for any alteration of channel design. WDRs and 401 Certifications issued by the Los Angeles Water Board to LACFCD for maintenance of flood control facilities do not authorize additional hardscape, concrete, or rock in Waters of the U.S. and Waters of the State of California.
6. The Los Angeles Water Board regulates the following dredge and fill activities associated with LACFCD's maintenance of its flood control facilities: maintenance of 172 debris basins (File No. 02-144), maintenance of concrete channels (File No. 13-029), maintenance of earthen-bottom channels (this WDR and 401 Certification), and individual project Water Quality Certifications for major repairs or renovations to flood control facilities and emergency projects.
7. LACFCD maintains 96 earthen-bottom channels through this WDR and 401 Certification. The 96 channels include a total of approximately 43 miles of waterways throughout Los Angeles County and approximately 1,276 acres of jurisdictional waters of the United States. The acreage authorized to be impacted by this Order is 734 acres.
8. Development of natural areas and redevelopment projects in Los Angeles County may alter or add to or subtract from the number of required flood control facilities and may alter the hydrology of waters. Plans and new goals for water use in Los Angeles County (as detailed in Findings 70-75) may contribute to changes in hydrology and the need for more or less flood control capacity and the need for altered or more or fewer flood control facilities. Through the requirements of WDRs and 401 Certifications issued by the Los Angeles Water Board to LACFCD for maintenance of its flood control facilities, the Los Angeles Water Board has taken into account changes of the nature described above, and will continue to do so where appropriate in its future permitting actions regarding LACFCD's maintenance of earthen-bottom channels.
9. LACFCD maintains flood control facilities to meet a number of different requirements, depending on when the flood control facility was built and which agency built it; in some cases, LACFCD must protect for a 100-year storm.
10. Many of the flood control channels maintained by LACFCD were built with federal funds and turned over to LACFCD for maintenance. As such, LACFCD is required to maintain the channel as designed and without debris and vegetative growth. In order to change a maintenance requirement, LACFCD must apply under section 14 of the Rivers and Harbors Act of 1899, codified at 33 U.S.C. section 408 (commonly referred to as "Section 408"), for modification of federally required maintenance requirements with the ACOE.

REVISED TENTATIVE

11. Post-Hurricane Katrina, the ACOE instituted Risk and Uncertainty analysis requirements for changes to federal flood control facilities. Alteration of federally-required maintenance may trigger the need for a ACOE Risk and Uncertainty analysis. A Risk and Uncertainty analysis is a statistical analysis that takes into account the uncertainty of the hydrology and hydraulics and related consequences.
12. LACFCD maintains levees in accordance with the Federal Emergency Management Agency (FEMA). FEMA administers the National Flood Insurance Program (NFIP). In order to obtain FEMA accreditation for the levees, LACFCD is required to demonstrate that maintenance of the levees will ensure their stability, height, and overall integrity in order to continue providing protection to the adjacent residents.
13. While FEMA accredits levees as meeting requirements set forth by the NFIP, the ACOE addresses operation and maintenance, risk management, and risk reduction levee needs as part of its responsibilities under the ACOE's Levee Safety Program. The ACOE inspects levees in Los Angeles County and may require risk reduction improvements to the levees by LACFCD.
14. LACFCD maintains various stations throughout the County to monitor flow and water quality. These stations consist of temporary and/or permanent houses with attached gauges, conduits, pumps, sensors, and probes typically placed in the invert of the channel. The houses may be mounted on bridges and/or other structures along several watercourses in the County. In order to obtain accurate data, the flow adjacent to the gauges, conduits, pumps, sensors, and probes must be laminar (i.e., non-turbulent). Routine maintenance, inspection and calibration, including clearance of accumulated sediment and/or vegetation within three feet of the water quality monitoring equipment may need to be conducted during dry weather to ensure proper operation.
15. During the storm season (October 15 to April 15), LACFCD personnel continually monitor flow conditions in channels and inspect facilities.
16. Urgent work conducted during and immediately after storm events is usually not routine maintenance, but instead, may be an emergency. Emergency is defined as, "a sudden, unexpected, occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. Emergency includes such occurrences as fire, flood, earthquake, or other soil or geologic movement, as well as such occurrences as riot, accident, or sabotage." Any project that is necessitated due to imminent threat to life or property is subject to ACOE Regional General Permit 63 (RGP 63) as certified by the State Water Resources Control Board (State Water Board) on November 25, 2013.
17. LACFCD has developed and complies with a Hazard Analysis and Critical Control Points (HACCP) for Malibu and Santa Monica Canyon watersheds to limit the spread of invasive New Zealand mudsnail and giant reed (*Arundo donax*), dated April 1, 2010.
18. LACFCD has developed and published watershed maps, which indicate types of vegetation present in the channel reaches and approximate schedules (including baseline biological surveys, post-surveys and maintenance activity descriptions). This information has been made publicly available on the LACFCD website since 2010. For each reach, the information includes: (a) the proposed schedule; (b) a description of the reach's existing condition; (c) the area of proposed impact; and (d) a description of any existing aquatic resources (e.g.,

wetland/riparian vegetation based on readily available information and pre-clearing biological surveys).

19. Los Angeles County maintains a GIS Data Portal where LACFCD facilities information is available to the public in GIS (geographic information system) mapping format.

b. Regulatory Authorities

20. The Project is located within the jurisdiction of the Los Angeles Water Board. Receiving waters and groundwater potentially impacted by this Project are protected in accordance with the applicable water quality control plan (Basin Plan) for the region and other plans and policies which may be accessed online at: http://www.waterboards.ca.gov/plans_policies/. The Basin Plan establishes water quality standards, which consist of existing and potential beneficial uses of waters of the state, water quality objectives to protect those uses, and the state and federal antidegradation policies.
21. The State of California regulates most dredge and fill discharges through 401 Certifications and may also regulate such discharges through WDRs as authorized by the California Water Code (CWC). Pursuant to CWC section 13263, the Los Angeles Water Board is authorized to prescribe WDRs for any proposed or existing discharge unless WDRs are waived pursuant to Water Code section 13269.
22. The Los Angeles Water Board has determined to regulate the subject discharge of dredge and fill materials into waters of the State by issuance of WDRs in this Order pursuant to CWC section 13263. The Los Angeles Water Board considers WDRs necessary to adequately control potential impacts to beneficial uses of waters of the U.S. and waters of the State from these maintenance activities, which primarily involve clearing, to meet the objectives of the California Wetlands Conservation Policy (Executive Order W-59-93) and to accommodate and require appropriate changes over the life of the project.
23. The goals of the California Wetlands Conservation Policy (Executive Order W-59-93, signed August 23, 1993) include ensuring “no overall loss” and achieving a “...long-term net gain in the quantity, quality, and permanence of wetland acreage and values...” Senate Concurrent Resolution No. 28 states that “[i]t is the intent of the legislature to preserve, protect, restore, and enhance California’s wetlands and the multiple resources which depend on them for benefit of the people of the State.” Section 13142.5 of the CWC requires that the “[h]ighest priority shall be given to improving or eliminating discharges that adversely affect...wetlands, estuaries, and other biologically sensitive areas.”
24. CWC section 13263 authorizes the Los Angeles Water Board, after any necessary hearing, to prescribe requirements as to the nature of any proposed discharge with relation to the conditions existing in the disposal area or receiving waters upon, or into which, the discharge is made or proposed. The requirements must implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of CWC section 13241. In accordance with subdivision (g) of section 13263, all discharges of waste into the waters of the State are privileges, not rights, and the WDRs in this Order shall not create a vested right to continue to discharge and are subject to rescission or modification.

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25. Pursuant to CWC section 13267, the Los Angeles Water Board, in establishing or reviewing any water quality control plan or waste discharge requirements, or in connection with any action relating to any plan or requirement authorized by Division 7 of the CWC, may investigate the quality of any waters of the state within its region. In conducting such an investigation, the Los Angeles Water Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, shall furnish, under penalty of perjury, technical or monitoring program reports which the regional water board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. The WDRs contained in this Order incorporate requirements for water quality monitoring, and project reporting, which are necessary to ensure that the discharge of waste complies with WDRs and is protective of the environment.
26. The Los Angeles Water Board, on June 13, 1994, adopted, in accordance with section 13240 et seq. of the CWC, a revised Water Quality Control Plan for the Los Angeles Region (Basin Plan). This updated and consolidated revised Basin Plan was approved by the State Water Board and the Office of Administrative Law on November 17, 1994, and February 23, 1995, respectively. A summary of regulatory provisions is contained in California Code of Regulations, title 23, section 3930. The Basin Plan designates beneficial uses for surface and ground waters in Chapter 2, establishes water quality objectives that must be attained or maintained to protect the designated beneficial uses in Chapter 3, and sets forth implementation programs to attain the water quality objectives. The Basin Plan has been amended occasionally since 1994. This Order is in compliance with the Basin Plan, and amendments thereto.
27. The WDRs in this Order are adopted pursuant to CWC sections 13263 and 13267. It sets forth requirements, prohibitions, and other conditions to implement the Basin Plan, and LACFCD's responsibilities for monitoring and reporting. LACFCD is responsible for ensuring compliance with the WDRs.
28. It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

c. Regulatory History

29. The Los Angeles County Flood Control Act (Act) was adopted by the California State Legislature in 1915. The Act established the Los Angeles County Flood Control District and empowers it to provide flood protection, water conservation, recreation and aesthetic enhancement within its boundaries. LACFCD is governed, as a separate entity, by the County of Los Angeles Board of Supervisors.
30. In 1997, LACFCD proposed complete clearing of 100 earthen-bottom channels in anticipation of the El Niño storm season, encompassing a total of 886 acres. Of this acreage, approximately 203 acres were vegetated.
31. LACFCD developed a Maintenance Plan for the Annual Clearing of Earth-Bottom Flood Control Channels in 1999 (1999 Maintenance Plan) in collaboration with the ACOE, CDFW (then California Department of Fish and Game (CDFG)) and the Los Angeles Water Board.

The 1999 Maintenance Plan has been published under later dates, but all versions of the Maintenance Plan define the scope of channel clearance by the 1997 pre-El Niño clearing levels.

32. The ACOE permitted LACFCD's vegetation and debris clearing maintenance activities under the CWA Section 404 Nationwide Permit 31 "Maintenance of Existing Flood Control Facilities" in 1998. The Los Angeles Water Board issued a CWA Section 401 Water Quality Certification for these activities in 1999 (File No. 99-011). Also in 1999, LACFCD and CDFW (then CDFG) entered into a Streambed Alteration Agreement, Memorandum of Understanding (MOU 5-076-99). When permitting these activities in 1998 and 1999, the ACOE and the Los Angeles Water Board developed the first programmatic permit and 401 Certification for the earth-bottom channel maintenance activities.
33. The ACOE and the Los Angeles Water Board utilized clearing limits developed for the 1997 pre-El Niño clearing. However, the Los Angeles Water Board recognized the need to ultimately develop a more comprehensive plan beyond direct use of the 1997 clearing limits that would allow vegetation and the associated habitat to be preserved within these earthen-bottom channels to the maximum extent feasible. At that time, the 404 permit and 401 Certification only authorized clearing activities in 48.2 acres of the approximately 203 vegetated acres.
34. To mitigate the 48.2 acres impacted by removal of vegetation, the Big Tujunga Wash Mitigation Area was established in accordance with the *Master Mitigation Plan for the Big Tujunga Wash Mitigation Bank* (Final Plan dated April 2000), which contains 62.7 acres (achieving a 1.3:1 mitigation ratio).
35. The success criteria for the Big Tujunga Wash Mitigation Area have been met. Field data collection for the functional analysis and success monitoring studies was conducted in August 2012 and reported in the 2012 Annual Report for the Big Tujunga Wash Mitigation Area.
36. LACFCD continues to maintain the Big Tujunga Wash Mitigation Area to ensure its long-term sustainability and that of the resident aquatic resources. The Big Tujunga Wash Mitigation Area's Long-Term Management Plan has been drafted but is not finalized. LACFCD is working with the CDFW to finalize the draft.
37. The ACOE, after evaluation of updated information, has reissued the 404 permit under Nationwide Permit 31 for these channel maintenance activities by the LACFCD every five years since 1998. The Nationwide Permit was re-issued on May 11, 2018.
38. The number of earth-bottom channel reaches authorized for maintenance under the ACOE 404 permit has changed during each permit cycle due to channels being combined, removed, or added. The ACOE divides channels into reaches that it considers to be sensitive and non-sensitive based on a Biological Opinion from the U.S. Fish and Wildlife Service. The ACOE normally incorporates special conditions such as avoidance of nesting seasons or hand clearing, for reaches it deems to be sensitive.
39. In 2003, the State Water Board issued Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges that have received State Water Quality Certification," which requires compliance with all conditions of Water Quality Certifications. The 2003 State Water Board Order included regulation of discharges from earthen-bottom channel maintenance.

40. The 401 Certification was renewed by the Los Angeles Water Board on October 17, 2003, conditionally authorizing maintenance of 99 earthen-bottom channels. The Los Angeles Water Board extended the October 17, 2003 Water Quality Certification by letter on September 10, 2007 until March 15, 2008, and extended it by letter again on August 29, 2008 until January 31, 2009.
41. On February 4, 2010, the Los Angeles Water Board issued WDRs (Order No. R4-2010-0021, 2010 WDRs) to the LACFCD. The 2010 WDRs included 10 new channel reaches authorized to be cleared in addition to the reaches included in the previous 401 Certification. The 2010 WDRs also acted as 401 Certification for those 10 reaches.
42. As an outgrowth of the original Maintenance Plan development and the incomplete effort in 2008 to further develop an understanding of the hydrology and biological functions for each reach in order to reform and improve the required channel clearing and to make the basis transparent to the Los Angeles Water Board and the public, the 2010 WDRs required “Feasibility Studies” for each watershed, stating “...LACFCD shall implement the Feasibility Study process with a schedule of one or more watersheds per year to be analyzed, with completion of all watersheds/studies within six (6) years. LACFCD shall solicit input from stakeholders during Work Plan development and prior to the finalizing the Technical Assessment Report and recommendations...”
43. The Feasibility Studies of the 2010 WDRs were to determine where a potential may exist for native vegetation to remain within the earth-bottom portion of the channel. The Feasibility Studies also required identification of any channels that could potentially provide restoration opportunities for riparian habitat.
44. The required analyses were split over multiple years to allow LACFCD flexibility in completing the required studies. The data and technical ability necessary to conduct the required analyses exists within LACFCD.
45. LACFCD completed three Feasibility Study Workplans, including the Los Angeles River watershed (July 2010), the San Gabriel River watershed (January 2013) and the Malibu and Dominguez Channel (April 2014) watersheds prior to the expiration of the 2010 WDRs in 2015.
46. LACFCD finalized the Los Angeles River Feasibility Study in August 2013 after public notice and a public meeting. Results of these analyses conducted during the Los Angeles River Feasibility Study were presented to stakeholders at a technical workshop on June 24, 2013.
47. On February 12, 2015, the Los Angeles Water Board renewed WDRs and 401 Certification for the discharges associated with channel clearing activities in Los Angeles County (2015 WDRs) by adopting Order No. R4-2015-0032. The term of the renewed 2015 WDRs was one year.
48. Los Angeles Water Board direction to Los Angeles Water Board staff, upon issuance of the renewed 2015 WDRs, included:
 - i. Ensure transparency and clarity with regards to the use and results of LACFCD and ACOE hydraulic models to determine channel capacities and reaches where more vegetation can remain;

- ii. Facilitate greater involvement of interested non-governmental stakeholder groups in discussions and, where possible, crafting of recommendations, regarding channel clearing activities, particularly in the Los Angeles River in light of river restoration and revitalization efforts; and
 - iii. Coordinate principles and discussions related to activities regulated under this WDR with other water resource management efforts such as efforts to increase stormwater retention, beneficial use protection and enhancement, and river restoration projects.
49. Los Angeles Water Board staff and LACFCD staff initiated a series of in-depth discussions, referred to as “WDR Working Group Meetings,” with interested stakeholder groups including Friends of the Los Angeles River, Arroyo Seco Foundation, Heal the Bay, The Nature Conservancy, Mountains Restoration Conservation Authority, San Fernando Valley Audubon, and Santa Clara Organization for Planning the Environment, which also included participation by ACOE, CDFW, and California Coastal Commission. Nine meetings were held between April 2, 2015 and December 15, 2015. Agendas, presentations, meeting notes and sign-in sheets are available at <https://dpw.lacounty.gov/lacfcd/WDR/workgroup.aspx>.
50. During these WDR Working Group Meetings, the group prioritized its discussions and pilot efforts on the lower reaches of the Los Angeles River and:
 - i. Discussed and raised the level of understanding of hydraulic models used in Feasibility Studies;
 - ii. Reviewed the channel maintenance obligations of the LACFCD, including ACOE requirements for ACOE-built channels, levee safety requirements, and FEMA requirements;
 - iii. Reviewed concerns of environmental and conservation organizations, including Friends of the Los Angeles River and Heal the Bay, especially pertaining to the lower Los Angeles River and Compton Creek;
 - iv. Discussed results of a new Risk and Uncertainty analysis required for ACOE-built channels, as applied to Reach 25 of the Los Angeles River As requested by stakeholders at the WDR Working Group Meetings, a reanalysis of the Los Angeles River was conducted by LACFCD. The results of this analysis and a discussion of the methodology used were provided at the WDR Working Group Meetings over several sessions. LACFCD also performed the ACOE’s new Risk and Uncertainty analysis on Los Angeles River Reach 25 and results were provided at the WDR Working Group Meetings; and
 - v. Identified, and then reviewed, results of a pilot project employing an alternative clearing method of mowing instead of scraping to remove vegetation in the lower Los Angeles River (Reach 25) and Compton Creek.
51. In addition to the analyses conducted for the Los Angeles River Feasibility Study, and as part of the WDR Working Group Meetings held throughout 2015, the LACFCD conducted additional analyses on the reaches of the Los Angeles River and presented the preliminary results of this additional analysis to Los Angeles Water Board staff and stakeholders participating in the WDR Working Group. Of the 25 reaches in the Los Angeles River Watershed, the Los Angeles River Feasibility Study Report identified eight reaches where additional native vegetation or the replacement of non-native vegetation with native vegetation could occur. No change in current maintenance vegetation clearance practices was recommended for eleven reaches due to insufficient hydraulic capacity for additional vegetation. In six reaches, additional vegetation removal may be required.

- 52.** The lower reaches of the Los Angeles River were a priority for the WDR Working Group, however, because the engineered aspects of the lower reaches of the Los Angeles River were constructed by the ACOE, there are additional federal requirements that must be met before changing the characteristics of the channel, and therefore, the level of flood protection. LACFCD hired WEST Consultants to perform an evaluation of the lower reach of Los Angeles River (Reach 25) using the Army Corps of Engineers' Risk and Uncertainty analysis. A Risk and Uncertainty analysis is a statistical analysis that takes into account the uncertainty of the hydrology, hydraulics, and consequences. The preliminary results of this analysis show there is an 80% probability that the 133-year flood's water surface elevation would be below the as-constructed top of levee elevation in Los Angeles River Reach 25. The 133-year flood is the federal standard for this reach.
- 53.** As the ACOE continues to define the relatively new Risk and Uncertainty analysis requirements, LACFCD will look for opportunities to work with the ACOE and will be able to consider applying to the ACOE to modify channel clearing activities in this reach.
- 54.** On December 10, 2015, Los Angeles Water Board staff, joined by staff from the LACFCD, ACOE, Friends of the Los Angeles River, Heal the Bay and Santa Clara Organization for Planning and the Environment, presented an information item to the Los Angeles Water Board to report on the progress of the WDR Working Group Meetings.
- 55.** LACFCD finalized the San Gabriel River Feasibility Study in January 2016 after public notice. The San Gabriel River Feasibility Study was discussed at a WDR Working Group Meeting on February 12, 2016. All of the San Gabriel River maintained reaches are federally-built reaches and must be maintained to meet federal design standards. As such, the study concluded there was no opportunity to alter requirements without ACOE participation and likely the need for a Risk and Uncertainty analysis. Therefore, the consensus of the WDR Working Group was that further discussions at an additional public meeting was unnecessary.
- 56.** On February 11, 2016, the Los Angeles Water Board amended the 2015 WDRs, Order No. R4-2015-0032 (Order No. R4-2015-0032-A1) for discharges associated with channel clearing activities in Los Angeles County (2016 WDRs). The amendment extended the WDRs for approximately two and a half years and continued the requirements for Feasibility Studies and WDR Working Group meetings. The term of the 2016 WDRs expired on July 20, 2018.
- 57.** LACFCD and the Los Angeles Water Board staff continued the WDR Working Group meetings with interested stakeholder groups including Friends of the Los Angeles River, Arroyo Seco Foundation, Heal the Bay, and The Nature Conservancy, along with participation by CDFW. Nine more meetings were held between February 18, 2016 and July 20, 2017. Agendas, presentations, meeting notes and sign-in sheets are available at <https://dpw.lacounty.gov/lacfd/WDR/workgroup.aspx>.
- 58.** During these continued WDR Working Group Meetings, the group has:
- i.** Discussed the Feasibility Studies and reviewed reaches where there was potential for additional vegetation (where there was additional flood capacity) based on LACFCD recommendations for those reaches;
 - ii.** Reviewed the maps LACFCD has made available to the public, including GIS layers of LACFCD facilities;
 - iii.** Discussed water quality sampling required in the WDR relative to other monitoring in these channels;

- iv. Further discussed results of a pilot project employing an alternative clearing method of mowing instead of scraping to remove vegetation in the lower Los Angeles River (Reach 25) and Compton Creek (Reach 24);
 - v. Reviewed pilot projects in Bull Creek (Reach 7) and Pickens Canyon (Reach 19) to let more native vegetation remain during clearing activities; and
 - vi. On September 15, 2016, held a field meeting adjacent to Compton Creek to observe clearing activities, equipment used, and Best Management Practices implemented to minimize impact during the maintenance activities. Questions by staff from Friends of the Los Angeles River and Heal the Bay regarding habitat and water quality monitoring during these activities were addressed.
59. LACFCD finalized the Malibu Creek and Dominguez Channel Feasibility Study in September 2016 after public notice and a public meeting on May 25, 2016.
60. LACFCD finalized the Santa Clara River and Antelope Valley Feasibility Study in August 2017 after public notice and a public meeting on February 1, 2018.
61. As of the finalization of the Santa Clara River and Antelope Valley Feasibility Study, all Feasibility Studies requirements are complete. A summary of all revisions for every reach is in Attachment B to this Order, Summary of Revisions to Maintenance Manual. Appropriate modifications to maintenance activities have been incorporated into the Master Maintenance Plan June 2018) included as Attachment A of this Order.
62. On March 21, 2018, the Los Angeles Water Board received the LACFCD's Report of Waste Discharge (ROWD), which served as application for reissuance of WDRs and 401 Certification for its maintenance activities, which primarily involve clearing, in earthen-bottom channels. The ROWD included a revised draft Master Maintenance Plan containing maps and the scope of work for each reach in one place. This Master Maintenance Plan incorporates revised scopes of work for previously authorized reaches, sensitive or non-sensitive status (per the U.S. Fish and Wildlife Service's Biological Opinion) and an updated list of reach numbers. This ROWD did not include previously authorized reaches 34, 74, 106 and 107. Reach 34 has been transferred to the City of Agora Hills. LACFCD does not have right-of-way for reaches 74, 106 and 107.
- d. Earth-bottom Channel Watersheds and Stormwater Plans**
63. The reaches for which maintenance activities, which primarily involve clearing, are covered by this Order are located in the Los Angeles River watershed, San Gabriel River watershed, Santa Clara River watershed, Malibu Creek watershed, and Dominguez Channel watershed. Maps and latitude/longitude coordinates of all included reaches are in the Master Maintenance Plan included as Attachment A of this Order.
64. The reaches for which maintenance activities, primarily clearing, are covered by this Order provide unique ecosystems and habitat for native vegetation and sensitive species.
65. The Los Angeles River flows 51 miles from the western end of the San Fernando Valley to the Pacific Ocean at Long Beach and includes several major tributaries including Tujunga Wash, Burbank Western Channel, Arroyo Seco, Rio Hondo, and Compton Creek. The Los Angeles River watershed comprises an area of about 834 square miles. Of this area, the incorporated

cities and unincorporated portion of Los Angeles County comprise 599 square miles. The remaining watershed consists of the Angeles National Forest.

66. The San Gabriel River watershed comprises a 682 square mile area of eastern Los Angeles County and has a main channel length of approximately 58 miles. It originates in the San Gabriel Mountains and flows through heavily developed areas before emptying into the Pacific Ocean in Long Beach. The main tributaries of the river are Walnut Creek, San Jose Creek, and Coyote Creek. In the middle of the watershed are large spreading grounds used for groundwater recharge. The watershed is hydraulically connected to the Los Angeles River through the Whittier Narrows Reservoir (occurring mostly during high storm flows).
67. The Santa Clara River is approximately 100 miles long and the watershed comprises approximately 1,200 square miles. The river originates on the northern slope of the San Gabriel Mountains in Los Angeles County, traverses Ventura County, and flows into the Pacific Ocean halfway between the cities of San Buenaventura and Oxnard. Large tributaries include Sespe, Piru and Santa Paula Creeks and a lagoon exists at the mouth of the river. Land use is predominately open space with concentrations of residential, agriculture, and some industrial uses along the mainstem of the river. The Santa Clara River is the largest river system in southern California that remains in a relatively natural state; this is a high quality natural resource for much of its length.
68. The Malibu Creek watershed comprises 109 square miles. The watershed extends from the Santa Monica Mountains and adjacent Simi Hills to the Pacific Coast at Santa Monica Bay. Several creeks and lakes occur in the upper portions of the watershed, and these ultimately drain into Malibu Creek at the downstream end of the watershed. Malibu Creek drains into Malibu Lagoon, a 13-acre tidal lagoon.
69. The Dominguez Channel watershed is 133 square miles. This watershed includes the Los Angeles and Long Beach Harbors. The Dominguez Channel is 15 miles long. The watershed also includes Wilmington Drain, which empties into Machado Lake and other drainages, which drain directly or indirectly to the Los Angeles and Long Beach Harbors. Ninety-one percent of land in the watershed is developed.
70. There are a number of important Stormwater Management Plans and river plans that will shape the future of stormwater management in Los Angeles County. These Stormwater Management Plans, as implemented, may affect the volumes of stormwater that reach rivers and streams.
71. Two potentially significant drivers in terms of shaping the future of stormwater management are the 2006 Greater Los Angeles County Region, Integrated Regional Water Management Plan (GLAC IRWMP), which was updated in 2014, and the Watershed Management Programs (WMPs) and Enhanced Watershed Management Programs (EWMPs) developed under the Los Angeles County and City of Long Beach Municipal Separate Storm Sewer System (MS4) permits. The GLAC IRWMP is significant because it is very comprehensive and includes broad targets although it does not commit to specific projects. The EWMPs and WMPs are significant because they include specific projects with timelines or plans to develop specific projects with timelines. Considered as a group, the EWMPs and WMPs are comprehensive. The EWMPs and WMPs have generally been coordinated with the IRWMP.

- 72. The “Los Angeles Basin Study - The Future of Stormwater Conservation,” Bureau of Reclamation, November 2016 (Basin Study) may become a significant driver of change to stormwater management depending on its implementation.
- 73. The Lower LA River Revitalization Plan, per California State Assembly Bill 530 (2015), has identified specific project opportunities, a Community Stabilization Toolkit for river-adjacent communities, and a Watershed Education Program focused on the lower Los Angeles River.
- 74. LACFCD and Los Angeles County Public Works have initiated an effort to update the 1996 Los Angeles River Master Plan. The Los Angeles River Master Plan efforts will be led by the Los Angeles County Public Works and will include architect/design firms OLIN and Gehry Partners, and the nonprofit River LA. River LA will lead the community engagement and outreach.
- 75. The Stormwater Management Plans and the river plans are the drivers of change in Los Angeles County. The WDRs in this Order will respond to and reflect changes due to the implemented Stormwater Management Plans, as necessary.

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V. Description of Direct Impacts to Waters of the State

Total Project fill/excavation quantities for all impacts are summarized in Table 1, below. These are not new or additional impacts but an accounting of areas which have been, and continue to be, impacted by yearly clearing. Permanent impacts are categorized as those resulting in a physical loss in area and also those degrading ecological condition only.

Table 1: Total Project Fill/Excavation Quantity									
Aquatic Resource Type	Temporary Impact ²			Permanent Impact					
				Physical Loss of Area			Degradation of Ecological Condition Only		
	Acres	CY ³	miles	Acres	CY	LF	Acres	CY	LF
Stream Channel							734		

VI. Avoidance and Minimization

LACFCD conducted Feasibility Studies for the reaches in the Los Angeles River, San Gabriel River, Malibu Creek, Dominguez Channel, Antelope Valley, and Santa Clara River between 2013 and 2018 including every reach covered in this Order. The Feasibility Studies addressed capacity requirements for flood control; design criteria and anticipated limitations; and included an analysis of potential areas where vegetation could remain; areas with the potential for restoration of native vegetation; and/or where justification existed to clear additional vegetated area.

The Feasibility Studies also include an assessment of the biological functions and values for each reach and an assessment of water quality and consideration of whether the vegetation in the channel is native or an exotic and/or invasive species.

² Includes only temporary direct impacts to waters of the state and does not include upland areas of temporary disturbance which could result in a discharge to waters of the state.

³ Cubic Yards (CY); Linear Feet (LF)

Based on these analyses, LACFCD was able to minimize impacts while achieving the required flood control. A summary of all revisions for every reach is in Attachment B to this Order, Summary of Revisions to Maintenance Manual.

VII. Antidegradation Policies and California Environmental Quality Act (CEQA)

- a. **CEQA.** The Los Angeles Water Board finds that the Project is exempt from CEQA pursuant to California Code of Regulations, title 14, section 15061(b)(2). Specifically, the issuance of this Order and the activities described herein meet the exemption criteria under California Code of Regulations, title 14, section 15301 (Existing Facilities). Additionally, the Los Angeles Water Board concludes that no exceptions to the CEQA exemption apply to the activities approved by this Order.
- b. **Antidegradation Policies.** Federal regulation 40 C.F.R. section 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining the Quality of the Waters of the State"). Resolution No. 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The activities and discharges permitted by this Order are consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. This Order includes discharge prohibitions, best management practices, monitoring requirements, and other conditions on the permitted activities and discharges to ensure that water quality standards are achieved and that beneficial uses are protected. Compliance with the requirements of this Order will ensure that the permitted activities and discharges will not cause degradation.

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VIII. Petition for Reconsideration and/or Review to the State Water Board

Any person aggrieved by the 401 Certification in this Order may petition the State Water Board to reconsider the 401 Certification in accordance with California Code of Regulations, title 23, section 3867. Any person aggrieved by the WDRs in this Order may petition the State Water Board to review the WDRs in accordance with California Water Code section 13320 and California Code of Regulations, Title 23, sections 2050 and following. A petition for reconsideration and/or review must be submitted in writing. The State Water Board must *receive* the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

IX. Fees Received

An application fee of \$1,500 was received on April 13, 2018. An additional fee of \$128,500 based on total Project impacts identified in Table 1 was received on June 8, 2018. The fee amount was determined as required by California Code of Regulations, title 23, sections 3833(b)(3) and 2200(a)(3), and was calculated as category A - Fill & Excavation Discharges (fee code 84) with the dredge and fill fee calculator.

IT IS HEREBY ORDERED that the Los Angeles County Flood Control District, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following requirements, pursuant to authority under California Water Code sections 13263 and 13267.

X. Permitted Activities

a. Vegetation and Sediment Clearing

1. Conduct maintenance of 96 earthen-bottom channel reaches in accordance with the 2018 Maintenance Plan. The Master Maintenance Plan is consistent with the Preliminary Jurisdictional Delineation Report prepared by LACFCD dated September 4, 2014. The Master Maintenance Plan includes the hydrologic code, beneficial uses, length, acreage, maps and maintenance methods for each reach.⁴
2. Conduct annual sediment and vegetation removal as authorized per the Master Maintenance Plan and per the schedule the LACFCD issues (Section XII, b. Reporting and Notification Requirements). Channel clearing shall not exceed the boundaries included for each reach in the Master Maintenance Plan as approved by the Los Angeles Water Board by this Order. Other changes to the Master Maintenance Plan shall be approved by the Executive Officer of the Los Angeles Water Board and other appropriate agencies including the ACOE and CDFW.
3. Conduct routine maintenance, inspection and calibration, including clearance of accumulated sediment and/or vegetation within three feet of the water quality monitoring equipment during dry weather as needed to ensure proper operation. Conduct periodic sediment and vegetation removal as authorized on an as-needed basis to provide continuous flow for water quality monitoring equipment.
4. Conduct periodic sediment and vegetation removal as authorized, on an as-needed basis, to ensure proper drainage to address vector issues.
5. In areas where there are sensitive species and native vegetation, clearing shall take place by hand as specified in the Master Maintenance Plan in order to selectively avoid protected resources. In other areas, clearing may be conducted with heavy equipment, including trucks, bulldozers, dump trucks, and front-end loaders, along with other specialized equipment. Equipment shall access the channels by existing access roads or by designated access paths.

b. Maintenance of Existing Invert Access Ramps

1. Conduct authorized maintenance activities for invert access ramps, which are critical structures for access to earthen-bottom channel reaches whether constructed with dirt, lined with concrete, or armored with riprap on the sides. Authorized maintenance activities include inspection, minor maintenance repairs, and storm damage repair and rehabilitation. Storm damage repair and rehabilitation includes restoring ramps that are damaged or washed out during a storm, back to pre-storm conditions.

⁴ While included in the Master Maintenance Plan, channel reaches identified as County Reach numbers 112–121 are not regulated by this Order. Any required maintenance in these channels will be permitted or certified by the Los Angeles Water Board separately.

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c. Outlets, minor repairs and equipment maintenance

1. Notching and limited vegetation removal from drain channel outlets is authorized on reaches where mechanical removal of sediment and vegetation is allowed and it is consistent with the original channel designs. In stream reaches where mowing or hand removal of vegetation is required, work on installing notches at 45 degrees and clearing drain channel outlets is authorized to be conducted by hand and/or hand tools, and shall be consistent with all terms of the Master Maintenance Plan.
2. Conduct non-emergency minor repairs, which may include the following: regrading inverts to repair minor erosion and to remove ponded water; repair of minor storm damage; and in-kind structural repairs. These repairs may include, but are not limited to, minor in-kind riprap replacement, flap gate repair and/or replacement, invert and slope repairs, and erosion control structures.
3. Conduct urgent work that is small in scope and conducted during and immediately after storm events.
4. Conduct maintenance of monitoring equipment. In order to obtain accurate flow readings from all monitoring equipment mounted on bridges and/or other structures and prevent equipment damage, vegetation within monitored channels may be cleared to bank-full capacity upstream and downstream of the gauges, conduits, pumps, sensors, and probes or bridge. In addition, maintenance may include performing repair and in-kind replacement of existing monitoring equipment if inspections determine that such activities are required. Stream gauge maintenance shall occur between September 1 and March 15. Routine maintenance, inspection and calibration, including clearance of accumulated sediment and/or vegetation within three feet of the water quality monitoring equipment may be conducted, if needed, during dry weather to ensure proper operation.

XI. Prohibitions

- a. Fueling, lubrication, maintenance, operation, and storage of vehicles and equipment shall not result in a discharge or a threatened discharge to waters of the State. At no time shall LACFCD use any vehicle or equipment which leaks any substance that may impact water quality. Staging and storage areas for vehicles and equipment shall be located outside of waters of the State.
- b. No construction material, spoils, debris, or any other substances associated with this project that may adversely impact water quality standards shall be located in a manner which may result in a discharge or a threatened discharge to waters of the State. Designated spoil and waste areas shall be visually marked prior to any excavation and/or construction activity and storage of the materials shall be confined to these areas.
- c. The discharge shall not: a) degrade surface water communities and populations including vertebrate, invertebrate, and plant species beyond the permitted vegetation removal; b) promote the breeding of mosquitoes, gnats, black flies, midges, or other pests; c) alter the color, create visual contrast with the natural appearance, or cause aesthetically undesirable discoloration of the receiving waters; d) cause formation of sludge deposits; or e) adversely affect any designated beneficial uses.

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- d. This Order does not authorize application of pesticides. Any such application that may be necessary as part of the maintenance activities authorized by this Order must be separately permitted through the appropriate statewide general pesticide application permit.

XII. Conditions

The Los Angeles Water Board has independently reviewed the record of the Project to analyze impacts to water quality and designated beneficial uses within the watersheds of the Project. In accordance with this Order, LACFCD may proceed with the Project under the following conditions and requirements:

a. Authorization

Impacts to waters of the State shall not exceed quantities shown in Section V. Table 1. Impacts to individual reaches shall not exceed the limits specified in Attachment A to this Order, MasterMaintenance Plan.

b. Reporting and Notification Requirements

1. All Reports and Notifications

- i. Requirements for the content of these reporting and notification types are detailed in Attachment C, Reporting Requirements, including specifications for photo and map documentation during the Project. Written reports and notifications must be submitted using the Reporting and Notification Cover Sheet located in Attachment C, which must be signed by LACFCD or an authorized representative as indicated in subpart iii., below.
- ii. Each and any report submitted in accordance with this Order shall contain the following completed declaration;

“I declare under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who managed the system or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on the _____ day of _____ at _____.

(Signature)

(Title)”

- iii. All applications, reports, or information submitted to the Los Angeles Water Board shall be signed by either a principal executive officer, ranking elected official, or other duly authorized employee. A duly authorized representative may sign documents if:
 - A. The authorization is made in writing by an authorized person;
 - B. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity; and

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- C. The written authorization is submitted to the Los Angeles Water Board Staff Contact prior to submitting any documents.
- iv. All communications regarding this project and submitted to the Los Angeles Water Board shall identify the Project File Number 99-011 2018 WDR. Submittals shall be sent to the Executive Officer where identified and to the 401 Certification Unit, Attention: Valerie Carrillo Zara.

2. Project Reporting

- i. **Annual Workplan and Thresholds for Additional Review.** Pursuant to California Water Code section 13267, LACFCD shall submit an Annual Workplan with a schedule of the upcoming reaches proposed for maintenance clearing. The Annual Workplan shall include, at a minimum, the following information: (a) proposed schedule; (b) acreage of areas to be impacted (vegetated and non-vegetated); (c) a description of any existing aquatic resources; (d) site-specific best management practices (BMPs) to be implemented; and (e) proposed application of pesticides. If LACFCD, or other County agency in support of LACFCD, plans to use any pesticide in these reaches, LACFCD shall also specify the pesticide permit (i.e. Vector Control or Weed Control) and submit the WDID number and the Pesticide Action Plan or Aquatic Pesticides Application Plan with the Annual Workplan. LACFCD shall send the Annual Workplan not later than August 1 of each year to the Los Angeles Water Board Executive Officer and 401 Certification Unit staff, and send notices of additional routine maintenance work as the needs are discovered in the field. The Executive Officer may require additional time to review or add additional requirements or require separate permitting for certain activities proposed upon review of the Annual Workplan or notice of additional routine maintenance work; however, if the Executive Officer does not provide any comments, additional requirements or a request for additional time within 30 days for the Annual Workplan, or 15 days for the notice of additional routine maintenance work, LACFCD is authorized to proceed pursuant to the Annual Workplan or notice of additional routine maintenance work as proposed.

- A. Routine maintenance may require additional review if the work exceeds certain thresholds of impact as defined below. For projects that exceed the following thresholds, LACFCD shall provide information similar to a pre-construction notification for a 401 Water Quality Certification for 60-day review.

B. Project Exceeds Original Footprint

For any work resulting in temporary or permanent impacts within the ordinary high water mark outside the currently permitted project boundaries, LACFCD shall submit a new proposed scope of work to the Los Angeles Water Board Executive Officer with all pertinent information for consideration to support either confirmation that the project area(s) is within the scope of this Order or a determination that LACFCD must apply for supplemental WDRs or a separate CWA Section 401 Water Quality Certification for the work.

C. Project Deviates from the Pre-Approved Surface Water Diversion Plan

If a water diversion is planned to occur in a manner which deviates from the Pre-Approved Water Diversion Plan, LACFCD shall submit the new plan to the Los Angeles Water Board Executive Officer for review and approval. The Executive Officer is authorized to approve changes to the Surface Water Diversion Plan provided that it is consistent with this Order.

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- ii. Schedules.** Prior to any maintenance activities within the subject reaches, LACFCD shall publish approximate schedules (including baseline biological surveys and maintenance activity descriptions). This information shall be made publicly available on the LACFCD website and via email notification or other direct notification to watershed councils and other interested persons prior to any routine maintenance activities. For each reach, the information shall include: (a) the proposed schedule; (b) a description of the reach's existing condition; (c) the area of proposed impact; and (d) a description of any existing aquatic resources (e.g., wetland/riparian vegetation based on readily available information and pre-clearing biological surveys).
- iii. Annual Reports.** To demonstrate compliance with this Order, pursuant to CWC section 13267, LACFCD shall submit to the Los Angeles Water Board Executive Officer an Annual Project and Mitigation Monitoring Report (Annual Report) by May 1st of each year for each year this Order is in effect. Any revisions to the previous Annual Reporting outline and/or technical or field checklists shall be submitted to the Executive Officer for approval within 60 days of the issuance of this Order.

After submission to the Los Angeles Water Board Executive Officer, LACFCD will post the Annual Report to the LACFCD website.

The Annual Report shall describe in detail all of the project/maintenance activities performed during the previous year and all restoration and mitigation efforts. At a minimum, the Annual Reports shall include the following documentation, as set forth in the Annual Report Outline dated April 5, 2010:

- A.** Annual Report Summary
- B.** List of attached documentation
- C.** Description of all project/maintenance activities performed during the previous year
- D.** Discussion of all restoration efforts and continued maintenance of the Big Tujunga mitigation site
- E.** Status of other agreements (e.g., ACOE permits or CDFW SAAs)
- F.** Status of review of hydraulic analyses or new hydraulic analyses for reaches 28, 67, 69, 70, 75, 90, 100, and 110
- G.** Summary of compliance with all requirements of this Order
- H.** A certified statement (Declaration) from LACFCD that all information reported in the annual report is complete and accurate
- I.** Documentation/Attachments
 - Color photo documentation (pre-, during, and post-project site conditions)
 - Narrative and photo documentation of any BMP installations during and post-project maintenance activities
 - Evaluation of the effectiveness of BMPs utilized based on field observations and water quality monitoring data required
 - Photo documentation of any vegetation left within maintenance areas immediately following maintenance clearing (including acreage)
 - Documentation of estimates of volumes of vegetation removed from the project areas including an analysis of inter-annual trends in vegetation loads
 - Documentation of estimates of volumes of trash removed from the project areas including an analysis of inter-annual trends in trash loads

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- Documentation of estimates of volumes of sediment removed from the project areas including an analysis of inter-annual trends in sediment loads
- Biological information including baseline biological surveys and post-project surveys
- The overall status of the project including a detailed schedule of work
- Copies of all revised permits related to this project
- All water quality monitoring results by reach in a tabular format containing results of each parameter for each channel reach
- A certified statement of "No Net Loss" of Wetlands Associated with this project
- Discussion of all monitoring activities and exotic plant control efforts
- Description of all outreach activities in the previous year

iv. Conditional Notifications and Reports for Accidental Discharges of Hazardous Materials⁵: The following notifications and reports are required for Accidental Discharges of Hazardous Materials:

Following an accidental discharge of a reportable quantity of a hazardous material, sewage, or an unknown material, the following applies (Wat. Code, § 13271):

- A.** As soon as (a) LACFCD has knowledge of the discharge or noncompliance, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures then LACFCD shall:
- 1) first call – 911 (to notify local response agency)
 - 2) then call – Office of Emergency Services (OES) State Warning Center at: (800) 852-7550 or (916) 845-8911
 - 3) Lastly follow the required OES procedures as set forth in:
http://www.caloes.ca.gov/FireRescueSite/Documents/CalOES-Spill_Booklet_Feb2014_FINAL_BW_Acc.pdf
- B.** Following notification to OES, LACFCD shall notify the Los Angeles Water Board, as soon as practicable (within 24 hours if feasible). Notification may be via telephone, e-mail, delivered written notice, or other verifiable means.
- C.** Within five (5) working days of notification to the Los Angeles Water Board, LACFCD must submit an Accidental Discharge of Hazardous Material Report to the Los Angeles Water Board.
- v. Violation of Compliance with Water Quality Standards:** LACFCD shall notify the Los Angeles Water Board within 24 hours of any event causing noncompliance with water quality standards. Notification may be via telephone, e-mail, delivered written notice, or other verifiable means.

⁵ "Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment. (Health & Saf. Code, § 25501.)

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- A. Examples of noncompliance events include: lack of storm water treatment following a rain event, discharges causing a visible plume in a water of the State, and water contact with uncured concrete.
 - B. This notification must be followed within three (3) working days by submission of a written report to the Los Angeles Water Board describing the noncompliance and actions taken to correct the condition.
- vi. **Modifications to Project.** Project modifications may require an amendment to this Order. LACFCD shall give advance notice to Los Angeles Water Board staff if Project implementation as described in the application materials is altered in any way or by the imposition of subsequent permit conditions by any local, state or federal regulatory authority by submitting a Modifications to Project Report. LACFCD shall inform Los Angeles Water Board staff of any Project modifications that will interfere with LACFCD's compliance with this Order.

c. Pilot Projects

1. Continuing LACFCD's efforts begun in 2015, LACFCD may identify pilot projects to investigate alternative vegetation management methods that may be more protective of beneficial uses, especially wildlife and habitat uses. Examples of pilot projects may include but are not limited to: mowing as opposed to scraping for vegetation clearing; clearing just one bank of a particular reach each year; replacing an invasive plant species such as *Arundo donax* with slower-growing native species; exploring different combinations of plant species in a given reach; or study and review of land use in the vicinity of a reach to determine if a level of infrequent flooding could be tolerated.
2. LACFCD shall explore pilot projects to investigate alternative vegetation management methods after consultation with the Los Angeles Water Board Executive Officer, ACOE, and stakeholders.
3. LACFCD shall include any pilot projects in the Annual Workplan.
4. For any pilot project conducted, LACFCD shall evaluate the project in terms of: a) ecological impact, impact to beneficial uses, and impact to local communities; b) positive or negative effects on downstream water quality; c) identification of conditions or requirements in permits or other requirements that would need to be modified for the pilot project to be required as routine maintenance; and d) impacts to LACFCD operations in terms of costs, schedule, resources, etc. LACFCD shall provide a technical report evaluating the pilot project within six months of completion of the pilot project with interim recommendations or, when possible, final recommendations.
5. With Los Angeles Water Board Executive Officer approval, and subject to approval by other agencies including ACOE and CDFW, as necessary, LACFCD shall implement new channel maintenance practices based on the outcomes of the pilot projects during term of this Order, as feasible.

d. Continued Avoidance and Minimization

1. LACFCD shall continue to assess and review, as appropriate, the hydraulic capacity and existing conditions of all reaches covered by this Order to identify any channels which may

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potentially provide restoration opportunities for riparian habitat/vegetation growth and support modifications to channel clearing activities to achieve greater levels of avoidance and minimization.

2. For the reaches identified by the Feasibility Studies as not meeting required flood capacity requirements where additional vegetation may be removed (reaches 28, 67, 69, 70, 75, 90, 100, and 110), LACFCD shall review hydraulic analyses or conduct new hydraulic analyses to identify possible methods to minimize additional potential impacts in those reaches and report results to the Los Angeles Water Board. The Master Maintenance Manual may be updated in the future with reductions to allowed impact.
3. If LACFCD identifies a revised channel clearing or restoration opportunity based on changes to the contributing drainage area or other significant change since completion of the applicable feasibility study, LACFCD shall submit any identified channel clearing or restoration opportunity recommendations to the Los Angeles Water Board Executive Officer. Recommendations shall also include suggested schedules of vegetation removal frequency in order to ensure the maximum habitat preservation is achieved, consistent with necessary flood control. For recommendations approved by the Executive Officer and by other appropriate regulatory agencies including the ACOE and CDFW, LACFCD shall make the necessary changes to the Master Maintenance Plan, including proposals for additional BMPs as may be appropriate.
4. LACFCD shall conduct Risk and Uncertainty analyses or other appropriate analyses, working with the ACOE, as warranted, in order to identify those reaches with federally required maintenance requirements that may be candidates for revised maintenance procedures that would allow more vegetation to remain in the channel, or that would allow alternative channel clearing approaches/methods potentially more protective of beneficial uses. LACFCD may apply under section 14 of the Rivers and Harbors Act of 1899, codified at 33 U.S.C. section 408 (commonly referred to as “Section 408”), or may pursue alternative approaches as determined by the ACOE for modification of federally required maintenance requirements with the ACOE, if appropriate.

e. Continued Outreach to stakeholders

LACFCD shall continue the meaningful dialogue with interested stakeholders started under the WDR Working Group through long-term planning efforts, such as Lower Los Angeles River Revitalization Plan and Los Angeles River Master Plan Update. LACFCD will host stakeholder meetings on an as-needed basis when there are topics/issues related to the earth-bottom channels' maintenance.

f. Water Quality Monitoring

1. Water quality shall be monitored in compliance with the *Water Quality Monitoring Guide for Maintenance and Repair Projects Involving Water Diversion*, April 2016 (Water Quality Guide) in Attachment D.

The Water Quality Guide requires upstream and downstream monitoring when surface flows are present for the following constituents:

- pH
- temperature
- dissolved oxygen

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- turbidity
- total suspended solids (TSS)

Analyses must be performed using approved U.S. Environmental Protection Agency methods, where applicable. These constituents shall be measured at least once prior to diversion and then monitored on a daily basis during the first week of diversion and/or dewatering activities, and then on a weekly basis, thereafter, until the in-stream work is complete.

LACFCD shall submit results of the analyses as part of the Annual Report to the Los Angeles Water Board in a tabular format containing results of each parameter for each channel reach. Diversion activities shall not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Any such violations may result in corrective and/or enforcement actions, including increased monitoring and sample collection.

2. LACFCD shall visually inspect the reaches after maintenance during the rainy season to ensure excessive erosion, stream instability, or other water quality pollution is not occurring in or downstream of the Project site. If water quality pollution is occurring, LACFCD shall contact the Los Angeles Water Board staff within three (3) working days. The Los Angeles Water Board may require the submission of a Violation of Compliance with Water Quality Standards Report. Additional permits may be required to carry out any necessary site remediation.

g. Standard

1. This Order is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330, and California Code of Regulations, title 23, sections 2050-2068 and sections 3867-3869, inclusive. Additionally, the Los Angeles Water Board reserves the right to suspend, cancel, or modify and reissue this Order, after providing notice to LACFCD, if the Los Angeles Water Board determines that: the Project fails to comply with any of the requirements or conditions of this Order; or, when necessary to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.) or federal Clean Water Act section 303 (33 U.S.C. § 1313). For purposes of Clean Water Act section 401(d), the condition constitutes a limitation necessary to assure compliance with water quality standards and appropriate requirements of state law.
2. This Order is not intended and shall not be construed to apply to any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license, unless the pertinent certification application was filed pursuant to subsection 3855(b) of chapter 28, title 23 of the California Code of Regulations, and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. This Order is conditioned upon total payment of any fee required under title 23 of the California Code of Regulations and owed by LACFCD.
4. In the event of any violation or threatened violation of the requirements or conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties,

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process, or sanctions as provided for under state and federal law. For purposes of Clean Water Act, section 401(d), the applicability of any state law authorizing remedies, penalties, processes, or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Order.

h. General Compliance and Enforcement

1. Failure to comply with any requirement or condition of this Order shall constitute a violation of the Porter-Cologne Water Quality Control Act and the Clean Water Act. LACFCD may then be subject to administrative and/or civil liability pursuant to Water Code sections 13268, 13350, or 13385.
2. Permitted actions must not cause a violation of any applicable water quality standards, including impairment of designated beneficial uses, for receiving waters as adopted by the Los Angeles Water Board or State Water Board (collectively Water Boards) in any applicable water quality control plan or policy. The source of any such discharge must be eliminated as soon as practicable.
3. In response to a suspected violation of any requirement or condition of this Order, the Los Angeles Water Board may require the holder of this Order to furnish, under penalty of perjury, any technical or monitoring reports the Water Boards deem appropriate, provide that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The additional monitoring requirements ensure that permitted discharges and activities comport with any applicable effluent limitations, water quality standards, and/or other appropriate requirement of state law.
4. LACFCD or their agents shall report any noncompliance with this Order. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time LACFCD becomes aware of the circumstances. A written submission shall also be provided within three days of the time LACFCD becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
5. In response to any violation of the requirements or conditions of this Order, the State Water Board or Los Angeles Water Board may add to or modify the requirements or conditions of this Order as appropriate to ensure compliance.
6. After notice and opportunity for a hearing, this Order may be modified, revoked and reissued, or terminated or modified for cause, including, but not limited to:
 - i. Failure to comply with any term or condition contained in this Order;
 - ii. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;
 - iii. A change in any condition or acquisition of newly-obtained information that would have justified the application of different terms or conditions if known at the time of Order adoption;

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- iv. Endangerment to human health or the environment resulting from the permitted activity.
- 7. LACFCD must, at all times, fully comply with engineering plans, specifications, and technical reports submitted to support this Order and all subsequent submittals required as part of this Order. However, the requirements and conditions within this Order and Attachments supersede any conflicting provisions within LACFCD submittals.
- 8. This Order and all of its conditions and requirements contained herein continue to have full force and effect regardless of the expiration or revocation of any federal license or permit issued for the Project. For purposes of Clean Water Act, section 401(d), this condition constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements of state law.

i. Administrative

- 1. This Order does not authorize any act which results in the taking of a threatened, endangered or candidate species or any act, which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & Game Code, §§ 2050-2097) or the federal Endangered Species Act (16 U.S.C. §§ 1531-1544). If a “take” will result from any act authorized under this Order held by LACFCD, LACFCD must obtain authorization for the take prior to any construction or operation of the portion of the Project that may result in a take. LACFCD is responsible for meeting all requirements of the applicable endangered species act for the Project authorized under this Order.
- 2. LACFCD shall grant Los Angeles Water Board and State Water Board staff, or an authorized representative (including an authorized contractor acting as a Water Board representative), upon presentation of credentials and other documents as may be required by law, permission to:
 - i. Enter the Project or compensatory mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records are kept.
 - ii. Have access to and copy any records that are kept and are relevant to the Project or the requirements of this Order.
 - iii. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order.
 - iv. Sample or monitor for the purposes of assuring Order compliance.
- 3. A copy of this Order shall be provided to any consultants, contractors, and subcontractors working on the Project. Copies of this Order shall be available at the Project sites during clearing activities. LACFCD shall be responsible for work conducted by its consultants, contractors, and any subcontractors.
- 4. A copy of this Order must be available at the Project site(s) during maintenance activities for review by site personnel and agencies. All personnel performing work on the Project shall be familiar with the content of this Order and its location at the Project site.
- 5. LACFCD shall submit copies of any other final permits and agreements required for this project, including, but not limited to, the ACOE CWA Section 404 permit and the CDFW’s Streambed Alteration Agreement to the Los Angeles Water Board 401 Certification Unit. These documents shall be submitted prior to any discharge to waters of the State.

j. Mitigation for Temporary Impacts

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1. LACFCD shall restore all areas of temporary impacts to waters of the State and all other areas of temporary disturbance outside of areas of maintenance, which could result in a discharge or a threatened discharge to waters of the State. Restoration shall include returning areas to pre-project contours and planting with native vegetation, if feasible.

k. Compensatory Mitigation for Permanent Impacts⁶

1. To mitigate the 48.2 acres impacted by removal of vegetation, LACFCD established the Big Tujunga Wash Mitigation Area in accordance with the *Master Mitigation Plan for the Big Tujunga Wash Mitigation Bank* (Final Plan dated April 2000), which contains 62.7 acres (achieving a 1.3:1 mitigation ratio) (Table 2).

Table 2: Required Project Compensatory Mitigation Quantity		
Aquatic Resource Type	Comp Mit. Type ⁷	Rehabilitation ⁸
Stream Channel	Permittee Responsible	62.7 acres

2. LACFCD shall continue to maintain the 62.7-acre Big Tujunga Wash Mitigation Area to ensure its long-term sustainability and that of the resident aquatic resources.

l. Best Management Practices

1. All appropriate Best Management Practices (BMPs) shall be implemented in order to avoid any impacts to water quality. LACFCD shall follow the “BMP Manual for Soft Bottom Clearing” developed by LACFCD in 2003 and all other necessary BMPs. The maintenance clearing activities shall not result in indirect impacts to water quality or beneficial uses of downstream waterbodies. The maintenance clearing activities shall not result in changes in the quantity or quality of water in downstream waterbodies as a result of maintenance activity, or during operation subsequent to the maintenance activities. The maintenance clearing activities shall not result in changes in water quality in the channel that would cause or contribute to water quality exceedances during periods between maintenance activities, or upon their annual completion.
2. LACFCD shall comply with the specifications of its Master Maintenance Plan, or any subsequently approved plans that follow.
3. LACFCD shall implement the Plan for Hazard Analysis and Critical Control Points dated April 1, 2010 (HACCP) in all reaches in the Malibu and Santa Monica watersheds or any subsequently Executive Officer-approved HACCP to limit the spread of invasive species.
4. LACFCD shall comply with all water quality objectives, prohibitions, and policies set forth in the Basin Plan, as amended.

⁶ Compensatory Mitigation is for permanent physical loss and permanent ecological degradation of a water of the state.

⁷ Compensatory mitigation type may be: In-Lieu-Fee (ILF); Mitigation Bank (MB); Permittee-Responsible (PR)

⁸ Methods: establishment, reestablishment, rehabilitation, enhancement, preservation.

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5. LACFCD shall implement all Best Management Practices as outlined in the Master Maintenance Plan.
6. Prior to start of any annual maintenance clearing, qualified biologists shall perform pre-clearing biological resource surveys and photo documentation. Sensitive/endangered species focused surveys shall be conducted per the Master Maintenance Plan. No work shall commence without confirmation of findings or no findings of sensitive/endangered species from the biologists. These surveys are also meant to minimize impact on any resources that may potentially use or benefit from the channel.
7. During construction, biologists shall be available for consultation for any issues that may arise.
8. If maintenance activities on monitoring equipment are necessary during the nesting season, appropriate nesting bird surveys will be conducted prior to starting work.
9. All excavation, construction, or maintenance activities shall follow best management practices to minimize impacts to water quality and beneficial uses. Dust control activities shall be conducted in such a manner that will not produce downstream runoff.
10. All waste and/or dredged material removed shall be relocated to a legal point of disposal if applicable. A legal point of disposal is defined as one for which WDRs have been established by a California Regional Water Quality Control Board, and is in full compliance therewith. Please contact the Land Disposal Unit, at (213) 620-6600 for further information.
11. LACFCD shall implement all necessary control measures to prevent the degradation of water quality from the proposed project in order to maintain compliance with the Basin Plan. The discharge shall meet all effluent limitations and toxic and effluent standards established to comply with the applicable water quality standards and other appropriate requirements, including the provisions of sections 301, 302, 303, 306, and 307 of the CWA. This Order does not authorize the discharge by LACFCD for any other activity than specifically described in the current CWA Section 404 permit for this project.
12. Application of pesticides must be supervised by a certified applicator and be in conformance with manufacturer's specifications for use. Compounds used must be appropriate to the target species and habitat. Pesticide utilization shall be in accordance with State Water Board pesticide permits including: Water Quality Order Nos. 2011-0003-DWQ, for Aquatic Animal Invasive Species Control; 2011-0004-DWQ, for Spray Applications; 2011-0002-DWQ, for Vector Control; and 2013-0002-DWQ, for Weed Control. If LACFCD, or other County agency in support of LACFCD, plans to use any pesticides in these reaches, LACFCD shall also specify the General NPDES permit (i.e. Vector Control or Weed Control) and submit the WDID number and the Pesticide Action Plan or Aquatic Pesticides Application Plan with the Annual Workplan. If LACFCD or other County agency in support of LACFCD, enrolls in one of the abovementioned permits during the year for use in a reach included in this Order due to an emerging issue such as an emerging vector control issue, LACFCD shall submit the WDID number and the Pesticide Action Plan or Aquatic Pesticides Application Plan as soon as available.
13. LACFCD shall not conduct any routine maintenance activities within waters of the State during a rainfall event. LACFCD shall maintain a one-day (1-day) clear weather forecast before conducting any operations within waters of the State. If rain is predicted within 12

hours after operations have begun, activities shall cease temporarily, protective measures to prevent siltation/erosion shall be implemented and maintained and all material and equipment will be removed from the earth-bottom reach.

- 14.** LACFCD shall utilize the services of a qualified biologist with expertise in riparian assessments during all construction activities where maintenance involves partially clearing areas (i.e., some vegetation is to remain in the same reach or in an adjacent reach). The biologist shall be available if necessary during maintenance activities to ensure that all protected areas are marked properly and ensure that no vegetation outside the specified areas is removed. The biologist shall have the authority to stop the work, as necessary, if instructions are not followed. The biologist shall be available upon request from the Los Angeles Water Board for consultation within 24 hours of request of consultation.
- 15.** No activities shall involve wet excavations (i.e., no excavations shall occur below the seasonal high water table). A minimum 5-foot buffer zone shall be maintained above the existing groundwater level. If construction or groundwater dewatering is proposed or anticipated, LACFCD shall file a Report of Waste Discharge with the Los Angeles Water Board and obtain any necessary NPDES permits/WDRs prior to discharging waste. Sufficient time should be allowed to obtain any such permits (generally 180 days). If groundwater is encountered without the benefit of appropriate permits, LACFCD shall cease all activities in the areas where groundwater is present, file a Report of Waste Discharge to the Los Angeles Water Board, and obtain any necessary permits prior to discharging waste.
- 16.** All maintenance activities not included in this Order, and which may require a permit, must be reported to the Los Angeles Water Board for appropriate permitting. Bank stabilization and grading, as well as any other ground disturbances, are subject to restoration and revegetation requirements, and may require additional WDR action.
- 17.** All surface waters, including ponded waters, shall be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water.
- 18.** LACFCD shall follow the 2016 Water Diversion Manual, Attachment E to this Order, or, for circumstances which require a deviation from the Surface Water Diversion Plan, may submit to the Los Angeles Water Board an individual plan for the surface water diversion prior to the surface water diversion.
- 19.** Diversion activities shall not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Any such violations may result in corrective and/or enforcement actions, including increased monitoring and sample collection.
- 20.** If ongoing maintenance activities on a new channel reach were covered by previous certifications with mitigation, additional mitigation will not be required. Prior to clearing of the new reaches, or where additional clearing has been authorized by the Los Angeles Water Board, LACFCD will document and provide to the Los Angeles Water Board the amount of riparian vegetation to be removed for maintenance in these reaches.
- 21.** All mitigation areas shall be preserved and maintained as habitat in perpetuity.

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22. Any modifications of the proposed project may require submittal of a new CWA Section 401 Water Quality Certification application or Report of Waste Discharge and appropriate filing fee.

XIII. Water Quality Certification

The Los Angeles Water Board hereby issues this Order for the Maintenance Clearing of Engineered Earth-Bottom Channels for Flood Control, 4WQC40199011, certifying that as long as all of the conditions and requirements listed in this Order are met, any discharge from the referenced Project will comply with the applicable provisions of Clean Water Act sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards).

Except insofar as may be modified by any preceding conditions or requirements, all Order actions are contingent on: (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the conditions and requirements of this Order and the attachments to this Order; and (b) compliance with all applicable requirements of Statewide Water Quality Control Plans and Policies and the Los Angeles Water Boards' Water Quality Control Plan and Policies.

XIV. Effective Date and Term

- a. This Order takes effect upon its issuance by the Los Angeles Water Board.
- b. Term: This Order expires on July 20, 2023 or upon such time it is replaced coincident with a renewed ACOE CWA Section 404 permit, whichever is earlier. If an ACOE CWA Section 404 permit is renewed, LACFCD must file a Report of Waste Discharge with the Los Angeles Water Board no later than 120 days before of the expected date of the renewed ACOE CWA Section 404 permit for consideration of issuance of new or revised requirements. If no such ACOE CWA Section 404 permit is renewed and LACFCD wishes to continue maintenance activities after this Order expires, LACFCD must file a Report of Waste Discharge with the Los Angeles Water Board no later than 120 days before the expiration date of this Order for consideration of issuance of new or revised requirements. Any discharge of waste after the expiration date of this Order is a violation of Water Code section 13264. The Los Angeles Water Board is authorized to take appropriate enforcement action for any noncompliance with this provision including assessment of penalties.
- c. Los Angeles Water Board Order No. R4-2015-0032, adopted by the Board on February 12, 2015 and amended on February 11, 2016, is hereby terminated, except for enforcement purposes.

CERTIFICATION

I, Deborah J. Smith, do hereby certify that the foregoing is a full, true, and correct copy of Waste Discharge Requirements and Clean Water Act section 401 Water Quality Certification for the Maintenance Clearing of Engineered Earthen-Bottom Channels for Flood Control, 4WQC40199011, issued on June 14, 2018.

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Deborah J. Smith
Executive Officer
Los Angeles Water Quality Control Board

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Attachment B

REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
1	Bell Creek- MTD 963 M.C.I.	The channel clearing work will involve hand cutting a 15-foot-wide "tunnel" through the vegetation to the right-of-way boundary to train flows to the center of the channel inlet. The Operator shall not impact the 0.27 acre of vegetation that was allowed to remain in 1997. All removal shall be done by hand operated tools.	<ul style="list-style-type: none"> Lollipop 15-foot wide "tunnel" through the vegetation in invert. Allow native shrubs such as willow, coyote bush, and mulefat to spread and become established outside channel on both banks. Crews have relocated existing chain-link fence to between access road and channel so the "side area" next to the channel isn't used as a staging area. Remove all vegetation with hand operated tools. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>Recommendation:</p> <p>1) Allow willow canopy to spread outside channel on north side. Allow native shrubs such as coyote bush and mule fat to become established in this area. Relocate existing chain-link fence as shown on exhibit (placed between access road and channel so the "side area" next to the channel isn't used as a staging area).</p> <p>2) Allow willow canopy to spread outside channel on south side. Allow native shrubs such as coyote bush and mule fat to become established in this area.</p>
2	Dry Canyon (Calabasas) PD T1845	The channel clearing work will involve maintaining and clearing a 20-foot-wide path along the centerline of the channel. A canopy of vegetation (trees along both banks) will be left in place. Hand clearing will be performed annually to keep the center portion of the channel clear and vegetation will be removed from the openings in the crib walls to the extent necessary to prevent structural damage to the crib walls. The Operator shall not impact the 0.39 acre of vegetation that was allowed to remain in 1997. All removal shall be done by hand operated tools. The width of clearing shall not exceed 20 feet and trees with a 3-inch DBH or greater shall not be removed. All exotics shall be selectively removed from the area during maintenance activities.	<ul style="list-style-type: none"> The reach-clearing work will involve maintaining and clearing a 20-foot-wide path along the reach's centerline. New trees within and on the reach banks will not be allowed to mature. Hand clearing will be performed annually to keep the center portion of the reach clear. Vegetation will be removed from the openings in the crib walls to the extent necessary to prevent structural damage to the crib walls. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>No change.</p> <p>The new language ("trees within and on the reach banks will not be allowed to mature") is required because the banks are vertical crib walls which large trees damage. Most, if not all of the trees on the crib walls are ornamental species.</p>
3	Santa Susana Creek M.C.I.	Hand cutting and clearing vegetation and trees will be done in an 18-foot-wide area by 75-foot long area at the inlet to the channel. Oak trees will be left in place. Removal of vegetation shall be done by hand clearing only.	<ul style="list-style-type: none"> Hand cutting and clearing vegetation and trees will be done in an 18-foot-wide by 75-foot-long area at the inlet to the concrete-lined channel. Large oak trees are not rooted within easement boundary. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
4	Browns Creek	Mechanical equipment will be used to keep clear all vegetation from bank to bank within the rail and timber revetment.	<ul style="list-style-type: none"> Mechanical equipment will be used to keep clear all vegetation from bank to bank within the rail and timber revetment. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
5	Caballero Creek M.C.I. (West Fork)	The vegetation clearing work will involve hand clearing a 20-foot-wide path along the centerline of the channel. The total amount of area impacted due to maintenance activities, for both reaches combined, was a 20-foot-wide path along the centerline of the channel for a total of 812 linear feet (0.37 acre). The Operator shall use hand clearing only. Exotics shall be removed during maintenance activities. The vegetation (0.36 acre) that was	<ul style="list-style-type: none"> The vegetation clearing work will involve hand clearing a 20-foot-wide path along the centerline of the channel. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
6	Caballero Creek M.C.I. (East Fork)	The vegetation clearing work will involve hand clearing a 20-foot-wide path along the centerline of the channel. The total amount of area impacted due to maintenance activities, for both reaches combined, was a 20-foot-wide path along the centerline of the channel for a total of 812 linear feet (0.37 acre). The Operator shall use hand clearing only. Exotics shall be removed during maintenance activities. The vegetation (0.36 acre) that was	<ul style="list-style-type: none"> The vegetation clearing work will involve hand clearing a 20-foot-wide path along the centerline of the channel. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.

Attachment B

REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
7	Bull Creek M.C.O.	<p>The work will involve mechanical or manual methods to clear dead vegetation and tree limbs along the banks to ensure clear flow within the channel. Mechanical clearing is necessary due to hazardous conditions. The mechanical clearing will be accomplished from the top of bank.</p> <p>No equipment will be driven in the invert. This work will be done only in the first 400 feet of riprap channel downstream from the concrete channel outlet to ensure that flow does not back up into the concrete channel upstream of Victory Boulevard. The trimming and removal of dead vegetation along the banks within the 400 linear feet shall not exceed a width of 15 feet on each bank. The Operator shall not impact the 1.45 acres of vegetation that was allowed to remain in 1997. A biologist will monitor clearing activities in order to facilitate replacement of ornamental vegetation with native riparian vegetation.</p>	<ul style="list-style-type: none"> • Hand clear vegetation and debris from the invert. This work will be done only in the first 275 feet of the reach, from the concrete reach outlet to the pedestrian bridge. • Allow willows to grow in a single line (no more than one tree every ten feet) and to mature at the toe of the levee on the right bank. • Lollipop these willows up to six feet. • Use hand clearing only. • LACFCD agreed to maintain this reach for USACE even though it is within USACE easement. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>Note that the area and length of the work are has been reduced to 275 feet of riprap due to the installation of the USACE restoration project in Balboa Park. The vegetation on the invert was not allowed to remain prior to the restoration project, so the current maintenance activities do not represent a change.</p> <p>Recommendation: Allow willows to grow in a single line (no more than one tree every ten feet) and to mature at the toe of the levee on the right bank.</p>
8	Hayvenhurst Drain -Project 470 Outlet	All vegetation in this channel reach will be cleared annually using hand clearing only.	<ul style="list-style-type: none"> • All vegetation in this reach will be cleared annually using mechanical or manual methods. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
9	Project 106 Outlet	Brush and tree trimming will be performed where needed to keep growth at the levels that were left in November 1997. Hand clearing only. Impacts shall not exceed 0.12 acre.	<ul style="list-style-type: none"> • Brush and tree trimming will be performed annually to keep the invert free of vegetation and debris. • Remove non-native ash trees at top of both banks and replace with native trees. • Allow native sycamore trees to establish. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>Recommendation: Replace the non-native ash trees with native trees on both banks. Based on the physical parameters of this channel reach and its location, native sycamore trees should be allowed to establish on both banks instead of willows.</p>

Attachment B

REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
10	Project No. 469	<p>Due to a recent toxic spill, no work was performed in November 1997, since virtually all of the vegetation was killed. Vegetation and dead vegetation will be mechanically removed to the extent necessary to prevent restricting flows in the storm drain upstream of Victory Boulevard. This will require clearing the channel for approximately 4,000 feet downstream of Victory Boulevard. The reach will be maintained clear of all vegetation during the dry season. No work was done in 1997. Vegetation will be cleared annually to the extent necessary to prevent restricting flows in the storm drain upstream of Victory Boulevard. This will require mechanical clearing of vegetation in the channel for approximately 4,000 feet downstream of Victory Boulevard. Channel work will also include mechanical grading to train flows to the centerline of the channel. The Operator shall not impact 2.11 acres of vegetation that was allowed to remain in the channel in 1997.</p>	<ul style="list-style-type: none"> • The reach will be maintained clear all vegetation to allow flows in the storm drains upstream of Victory Boulevard (includes clearing of vegetation approximately 4,000 feet downstream of Victory Blvd.). • Maintenance will also include mechanical grading to train flows to the centerline of the reach. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>The vegetation in this reach consists almost entirely of non-native ruderal (weedy) vegetation. The maintenance plan has not been fully implemented for this reach because of a conflict between the maintenance plan and the permits. Issuance of the 1997 CDFW permit coincided with a toxic spill in this reach and resulted in the incorrect conclusion that "no work was done in 1997." Since that time, the monitoring biologist has worked with LACFCD personnel to implement partial clearing strategies designed to meet flood-control concerns and to retain as much vegetation as possible. A rotating pattern of clearing was implemented that allowed ruderal vegetation to remain on one bank each year. As a result, the ruderal vegetation cleared each year was two years old. After several years, however, the monitoring biologist found that the bank of mowed ruderal vegetation responded favorably to the mowing and provided more "biological value" than the older (two year old) ruderal vegetation. Therefore, the monitoring biologist discontinued the rotating clearing pattern at this reach and full clearing was resumed.</p> <p>The hydrological studies identified this reach as hydraulically insufficient, without the capacity for any additional vegetation.</p>
12	Haines Canyon M.C.O.	<p>Hand clearing of all vegetation will be used to keep the reach clear of vegetation, except for vegetation that was allowed to remain. This process will be repeated annually to prevent growth from restricting flows at the outlet to the channel.</p>	<ul style="list-style-type: none"> • Hand clear of all vegetation in understory and lollipop trees. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
13	Project No. 5215 Unit 1	<p>The channel clearing work will involve mechanical clearing the earthen outlet channel with a backhoe and hand cutting all vegetation from the first 250 feet of channel bottom (12-foot wide) downstream at the end of Christy Avenue. Bank vegetation and the remaining 300 feet of channel will not be cleared.</p>	<ul style="list-style-type: none"> • The channel clearing work involves mechanically clearing the earthen outlet reach with a backhoe and hand cutting all vegetation from the first 250 feet of the channel bottom (12-foot wide) downstream at the end of Christy Avenue. • Bank vegetation and the remaining 300 feet of the channel will not be cleared. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.

Attachment B

REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
14	May Channel (M.C.O. Into Pacoima Canyon)	Hand clearing work will be performed to keep reach clear of all vegetation. The Operator shall not impact the 0.5 acre of vegetation that was allowed to remain in 1997.	<ul style="list-style-type: none"> • Hand clear all understory vegetation. • The tree canopy will remain. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>No change.</p> <p>Actual maintenance activities that have been conducted at this reach have always been confined to the invert. The riparian vegetation that was allowed to remain on the banks had been the "protected" vegetation in this reach. The surveys then determined that this vegetation is occupied by the least Bell's vireo. However because the reach is hydraulically deficient, the maintenance activities will be implemented as permitted.</p>
15	Pacoima Wash	Mechanical equipment and hand cutting will be used to keep the reach cleared of all vegetation. The Operator shall not impact 0.01 acre of vegetation.	<ul style="list-style-type: none"> • Mechanical equipment and hand cutting will be used to keep the reach cleared of all vegetation. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	The 0.01 acre of vegetation allowed to remain in 1997 was upstream of the pedestrian bridge. This 0.01 acre consisted of cattails that was taken over by invasive species (e.g., ornamental trees and Washingtonia palms). This preserved polygon was relocated and expanded, at the direction of the monitoring biologist, to the downstream terminus of the channel reach.
16	Verdugo Wash-Las Barras Canyon (channel inlet)	Hand clearing work will be used to keep the reach clear of all vegetation. Impacts shall not exceed 0.07 acre.	<ul style="list-style-type: none"> • Hand clear all understory vegetation. • The tree canopy will remain. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
18	Engleheard Channel	Hand clearing work will remove dead vegetation and tree branches from the area between the pipe and wire revetments. All vegetation will be cleared annually by manual methods.	<ul style="list-style-type: none"> • Hand clear all vegetation and tree branches from the invert between the pipe and the wire revetments. • Allow native shrub species to grow and become established on the banks, above the pipe and wire revetments. Protect native shrub species by selectively removing non-native weedy species. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>Recommendation:</p> <p>Allow native shrub species to grow and become established on the banks, above the pipe and wire revetments. Protect native shrub species by selectively removing non-native weedy species.</p>
19	Pickens Canyon	Manual removal of all vegetation adjacent to or growing out of the crib structures will be performed.	<ul style="list-style-type: none"> • Hand clear all vegetation adjacent to the crib structures and all vegetation growing out of them. • Allow native shrubs, but not trees, to grow in the invert of the channel except on the crib structures. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>Recommendation:</p> <p>Except for on the crib structures, allow native shrubs to grow on the invert of the channel reach from the upstream end to the pedestrian bridge at Mountain Ave. Protect native shrubs by selectively removing non-native vegetation. Native trees will not be allowed to grow on the invert.</p>

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
20	Webber Channel (Storm @ Private Bridge)	Mechanical equipment will be used to keep the channel clear of all vegetation. Impacts shall not exceed 0.13 acre (115 linear feet by 50 feet wide).	<ul style="list-style-type: none"> • Hand-held equipment will be used to selectively remove all new non-native and invasive species. • Allow native vegetation/shrubs to grow in the invert and on the channel banks, but not trees. • Do not allow additional oaks or other trees to grow on the banks. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>Recommendation: Mechanical equipment will be used to keep the reach clear of all vegetation except for the native shrubs on the right (or west) bank. Under the guidance of the monitoring biologist, native shrubs will be allowed to grow on the right (or west) bank, and non-native species will be selectively removed. Do not allow oaks or other additional trees to grow on the banks.</p> <p>Hand-held equipment instead of mechanical will be used. Adjacent residents have installed landscaping plants. The language is revised to indicate only "new" growth will be removed.</p>
21	Webber Channel (Main Channel Inlet d/s Bridge)	Hand clearing work will be performed to keep the reach clear of all vegetation. Impacts shall not exceed 0.03 acre.	<ul style="list-style-type: none"> • Hand-held equipment will be used to selectively remove all new non-native and invasive species. • Allow native vegetation/shrubs to grow in the invert and on the channel banks. • Do not allow additional oaks or other trees to grow on the banks. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>Recommendation: Mechanical equipment will be used to keep the reach clear of all vegetation except for the native shrubs on the left (or east) bank. Under the guidance of the monitoring biologist, native herbaceous and shrub species will be allowed to grow on the left (or east) bank, and non-native species will be selectively removed. Selectively remove non-native ground cover species (e.g. ivy) from left (or east) bank. Do not allow additional oaks or other trees to grow on the banks.</p> <p>Hand-held equipment instead of mechanical will be used. Adjacent residents have installed landscaping plants. The language is revised to indicate only "new" growth will be removed.</p>
22	Halls Canyon	Except for on the crib structures, allow native shrubs (but not trees) to grow on the invert of the entire channel reach. Selectively protect native shrubs by removing non-native vegetation. Native trees will not be allowed to mature on the channel invert.	<ul style="list-style-type: none"> • Except for on the crib structures, allow native shrubs (but not trees) to grow on the invert of the entire length of the channel. • Protect native shrubs by selectively removing non-native vegetation. • Trees will not be allowed to mature on the channel invert. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>Recommendation: Except for on the crib structures, allow native shrubs (but no trees) to grow on the invert of the entire length of this channel reach. Protect native shrubs by selectively removing non-native vegetation. Native trees will not be allowed to mature on the invert.</p>

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
24	Compton Creek	Mechanical equipment will be used to keep the channel clear of all vegetation.	<ul style="list-style-type: none"> • Vegetation along the invert will be mowed to approximately 6 to 12 inches above grade using a skidsteer or a long-reach excavator with an attached mower. • Leave the clippings in place. • The vegetation along the water line will be mowed using a long-reach excavator with attached flail mower that gently mows the overgrowth back and away from the waterline to prevent increase turbidity in the water. • An excavator with flail mower will be used to mow vegetation on the side slope. • All invasive species such as castor beans will be removed by hand, except <i>Arundo donax</i> which will be mechanically removed. • All equipment will have rubber tires or rubber tracks, not steel tracks. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	Years of scraping the vegetation has resulted in small amounts of the soil on the invert being removed. As this minor removal happened year after year, it resulted in the invert being lower than intended and beginning to expose the toe of the grouted rip rap slopes. To compensate for this, the proposed maintenance activity will leave the "tracked" vegetation in place (which will eventually break down naturally and turn into soil). The slight roughness of the vegetation and root systems allow some sediment flowing downstream to be trapped. All invasive plants are removed before tracking to reduce them from spreading.
25	(a) Los Angeles River - Willow to PCH (East/Left Bank)	Using mechanical equipment, all exotic vegetation will be removed throughout this reach. Riparian vegetation allowed to remain in 2000 shall not be impacted by future maintenance activities. Trimming of the riparian vegetation may be necessary in the future as growth occurs.	<ul style="list-style-type: none"> • Vegetation along the invert will be mowed to approximately 6 to 12 inches above grade using a skidsteer or a long-reach excavator with an attached mower. • Leave the clippings in place. • The vegetation along the water line will be mowed using a long-reach excavator with attached flail mower that gently mowed the overgrowth back and away from the waterline to prevent increased turbidity in the water. • An excavator with flail mower will be used to mow vegetation on the side slope. • All invasive species such as castor beans will be removed by hand, except <i>Arundo donax</i> which will be mechanically removed. • All protected polygons will remain. • All equipment will have rubber tires or rubber tracks, not steel tracks. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	Reach has been split into (a) and (b) components. Recommendation: 1) Allow native willow woodland vegetation to mature and expand on left (or east) bank. 2) Allow wetland marsh expansion and persistence on right (or west) bank. 3) Selective removal of woody plants (hand tools only in marsh habitat)
25	(b) Los Angeles River - Willow to PCH (West/Right Bank)			
26	Project 740	The channel will be cleared using hand labor. Hand labor will be used to trim the vegetation which has been allowed to remain since 1997. New growth will not be allowed to become established and will be removed annually by manual methods.	<ul style="list-style-type: none"> • Hand trim the mature vegetation. • New growth will not be allowed to become established and will be removed annually by manual methods. • Ruderal vegetation above the banks will be mowed. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
27	Wilmington Drain	All vegetation from the channel in the area upstream of Lomita Boulevard will be kept cleared. Between Lomita Boulevard and Pacific Coast Highway, vegetation will be kept clear from the two channels, but the island will remain. The work will be done with mechanical equipment.	<ul style="list-style-type: none"> • [On hold until Long Term Maintenance Agreement has been finalized with the City.] • Upstream of Lomita Boulevard, all vegetation will be cleared. • Between Lomita Boulevard and Pacific Coast Highway, vegetation will be cleared from the toe of the invert to 3 feet up the slope on all banks, including the island. Upslope from that, vegetation on the island will remain. • Clearing work in the reach invert will be done with mechanical equipment; vegetation on the banks will be trimmed with hand tools. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	Construction for the City of Los Angeles's Wilmington Drain Multi-Use Project (Proposition O Clean Water Bond) began in spring 2013. Construction included the removal of sediment and non-native vegetation throughout the length of this reach. The channel reach provides potential habitat for the least Bell's vireo and southwestern willow flycatcher and surveys have determined that it is occupied by the vireo. The City of Los Angeles obtained the necessary "take" permits under FESA and CESA. Construction activities were allowed to continue under the terms and conditions of the permits. Prior to this year, the maintenance plan had been fully implemented and the vireo was protected by terms and conditions under permits held by the LACFCD.
28	Triunfo Creek (PD T2200)	The channel clearing work will involve hand clearing all vegetation from the ungrouted rock levee and hand clearing all vegetation along the levee from the base to an outward distance of 20 feet. The Operator shall avoid impacts to southwestern pond turtles. Clearing shall not extend beyond the area that was cleared in 1997 or as stated in the maintenance plan without prior approvals from the Department. No native trees shall be removed with a 2 inch diameter at breast height or greater. The 0.2 acre of vegetation that was allowed to remain in 1997 shall not be impacted during future maintenance activities.	<ul style="list-style-type: none"> • Hand clear all vegetation • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>This reach has insufficient capacity. Structures will be inundated in high flow storm events. LACFCD would like the authority to remove all vegetation annually if shown necessary after further analyses.</p> <p>In order to comply with the HACCP plan developed by the LACFCD for the WDR and adopted on February 4, 2010, by the Los Angeles RWQCB, pre-clearing aquatic invasive species surveys will be conducted in the reaches of the Malibu Creek Watershed.</p>
29	Las Virgenes Creek (PD T1684) M.C.I.	The channel clearing work will involve hand clearing a 30-foot-wide strip along the watercourse low flow channel from the debris posts to the right-of-way boundary. The Operator shall avoid impacts to southwestern pond turtles. The Operator shall not impact the 0.61 acre of vegetation that was allowed to remain in 1997. No native trees shall be removed with a 2-inch diameter at breast height or greater.	<ul style="list-style-type: none"> • The reach clearing work will involve hand clearing a 30-foot-wide strip along the watercourse low flow reach from the debris posts to the opposite bank. • Within the herbaceous vegetation on the left bank, plant 2 valley oaks (<i>Quercus lobata</i>) and 5 blue elderberry (<i>Sambucus nigra</i>) at edge of right-of-way (about 100 to 125 feet away from concrete levee). • No native trees shall be removed with a 2-inch diameter at breast height or greater. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>Recommendation: Within the herbaceous vegetation on the left bank, plant two (2) valley oaks (<i>Quercus lobata</i>) and five (5) blue elderberry (<i>Sambucus nigra</i>) at edge of right-of-way (about 100 to 125 feet away from concrete levee).</p> <p>In order to comply with the HACCP plan developed by the LACFCD for the WDR and adopted on February 4, 2010, by the Los Angeles RWQCB, pre-clearing aquatic invasive species surveys will be conducted in the reaches of the Malibu Creek Watershed.</p>

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32	Stokes Canyon Channel (PD T043)	The work will involve hand clearing of all vegetation between the pipe and wire. Embankment vegetation outside the pipe and wire channel will be left in place.	<ul style="list-style-type: none"> • Hand clear all vegetation between the pipe and wire. • Embankment vegetation outside the pipe and wire channel will be left in place. • Plant at least 20 young coast live oaks (<i>Quercus agrifolia</i>) on the south bank between the bridge and the most upstream end of the reach. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>Recommendation: Plant at least 20 young coast live oaks (<i>Quercus agrifolia</i>) on the south bank between the bridge and the most upstream end of the reach.</p> <p>In order to comply with the HACCP plan developed by the LACFCD for the WDR and adopted on February 4, 2010, by the Los Angeles RWQCB, pre-clearing aquatic invasive species surveys will be conducted in the reaches of the Malibu Creek Watershed.</p>
33	Medea Creek (PD T1378 U.2)	The channel clearing work will avoid vegetation clearing due to sensitive resources. If any vegetation needs to be cleared during future maintenance activities, the Operator shall provide additional mitigation for those impacts. The entire 0.69 acre modified area is vegetated. Therefore, if clearing all vegetation, need to mitigate for an additional 0.69 acre of riparian vegetation. Vegetation shall be removed by hand clearing only. No native trees shall be removed with a 2-inch diameter at breast height or greater.	<ul style="list-style-type: none"> • Trees will be lollipopped to a height of seven feet. • The cattails downstream of Thousand Oaks Blvd will be allowed to naturally expand throughout this downstream area. • If overgrowth of the cattails occurs over time, the vegetation at this location may need to be trimmed back every so often. • Vegetation shall be removed by hand clearing only. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	Additional vegetation clearing impacts will be offset through mitigation at Stickleback River Ranch.
34	Medea Creek (PD T1005) Main Channel Outlet (Chumasa Park)	Hand clearing only. Impacts shall not exceed 0.19 acre. No native trees shall be removed with a 2 inch diameter at breast height or greater.	LACFCD transferred the fee title right of way and appurtenant flood control facilities to the City of Agoura Hills. Maintenance has been discontinued and the reach is removed from all regulatory permits.	LACFCD transferred the fee title right of way and appurtenant flood control facilities to the City of Agoura Hills. Maintenance has been discontinued and the reach is removed from all regulatory permits.
35	Medea Creek M.C.I.-under Route 101	Hand clearing only. Impacts shall not exceed 0.14 acre. No native trees shall be removed with a 2 inch diameter at breast height or greater.	<ul style="list-style-type: none"> • This reach is not within LACFCD easement boundaries. • Continue maintenance until the entity responsible for maintaining the reach is notified that the reach is their responsibility. Then discontinue maintenance and remove from all regulatory permits. • Hand clearing will be performed to keep reach clear of all vegetation. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>No change. This reach is not within LACFCD easement boundaries.</p> <p>In order to comply with the HACCP plan developed by the LACFCD for the WDR and adopted on February 4, 2010, by the Los Angeles RWQCB, pre-clearing aquatic invasive species surveys will be conducted in the reaches of the Malibu Creek Watershed.</p>
36	Cheseboro Main Channel Inlet	The clearing work will involve hand cutting/trimming three two-inch diameter trees. New vegetation will be cleared annually to prevent blockage of the inlet. The Operator shall not impact the 0.05 acre of vegetation that was allowed to remain in 1997.	<ul style="list-style-type: none"> • Hand clear vegetation in the invert. • The tree canopy will remain, but with a clear "tunnel" path to convey flows. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>No change. Language revised to reflect current on-site conditions (ie. the three two-inch diameter trees have changed).</p> <p>In order to comply with the HACCP plan developed by the LACFCD for the WDR and adopted on February 4, 2010, by the Los Angeles RWQCB, pre-clearing aquatic invasive species surveys will be conducted in the reaches of the Malibu Creek Watershed.</p>

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37	Medea Creek/Cheseboro Creek Outlet	Hand clearing work will be performed to keep reach clear of all vegetation. The 0.25 acres of vegetation that was allowed to remain in 1997 shall not be impacted during maintenance activities.	<ul style="list-style-type: none"> Hand clearing work will be performed to keep reach clear of all vegetation, except protected polygons. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>No change.</p> <p>In order to comply with the HACCP plan developed by the LACFCD for the WDR and adopted on February 4, 2010, by the Los Angeles RWQCB, pre-clearing aquatic invasive species surveys will be conducted in the reaches of the Malibu Creek Watershed.</p>
38	Lindero M.C.O.	Hand clearing work will be performed to keep reach clear of all vegetation. Impacts shall not exceed 0.19 acre. No native trees shall be removed with a 2-inch diameter at breast height or greater.	<ul style="list-style-type: none"> Hand clearing work will be performed to keep reach clear of all vegetation. No native trees shall be removed with a 2-inch diameter at breast height or greater. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>No change.</p> <p>In order to comply with the HACCP plan developed by the LACFCD for the WDR and adopted on February 4, 2010, by the Los Angeles RWQCB, pre-clearing aquatic invasive species surveys will be conducted in the reaches of the Malibu Creek Watershed.</p>
39	Beatty Channel Outlet @ SGR 25+99.00	Mechanical equipment will be used to keep the channel outlet clear of all vegetation.	<ul style="list-style-type: none"> Mechanical equipment will be used to keep the channel outlet clear of all vegetation. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
40	(a) San Gabriel River – Santa Fe Dam to I-10 Freeway	<p>From Santa Fe Dam to the San Bernardino Freeway, most of the vegetation consists of mule fat interspersed with various exotic species. The 10-foot-wide strips along the levee toes will be kept clear of all vegetation annually using a combination of mechanical equipment and hand labor.</p> <p>Two strips of vegetation varying from 50 to 75 feet in width will be mowed using various types of mowing equipment. The root structures of the plants will not be disturbed. In subsequent years, mowing will be accomplished in alternate cycles between the center portion of the channel and the two strips of vegetation. Grading to reestablish baseline conditions will be performed on an as-needed basis to maintain access ramps and low-flow channels from side outlets.</p>	<ul style="list-style-type: none"> From Santa Fe Dam to the San Bernardino Freeway, Interstate 10, most of the vegetation consists of native mule fat interspersed with various non-native species. The 10-foot-wide strips along the levee toes will be kept clear of all vegetation annually using a combination of mechanical equipment and hand labor. In the center of the reach, the mule fat is mowed using various types of mowing equipment. The root structures of the plants are not disturbed. Two strips of vegetation (50 and 75 feet in width) will be allowed to remain along each side of the reach invert. Mowing is accomplished in alternate cycles between the center portion of the reach and the two strips of vegetation. Grading to reestablish baseline conditions will be performed on an as-needed basis to maintain access ramps and low-flow reaches from side outlets. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>No change.</p> <p>Reach is split into (a) and (b) components.</p>
40	(b) San Gabriel River – I-10 Freeway to Thienes Avenue	<p>From San Bernardino Freeway to Thienes Avenue, this portion of the reach will be kept clear of all vegetation using mechanical equipment and hand labor, except for the riparian vegetation allowed to remain in place in November 1997. This process will be repeated annually. Grading to reestablish baseline conditions will be performed on an as-needed basis to maintain access ramps and low-flow channels from side outlets.</p>	<ul style="list-style-type: none"> From San Bernardino Freeway, Interstate 10, to Thienes Avenue, this portion of the reach will be kept clear of all vegetation using mechanical equipment and hand labor, except for the protected polygons. This process is repeated annually and is monitored by a biologist familiar with least Bell's vireo habitat requirements. Grading to reestablish baseline conditions will be performed on an as-needed basis to maintain access ramps and low-flow reaches from side outlets. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>No change.</p> <p>Reach is split into (a) and (b) components.</p>

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
41	Walnut Creek	Mechanical equipment will be used to keep the channel clear of all vegetation, except for the riparian habitat (mostly willows) allowed to remain in November 1997 and vegetation located away from structure bases and not located in center of channel. Vegetation growing in the rock riprap along the channel sides and on the riprap at the downstream end of the concrete channel will be cleared. Some trimming of the riparian vegetation may be necessary to reduce the impact on flow in the channel as future growth occurs.	<ul style="list-style-type: none"> Mechanical clearing of vegetation will be used to keep the channel clear of all vegetation except for the protected polygons. Hand clear the vegetation growing in the rock riprap along the reach sides and on the riprap at the downstream end of the concrete reach. Some trimming of the riparian vegetation may be necessary to reduce the impact on flow in the reach as future growth occurs. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>No change. Cannot implement the SGR Feasibility Study recommendation to add more vegetation because USACE owns the reach and will not allow additional vegetation.</p> <p>Some of the riparian vegetation allowed to remain in place in November 1997 has been lost due to natural causes. Due to drought conditions, several willow trees were stressed and became susceptible to a wood borer infestation.</p>
42	San Jose Creek d/s 1000' from end of concrete channel	Mechanical equipment will be used to keep the channel clear of all vegetation, except for the riparian habitat (mostly willows) allowed to remain in November 1997 and vegetation located away from structure bases and not located in center of channel. Vegetation growing in the rock riprap along the channel sides and on the riprap at the downstream end of the concrete channel will be cleared. Some trimming of the riparian vegetation may be necessary to reduce the impact on flow in the channel as future growth occurs.	<ul style="list-style-type: none"> Mechanical clearing of vegetation will be used to keep the channel clear of all vegetation except for the protected polygons. Hand clear the vegetation growing in the rock riprap along the reach sides and on the riprap at the downstream end of the concrete reach. Some trimming of the riparian vegetation may be necessary to reduce the impact on flow in the reach as future growth occurs. LACFCD agreed to maintain this reach for USACE even though it is within USACE easement. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>No change.</p> <p>Some of the riparian vegetation allowed to remain in place in November 1997 has been lost due to natural causes. Willow trees were lost due to high storm flows during the 2004–2005 rainy season. The monitoring biologist in conjunction with LACFCD personnel identified young willow trees within the same "line" for protection. However, the sediment islands had been scoured and these young willow trees did not survive subsequent rainy seasons.</p>
43	(a) San Gabriel River- Upper	Mechanical equipment will be used to keep the channel clear of all vegetation, except for the riparian vegetation allowed to remain in November 1997 (5.27 acres). Trimming of the riparian vegetation may be necessary in the future as growth occurs	<ul style="list-style-type: none"> Mechanically clear the invert and the rock riprap along the reach sides to keep the channel clear of all vegetation, except for the protected polygons. Some trimming of the riparian vegetation may be necessary to reduce the impact on flow in the reach as future growth occurs. The vegetation that is seasonally occupied by the least Bell's vireo will be flagged and a qualified biologist will be present during clearing activities. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>No change. Cannot implement the SGR Feasibility Study recommendation to add more vegetation because USACE owns the reach and will not allow additional vegetation.</p> <p>Reach has been split into (a) and (b) components.</p>
43	(b) San Gabriel River- Lower	Mechanical equipment will be used to keep the channel clear of all vegetation, except for the riparian vegetation allowed to remain in November 1997. Trimming of the riparian vegetation may be necessary in the future as growth occurs.	<ul style="list-style-type: none"> Mechanically clear the invert and the rock riprap along the reach sides to keep the channel clear of all vegetation, except for the protected polygons. Some trimming of the riparian vegetation may be necessary to reduce the impact on flow in the reach as future growth occurs. The vegetation that is seasonally occupied by the least Bell's vireo will be flagged and a qualified biologist will be present during clearing activities. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<p>No change. Cannot implement the SGR Feasibility Study recommendation to add more vegetation because USACE owns the reach and will not allow additional vegetation.</p> <p>Reach has been split into (a) and (b) components.</p>
	San Gabriel River – Rubber Dams (Upper)	Mechanical equipment will be used to keep the channel	<ul style="list-style-type: none"> Mechanically clear the invert and the rock riprap along the reach sides to keep the channel clear of all vegetation, except for the protected polygons. 	

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44	San Gabriel River – Rubber Dams (Middle) San Gabriel River – Rubber Dams (Lower)	clear of all vegetation, except for the riparian vegetation allowed to remain in November 1997 (5.7 acres). Trimming of the riparian vegetation may be necessary in the future as growth occurs.	<ul style="list-style-type: none"> Some trimming of the riparian vegetation may be necessary to reduce the impact on flow in the reach as future growth occurs. The vegetation that is seasonally occupied by the least Bell's vireo will be flagged and a qualified biologist will be present during clearing activities. 	No change. Cannot implement the SGR Feasibility Study recommendation to add more vegetation because USACE owns the reach and will not allow additional vegetation.
45	Sand Canyon (PD T1307) Main Channel Inlet	Mechanical clearing will be performed to keep reach clear of all vegetation. Impacts shall not exceed 0.05 acre. No native trees shall be removed with a 2-inch diameter at breast height or greater.	<ul style="list-style-type: none"> This reach is not within LACFCD easement boundaries. Continue maintenance until the City of Santa Clarita completes their project in this area. Then discontinue maintenance and remove from all regulatory permits. Mechanically clear all vegetation. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change. This reach is not within LACFCD easement boundaries.
46	Sand Canyon (PD T1307) Main Channel Outlet	Mechanical clearing will be performed to keep reach clear of all vegetation. Impacts shall not exceed 0.06 acre. No native trees shall be removed with a 2-inch diameter at breast height or greater.	<ul style="list-style-type: none"> This reach is not within LACFCD easement boundaries. Continue maintenance until the entity responsible for maintaining the reach is notified that the reach is their responsibility. Then discontinue maintenance and remove from all regulatory permits. Mechanically clear all vegetation. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
47	Santa Clara River Main Channel (PD T1733-Unit 1)	The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach. The Operator shall not impact the 4.51 acres of vegetation that was allowed to remain in 1997. Impacts shall not exceed 0.76 acre (1,656 linear feet by 20 feet wide along each levee).	<ul style="list-style-type: none"> Mechanically clear all vegetation within 15 feet from the levee slope lining along the entire reach. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change. (Standardized levee toe clearing to 15 feet.)
48	Mint Canyon Channel between Sierra Highway & Adon Avenue	Mechanical and hand clearing work will be performed to keep reach clear of all vegetation.	<ul style="list-style-type: none"> Mechanical and hand clearing work will be performed to keep reach clear of all vegetation. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
49	Mint Canyon Channel between Adon Avenue & Scherzinger Lane	All vegetation in this channel reach will be cleared annually using mechanical and manual methods.	<ul style="list-style-type: none"> Mechanically and hand clear all vegetation. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
50	Mint Canyon Channel between Solamint & Soledad	Mechanical and hand clearing work will be performed to keep reach clear of all vegetation. The vegetation (0.01 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.	<ul style="list-style-type: none"> Mechanical and hand clearing work will be performed to keep reach clear of all vegetation. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
51	Mint Canyon M.C.O. (PD 1894)/Santa Clara River – Main Channel	The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach (932 linear feet). Impacts shall not exceed 0.9 acres.	<ul style="list-style-type: none"> Mechanically clear all vegetation within 15 feet from the levee slope lining along the entire reach. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change. (Standardized levee toe clearing to 15 feet.)

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
52	Sierra Highway Road Drainage (CDR 523.203)	Hand clearing work will be performed to keep reach clear of all vegetation. Impacts shall not exceed 0.4 acre.	<ul style="list-style-type: none"> This reach is not within LACFCD easement boundaries. Continue maintenance until the entity responsible for maintaining the reach is notified that the reach is their responsibility. Then discontinue maintenance and remove from all regulatory permits. Hand clearing will be performed to keep reach clear of all vegetation. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
53	Santa Clara River Non-Main Channel (PD 832) Main Channel Inlet	Mechanical and hand clearing work will be performed to keep reach clear of all vegetation. Impacts shall not exceed 0.03 acre.	<ul style="list-style-type: none"> Mechanically and hand clear all vegetation. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
54	Santa Clara River Non-Main Channel (PD 832) Main Channel Outlet	Mechanical and hand clearing work will be performed to keep reach clear of all vegetation. Impacts shall not exceed 0.31 acre.	<ul style="list-style-type: none"> Mechanical and hand clearing work will be performed to keep reach clear of all vegetation. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
55	Santa Clara River Main Channel – Right Bank Reach (PD's 910, 832, 1758, & 1562 Unit 2)	The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach.	<ul style="list-style-type: none"> Mechanically clear all vegetation within 15 feet from the levee slope lining along the entire reach. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change. (Standardized levee toe clearing to 15 feet.) Reaches 60, 59, and 58 are no longer combined with 55.
56	Santa Clara River Main Channel – Left Bank Reach (PD 832)	The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach.	<ul style="list-style-type: none"> Mechanically clear all vegetation within 15 feet from the levee slope lining along the entire reach. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change. (Standardized levee toe clearing to 15 feet.)
57	Whites Canyon (PD T704 M.C.I.)	Mechanical or hand clearing work will be performed to keep reach clear of all vegetation. No work was done in 1997 and 0.42 acre of vegetation was present in the channel.	<ul style="list-style-type: none"> Mechanical or hand clearing work will be performed to keep reach clear of all vegetation, except for protected polygons. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
58	Santa Clara River Main Channel – Right Bank Reach (PD 374)	The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach.	<ul style="list-style-type: none"> Mechanically clear all vegetation within 15 feet from the levee slope lining along the entire reach. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change. (Standardized levee toe clearing to 15 feet.) Reaches 60, 59, and 58 are no longer combined with 55. Reach 59 is now combined with Reach 58.
60	Santa Clara River Main Channel – Right Bank Reach (PD's 1339 and 374)	The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach.	<ul style="list-style-type: none"> Mechanically clear all vegetation within 15 feet from the levee slope lining along the entire reach. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change. (Standardized levee toe clearing to 15 feet.) Reaches 60, 59, and 58 are no longer combined with 55.

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
61	Santa Clara River Main Channel (PD 659 & 754)	The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach. Impacts shall not exceed 0.75 acre. Clearing shall not extend more than 20 feet beyond the toe of the levee.	<ul style="list-style-type: none"> Mechanically clear all vegetation within 15 feet from the levee slope lining along the entire reach. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change. (Standardized levee toe clearing to 15 feet.) Reach 62 is now combined with 61.
63	Oak Ave Road Drainage (CDR 523.081)	The channel clearing work will involve mechanized removal of all vegetation bank to bank. Impacts shall not exceed 0.85 acre.	<ul style="list-style-type: none"> This reach is not within LACFCD easement boundaries. Continue maintenance until the entity responsible for maintaining the reach is notified that the reach is their responsibility. Then discontinue maintenance and remove from all regulatory permits. Mechanically clear all vegetation. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
64	Soledad Canyon Road Drain (CDR 523.071 D outlet)	The channel clearing work will involve hand clearing an 8-foot-wide path along the centerline of the channel. All vegetation will be removed by hand labor. Impacts shall not exceed 0.10 acre (8-feet wide by 577 linear feet).	<ul style="list-style-type: none"> This reach is not within LACFCD easement boundaries. The reach clearing work will involve mechanical (rubber-tired equipment) and hand clearing to clear an eight-foot-wide path along the centerline of the channel. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	The use of rubber-tire equipment will be implemented. Maintenance activities revised to allow for additional removal techniques.
66	Santa Clara River Main Channel (PD 1538)	The channel clearing will involve mechanical removal of all vegetation within 20 feet from the slope lining along the entire reach.	<ul style="list-style-type: none"> Mechanically clear all vegetation within 15 feet from the levee slope lining along the entire reach. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change. (Standardized levee toe clearing to 15 feet.)
67	Bouquet Canyon Upper (PD's 1201, 802, 700B, & 625)	The channel clearing work will involve an alternating pattern of mechanical clearing of vegetation. Only one-half of the channel will be cleared each year. The other one-half of the channel will be cleared the following year. Channel clearing work will also include mechanical grading of sediment to train flows to the centerline of the channel. Outlet structures will be graded to drain each year.	<ul style="list-style-type: none"> Mechanically clear all vegetation. Reach-clearing work will also include mechanical grading of sediment to train flows to the centerline of the reach. Outlet structures will be graded to drain each year. The preferred method would be to clear the vegetation on the left bank in even years and the right bank in odd years. If water is present on the scheduled bank, however, the work will proceed with the opposite bank. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	This reach has insufficient capacity. Structures will be inundated in high flow storm events. LACFCD would like the authority to remove all vegetation annually if shown necessary after further analyses.

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
69	Bouquet Canyon Middle (PD's 722, 773, 1365, 1065, & 451)	The channel clearing work will involve an alternating pattern of mechanical clearing of vegetation. Only one-half of the channel will be cleared each year. The other one-half of the channel will be cleared the following year. Channel clearing work will also include mechanical grading of sediment to train flows to the centerline of the channel. Outlet structures will be graded to drain each year.	<ul style="list-style-type: none"> Mechanically clear all vegetation. Reach-clearing work will also include mechanical grading of sediment to train flows to the centerline of the reach. Outlet structures will be graded to drain each year. The preferred method would be to clear the vegetation on the left bank in even years and the right bank in odd years. If water is present on the scheduled bank, however; the work will proceed with the opposite bank. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	This reach has insufficient capacity. Structures will be inundated in high flow storm events. LACFCD would like the authority to remove all vegetation annually if shown necessary after further analyses.
70	Bouquet Canyon Lower (PD's 544 & 345)	The channel clearing work will involve an alternating pattern of mechanical clearing of vegetation. Only one-half of the channel will be cleared each year. The other one-half of the channel will be cleared the following year. Channel clearing work will also include mechanical grading of sediment to train flows to the centerline of the channel. Outlet structures will be graded to drain each year.	<ul style="list-style-type: none"> Mechanically clear all vegetation. Reach-clearing work will also include mechanical grading of sediment to train flows to the centerline of the reach. Outlet structures will be graded to drain each year. The preferred method would be to clear the vegetation on the left bank in even years and the right bank in odd years. If water is present on the scheduled bank, however, the work will proceed with the opposite bank. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	This reach has insufficient capacity. Structures will be inundated in high flow storm events. LACFCD would like the authority to remove all vegetation annually if shown necessary after further analyses.
71	Santa Clara River Main Channel (PD 1946)	The channel clearing work will involve mechanized removal of all vegetation within 20 feet from the base of the slope lining along the entire reach.	<ul style="list-style-type: none"> Mechanically clear all vegetation within 15 feet from the levee slope lining along the entire reach. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change. (Standardized levee toe clearing to 15 feet.)
72	South Fork-SCR (Smizer Ranch M.C.I.)	The channel clearing work will involve hand clearing dead vegetation and cutting invasive and trimming riparian vegetation that would obstruct flows. Tree canopy will be retained, yet a clear "tunnel" path will be provided to convey flows.	<ul style="list-style-type: none"> Hand clear vegetation in the invert. The tree canopy will remain, but with a clear "tunnel" path to convey flows. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
73	Wildwood Canyon Channel (PD T361) Main Channel Inlet	This reach is not within LACFCD easement and no work will be performed in it.	<ul style="list-style-type: none"> Mechanical and hand clearing will be performed to keep reach clear of all vegetation. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.

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74	Wildwood Canyon Channel (PD T361)	Mechanical or hand clearing work will be performed to keep reach clear of all vegetation. Impacts shall not exceed 0.02 acre.	This reach is not within LACFCD easement boundaries. Maintenance has been discontinued and the reach is removed from all regulatory permits.	No change.
75	South Fork-Santa Clara River (PD's 725, 916, 1041, &1300)	The channel clearing work will involve mechanical clearing and grading of all vegetation bank to bank from <u>Lyons Avenue to Orchard Village Road</u> . Mechanical grading and clearing of just invasive vegetation from bank to bank will be performed from <u>Orchard Village Road to the confluence with Newhall Creek</u> . Mechanical clearing of all vegetation will be done along the base of the concrete levee from the <u>confluence with Newhall Creek to Magic Mountain Parkway</u> . A 20-foot-wide strip will be maintained clear along the entire length of the levee and 45 degree grading of low-flow channels from side outlets to the center of the watercourse will also be maintained clear of all vegetation to minimize pounding and blockage of side outlet flows. A centerline watercourse low flow 12-foot wide will be maintained clear of all vegetation and will be graded along the entire length in this reach. Two island areas supporting mature trees will be left in place as well as the riparian vegetation. Tree pruning of dead branches and limbs that could obstruct flow will be removed by hand labor. The vegetation (15.37 acres) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.	<ul style="list-style-type: none"> • mechanically clear all vegetation • mechanically clear and grade 10-foot <p>wide entrainment channels from all outlets, extending to the channel centerline at a 45-degree angle.</p> <ul style="list-style-type: none"> • mechanically clear and grade a centerline watercourse low flow 12-foot wide. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	This reach has insufficient capacity. Structures will be inundated in high flow storm events. LACFCD would like the authority to remove all vegetation annually if shown necessary after further analyses.
76	Pico Canyon (PD 813)	The channel clearing work will involve bank-to-bank removal of all vegetation using mechanical equipment.	<ul style="list-style-type: none"> • Mechanical and hand clearing will be performed to keep reach clear of all vegetation. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
77	Newhall Creek Outlet	Mechanical equipment will be used to maintain the reach clear of all vegetation. The vegetation (0.89 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities. For this reach, the 0.89 acre of vegetation that was allowed to remain in 1997 must be located downstream of its confluence with Placerita Creek as all vegetation upstream of this confluence is cleared.	<ul style="list-style-type: none"> • Mechanical and hand clearing will be performed to keep the low flow channel clear of all vegetation. • Mature vegetation in the invert but above the low flow channel will remain. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
78	Placerita Creek	Mechanical equipment will be used to maintain the reach clear of all vegetation. The vegetation (0.01 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.	<ul style="list-style-type: none"> • Mechanical and hand clearing will be performed to keep the low flow channel clear of all vegetation. • Mature vegetation in the invert but above the low flow channel will remain. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
79	South Fork-Santa Clara River (Valencia Boulevard Bridge Stabilizer)	Mechanical equipment will be used to maintain the reach clear of all vegetation. The vegetation (0.02 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.	<ul style="list-style-type: none"> Mechanical equipment will be used to maintain the reach clear of all vegetation, except the protected polygon. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
80	South Fork-Santa Clara River (PD's 1947 & 1946)	The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the toe of the concrete levee along the entire length. The vegetation (2.05 acres) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.	<ul style="list-style-type: none"> Mechanically clear all vegetation within 15 feet from the levee slope lining along the entire reach. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change. (Standardized levee toe clearing to 15 feet.)
82	Santa Clara River Main Channel (PD 2278)	Channel clearing work will involve mechanically removing all vegetation within 20 feet of the toe of the concrete levee along the entire reach. Impacts within this reach shall not exceed 0.40 acre.	<ul style="list-style-type: none"> Mechanically clear all vegetation within 15 feet from the levee slope lining along the entire reach. Allow native vegetation to establish in the remainder of the channel within LACFCD right-of-way. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	Allow native vegetation to establish in the remainder of the channel within LACFCD right-of-way. (Standardized levee toe clearing to 15 feet.)
86	Violin Canyon Main Channel Outlet	Mechanical equipment will be used to maintain the reach clear of all vegetation. The vegetation (0.41 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.	<ul style="list-style-type: none"> Mechanical equipment will be used to maintain the reach clear of all vegetation. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
87	Castaic- Old Road Drainage (CDR 525.021D) Outlet	The channel clearing work will involve hand cutting and clearing a 20-foot path from the riprap outlet to the main watercourse, Castaic Creek.	<ul style="list-style-type: none"> Hand cut and clear a 20-foot path from the riprap outlet to the main watercourse, Castaic Creek. The tree canopy will remain, but with a clear "tunnel" path to convey flows. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
88	Hasley Canyon Upper (PD T1496)	The channel clearing work will involve mechanical equipment to remove all vegetation from bank to bank from Sharp Road to 755 feet upstream. From 330 feet downstream of Sharp Road to Sharp Road, hand clearing will be done. Impacts shall not exceed 0.42 acre (1,085 linear feet by 17 feet wide).	<ul style="list-style-type: none"> North of Sharp Road: Mechanically clear all vegetation within 15 feet of the toe of the levee. North of Sharp Road: Mechanically clear all vegetation within 50 feet upstream and downstream of the bridge. North of Sharp Road: Allow native shrubs to establish and existing mature native trees to remain elsewhere. South of Sharp Road: Hand clear all vegetation from the riprap. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	Recommendation: Remove all vegetation within 15 ft of the toe of the levee. Within area of identified capacity, from 15 ft to 39 ft from the toe of the levee, remove all nonnative vegetation and remove any newly established native or non-native trees. Allow native shrubs to remain and expand overtime and allow existing mature native trees to remain. All existing vegetation will be subject to maintenance practices allowed under existing permits (e.g. the "lollipoping" of individual trees, and the removal of invasive species).
89	Hasley Canyon South Fork (PD T1496)	The channel clearing work will involve hand labor clearing of alluvial sage scrub. The vegetation (0.02 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.	<ul style="list-style-type: none"> Hand clear all vegetation except mature oak trees. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.

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90	Hasley Canyon Lower (North Fork PD T1496)	The channel clearing work will involve hand clearing and mechanized removal of vegetation. Portions of the channel bottom will be denuded of vegetation while leaving the earthen bank vegetated, clusters of mature growth in the channel bottom will remain to the level it was left in November 1997. The vegetation (0.19 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.	<ul style="list-style-type: none"> Mechanically clear all vegetation Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	This reach has insufficient capacity. Structures will be inundated in high flow storm events. LACFCD would like the authority to remove all vegetation annually if shown necessary after further analyses.
91	San Martinez Chiquito Canyon Channel u/s of Kennington Road	The channel clearing work will involve removal of all the vegetation within the pipe and wire channel using hand labor, but the embankment vegetation will be left in place.	<ul style="list-style-type: none"> Hand clear all the vegetation within the pipe and wire channel The embankment vegetation will be left in place. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
92	San Martinez Chiquito Canyon (North Fork) unnamed	The channel clearing work will involve removal of all the vegetation within the pipe and wire channel using hand labor, but the embankment vegetation will be left in place.	<ul style="list-style-type: none"> Hand clear all the vegetation within the pipe and wire channel The embankment vegetation will be left in place. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
93	San Martinez Chiquito Canyon between Kennington Road and Val Verde Park	The channel clearing work will involve removal of all the vegetation within the pipe and wire channel using hand labor, but the embankment vegetation will be left in place.	<ul style="list-style-type: none"> Hand clear all the vegetation within the pipe and wire channel The embankment vegetation will be left in place. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
94	San Martinez Chiquito Canyon between Val Verde Park to d/s of Madison Street	The channel clearing work will involve removal of all the vegetation within the pipe and wire channel using hand labor, but the embankment vegetation will be left in place.	<ul style="list-style-type: none"> Hand clear all the vegetation within the pipe and wire channel The embankment vegetation will be left in place. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
95	Project No. 1224	The channel clearing work will involve removal of all vegetation within the pipe and wire channel using mechanical equipment, but the embankment vegetation will be left in place.	<ul style="list-style-type: none"> Hand clear all the vegetation within the pipe and wire channel The embankment vegetation will be left in place. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
96	PD 1591, Calabasas	The channel clearing will involve hand clearing all vegetation from the inlet and outlet approaches to the box culvert under Vicasa Drive.	<ul style="list-style-type: none"> Hand clear all vegetation from the inlet and outlet approaches to the box culvert under Vicasa Drive, except in protected polygons. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.

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97	PD T1982, Castaic Creek	The channel clearing work will involve hand cutting and mechanized removal of all vegetation along the entire length of the levee at a width of 20 feet and clearing and grading 45-degree, 12-foot-wide low flows from the side outlets to the center of the main watercourse. The vegetation (1.17 acres) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.	<ul style="list-style-type: none"> The reach clearing work will involve hand cutting and mechanized removal of all vegetation and trees along the entire length of the levee at a width of 15 feet and clearing and grading 45-degree, 12-foot-wide low flows from the side outlets to the center of the main watercourse. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change. (Standardized levee toe clearing to 15 feet.)
98	Walnut Creek – Channel Inlet	Mechanical equipment will be used to keep the inlet clear of all vegetation. Impacts shall not exceed 0.03 acre.	<ul style="list-style-type: none"> To the extent that storm flows do not keep the inlet free of vegetation, mechanical equipment will be used to keep the inlet clear of all vegetation. No regrowth will be allowed to remain. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
99	Kagel Canyon – Tujunga Wash	Hand clearing work will be performed to keep all vegetation clear in this reach.	<ul style="list-style-type: none"> Hand clear work all vegetation in this reach. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	No change.
100	Dry Canyon, Calabasas Creek Inlet	The channel clearing work will involve hand clearing all vegetation at the channel inlet. Bank vegetation will be left in place.	<ul style="list-style-type: none"> Hand clear all vegetation Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	This reach has insufficient capacity. Structures will be inundated in high flow storm events. LACFCD would like the authority to remove all vegetation annually if shown necessary after further analyses.
101	Violin Canyon (PD 2312)	The channel clearing work will involve an alternating pattern of mechanical clearing of vegetation. Only one-half of the channel will be cleared each year. The other one-half of the channel will be cleared the following year. In addition vegetation will be mechanically removed along a 12-foot path along the toe of the levee lining and 12-foot training channels will be cut to aid in levee inspection and draining the inlets.	<ul style="list-style-type: none"> Mechanically clear vegetation in a 15-foot-wide path along the toe of both levee slopes. Mechanically clear and grade 10-foot wide entrainment channel from all outlets, extending to the centerline of the channel at a 45-degree angle. Allow native vegetation to establish in the remainder of the channel. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> Not previously included in the 2005 Maintenance Plan. Leave all vegetation in the reach except for the levee toe and outlets. Standardized levee toe clearing to 15 feet. Standardized outlet entrainment channels to 10 feet wide.

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102	Violin Canyon (PD 2275)	Every year, all vegetation within 20 feet of the right bank slope lining will be mechanically removed. In addition, the vegetation will be mechanically removed, bank to bank, from the furthest downstream stabilizer (Station 14+32) to the concrete invert (Station 12+40).	<ul style="list-style-type: none"> • Mechanically remove all vegetation within 15 feet of the toe of the right levee. • Mechanically clear and grade 10-foot wide entrainment channels from all outlets, extending to the centerline of the channel at a 45-degree angle. Mature trees in the entrainment channel at the downstream outlet will be lollipopped instead of cleared. • Mechanically remove vegetation, bank to bank, over the three drop structures, which are currently hidden from view by sediment. • Initial effort: Remove 750 cubic yards of accumulated sediment from the three drop structures in order to expose them and provide flow velocity control. • Subsequent years: Re-grade 200 cubic yards of sediment during subsequent years over the same footprint as the initial removal. • The cleared drop structure areas will be used as pathways for equipment transport. • Allow native vegetation to establish in the remainder of the channel within LACFCD right-of-way. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan. • Chose to clear <u>less than</u> the Recommendation: Leave vegetation from the furthest downstream stabilizer (Station 14+32) to the concrete invert (Station 12+40) remaining. Clear over stabilizers. Allow native vegetation to establish in the remainder of the channel within LACFCD right-of-way. • Standardized levee toe clearing to 15 feet. • Standardized outlet entrainment channels to 10 feet wide.
103	Bouquet Canyon Channel (PD 2225)	The channel clearing work will involve an alternating pattern of mechanical clearing of vegetation. Only one-half of the channel will be cleared each year. The other one-half of the channel will be cleared the following year. Channel clearing work will also include mechanical grading of sediment to train flows to the centerline of the channel. Outlet structures will be graded to drain each year. If adequate surface water is present, surveys for the unarmored threespine stickleback are required prior to initiation of clearing activities.	<ul style="list-style-type: none"> • Mechanically clear vegetation on a 15-foot wide path along the toe of both levee slopes. • Clear all vegetation over the grouted riprap (Newhall Ranch Road bridge to 300 feet downstream). • Initial effort: Remove 3,000 cubic yards of sediment over the grouted riprap (Newhall Ranch Road bridge to 300 feet downstream). • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan. • Chose to clear <u>less than</u> the Recommendation: Leave all vegetation in the reach except for the levee toe and outlets.
104	Castaic Creek (PD 2441 Unit 2)	The channel clearing will involve mechanized removal of all vegetation within 20 feet of the left bank side slope lining along the entire reach. In addition, grading to drain a 12-foot wide training channel from the tributary underground storm drains to the easement line will be prepared. The training channel will be at a 45-degree angle to the side slope lining.	<ul style="list-style-type: none"> • All activities will follow the 2002 General Maintenance Plan for Castaic Creek and Hasley Canyon Drain. Those activities are summarized here. • Hand clear all woody vegetation, including large trees within a 15-foot-wide path along the toe of left bank's slope lining. • Mechanically clear and grade 10-foot wide entrainment channels from all outlets, extending up to 30 feet from the toe of the levee at a 45-degree angle. Trees with a diameter-at-breast-height over four inches will be avoided. Light equipment such as a Caterpillar D-6 or equivalent may be used and will avoid ponded water. • Allow native vegetation to establish in the remainder of the channel within LACFCD right-of-way. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan. • Proposed maintenance is in compliance with the revised 2002 General Maintenance Plan for Castaic Creek and Hasley Canyon Drain prepared for Newhall Land. • Allow native vegetation to establish in the remainder of the channel within LACFCD right-of-way. • Standardized levee toe clearing to 15 feet. • Standardized outlet entrainment channels to 10 feet wide.

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
105	San Francisquito Canyon Channel (PD 2456)	The channel clearing will involve mechanized removal of all vegetation within 20 feet of the side slope lining along both banks throughout the entire reach. In addition, grade to drain a 20-foot wide training channel from the left bank outlet at station 7 + 34 to the easement line. The training channel will be at a 45 degree angle to the side slope lining. If surface water is present, then surveys for the unarmored threespine stickleback and arroyo toad are required prior to initiation of clearing activities. Additionally, whether or not surface water is present, a qualified toad biologist must be present during clearing activities to salvage any adult arroyo toads that may appear during the clearing activities.	<ul style="list-style-type: none"> All activities will follow the Natural Rivers Management Plan. Those activities are summarized here. Hand clear all woody vegetation, including large trees, within a 15-foot-wide path along the toe of left bank's slope lining. Mechanically clear and grade a 10-foot wide entrainment channel from the outlet at Station 7+34, extending up to 60 feet from the toe of the levee at a 45-degree angle. Trees with a diameter-at-breast-height over four inches will be avoided. Light equipment such as a Caterpillar D-6 or equivalent may be used and will avoid ponded water. Allow native vegetation to establish in the remainder of the channel within LACFCD right-of-way. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> Not previously included in the 2005 Maintenance Plan. All activities will follow the Natural Rivers Management Plan. Allow native vegetation to establish in the remainder of the channel within LACFCD right-of-way. Standardized levee toe clearing to 15 feet. Standardized outlet entrainment channels to 10 feet wide.
106	Castaic Drain Outlet	The channel clearing will involve mechanized removal of vegetation along 12-foot wide access path aligned along toe of east bank; install and maintain crushed aggregate base equipment access path.	This reach is not within LACFCD easement boundaries. Maintenance will not occur and the reach is to be removed from all regulatory permits.	This reach is not within LACFCD easement boundaries. Maintenance will not occur and the reach is to be removed from all regulatory permits.
107	The Old Road Channels	Mechanical equipment or hand labor will be used to clear all vegetation up to approximately 8 feet high from bank to bank within the 943-foot long soft bottom channel. If surface water is present, then surveys for the unarmored threespine stickleback and arroyo toad are required prior to initiation of clearing activities. Additionally, a qualified toad biologist must be present during clearing activities to salvage any adult arroyo toads that may appear during the clearing activities.	This reach is not within LACFCD easement boundaries. Maintenance will not occur and the reach is to be removed from all regulatory permits.	This reach is not within LACFCD easement boundaries. Maintenance will not occur and the reach is to be removed from all regulatory permits.
108	Pico Canyon (PD 2528)	The LACFCD will inspect and mechanically remove accumulated sediment, debris, and all the vegetation in the reach to ensure the proper functioning of the flood-control infrastructure. Weeds and grasses may be controlled by mowing or hand labor. The reach will be cleared annually to the same baseline condition as that approved for clearing activities.	<ul style="list-style-type: none"> Mechanically remove accumulated sediment, debris, and all woody vegetation in the reach. Weeds and grasses may be controlled by mowing or hand labor. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> Not previously included in the 2005 Maintenance Plan. No change.
109	Santa Clara River - South Bank West of Mcbean Parkway (MTD1510)	The LACFCD will mechanically remove all vegetation within a 15-foot-wide path along the toe of the reach's left bank slope lining for the entire reach (easement boundary is 327 feet) and will grade and clear a 10-foot-wide training channel at a 45-degree angle from the outlet up to 30 feet from the toe of the levee. LACFCD will clear trash and debris by hand outside of the impact areas but within easement boundaries.	<ul style="list-style-type: none"> Mechanically remove all woody vegetation within a 15-foot-wide path along the toe of the left levee for the entire reach. Grade and clear a 10-foot-wide entrainment channel at a 45-degree angle from the outlet up to 30 feet from the toe of the levee. Trees in the entrainment channel at the downstream outlet will be lollipopped instead of cleared. Allow native vegetation to establish in the remainder of the channel within LACFCD right-of-way. Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> Not previously included in the 2005 Maintenance Plan. Mature trees in the outlet entrainment channel will be lollipopped, not cleared. Allow native vegetation to establish in the remainder of the channel within LACFCD right-of-way.

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
110	Hasley Canyon Channel (PD2262)	<p>The LACFCD will mechanically clear vegetation on alternating sections of the reach. Only one-half of the reach will be cleared each year. The right side of the reach will be cleared in odd years. The left side of the reach will be cleared in even years. After the initial clearing of vegetation, only mowing will be required. Reach-clearing work will also include mechanical grading of sediment to train flows to the centerline of the reach as well as the annual grading and clearing of a ten-foot-wide training channel at 45-degree angles from each outlet to the centerline of the reach. Additional clearing work and sediment re-grading will include within 37-feet downstream of each drop structure to form a ramp for equipment transportation up and over the drop structure. LACFCD will clear trash and debris by hand outside of the impact areas but within easement boundaries.</p>	<ul style="list-style-type: none"> • Mechanically clear all vegetation. • Mechanically clear and grade 10-foot wide entrainment channels from all outlets, extending up to 30 feet from the toe of the levee at a 45-degree angle. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan. <p>This reach has insufficient capacity. Structures will be inundated in high flow storm events. LACFCD would like the authority to remove all vegetation annually if shown necessary after further analyses.</p>

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
112	Ballona Creek	N/A	<p>Remove non-native woody vegetation on the levee slopes down to the roots. Above the Ordinary High Water Mark (OHWM), mechanical equipment parked on the access road will be used as necessary. Below the OHWM or in the native marshes only hand and/or hand-held mechanical equipment will be used.</p> <ul style="list-style-type: none"> • Native vegetation that is dead or alive will not be cleared. • Once vegetation is removed, root cavity voids will be backfilled using heavy equipment, positioned outside the OHWM. The sediment will be compacted, but not re-contoured. • Non-native weeds and grasses will be controlled by mowing or hand labor. • The above-ground vegetation of a shrub will be removed then a stump grinder will remove the root ball. <p>• Upper Section (Centinela Avenue to 90 freeway): The native California bulrush (<i>Schoenoplectus californicus</i>) and cattail (<i>Typha dominguensis</i>) comprises the "freshwater marsh" and is located below the OHWM. Therefore, only hand and/or hand-held mechanical equipment will be used to maintain it.</p> <p>1. The freshwater marsh will be mowed down to six-inches above the height of the grouted riprap.</p> <p>• Lower Section (90 freeway to the condos at 33.963880, - 118.451116): Only non-native vegetation will be removed within the saltwater marsh. It will be removed by hand only.</p>	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan.
113	Dominguez Channel	N/A	<ul style="list-style-type: none"> • Non-native woody vegetation on the riverside levee slopes will be removed down to the roots below the access roads. • The work to be performed includes the clearing of vegetation, debris, and brush growing on the reach right-of-way and in the riprap. • Trimming and removal of non-native trees and shrubs will reduce the impact on flow in the reach as future growth occurs. • No heavy equipment will be used in areas mapped as Coastal Salt Marsh (disturbed or not; generally, areas with pickleweed). These areas will be avoided and not impacted in order to prevent impacts to native species and potentially sensitive species. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan.

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
114	Los Angeles River	N/A	<ul style="list-style-type: none"> • Non-native woody vegetation on the riverside levee slopes will be removed down to the roots annually below the access roads to the original baseline condition. • Weeds and grasses may be controlled by mowing or hand labor. • The work to be performed includes the clearing of vegetation, trash, and debris on the reach right-of-way and in the riprap. • When root removal creates a cavity in the riprap, the cavity will be filled in and the soil compacted. • Areas mapped as Coastal Salt Marsh (disturbed or not; generally, areas with pickleweed) will be avoided and not impacted in order to prevent impacts to native species and potentially sensitive species. • The freshwater wetlands (formerly Arundo areas) in the upstream portion between Pacific Coast Highway and Anaheim Street will be maintained annually through mowing and trash removal. The sediment benches will not be removed. • No herbicide will be applied to native vegetation. • The monitoring biologist will identify locations with a New Zealand mudsnail population before work begins. If equipment comes into contact near the four 78-inch flapgate location, follow the 2008 Hazard Analysis and Critical Control Point (HACCP) Soft-Bottom Channel Maintenance Activities Within the Malibu and Santa Monica Canyon Watersheds. • A debris fence at the base of the slope along the river will be 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan.

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
115	San Gabriel River	N/A	<ul style="list-style-type: none"> • The USACE Levee Certification Vegetation Removal Project will involve removing all invasive vegetation with roots greater than ½ inch. • Vegetation will be removed by mechanical and manual methods on both banks annually until all non-compliant vegetation is removed. • Weeds and grasses may be controlled by mowing or hand labor. • Annual clearing of all woody vegetation will occur along the entire reach on both banks below the access roads using mechanical equipment placed on the access road. • The work to be performed includes the clearing of vegetation, debris, and brush growing on the reach right-of-way and in the riprap. • Trimming and removal of non-native trees and shrubs will reduce the impact on flow in the reach as future growth occurs. • No heavy equipment will be used in areas mapped as Coastal Salt Marsh (disturbed or not; generally, areas with pickleweed). These areas will be avoided and not impacted in order to prevent impacts to native species and potentially sensitive species. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan.
116	Los Cerritos Channel	N/A	<ul style="list-style-type: none"> • Annual clearing of all woody vegetation will occur along the entire reach on both banks below the access roads using mechanical equipment placed on the access road. • The work to be performed includes the clearing of vegetation, debris, and brush growing on the reach right-of-way and in the riprap. • Trimming and removal of nonnative trees and shrubs will reduce the impact on flow in the reach as future growth occurs. • No heavy equipment will be used in areas mapped as Coastal Salt Marsh (disturbed or not; generally, areas with pickleweed). These areas will be avoided and not impacted in order to prevent impacts to native species and potentially sensitive species. • The portion of the reach on the left bank within Los Cerritos Wetlands boundaries is to be accessed using a designated road through Synergy Oil, LLC property. This road requires major improvement before usage. If this road cannot be improved, a barge will be used. • Reach sections in the Cerritos Bahia Marina and downstream of the wetlands has not been improved by LACFCD and are not within county easement boundaries. Therefore, it will not be maintained. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan.

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
117	Centinela Creek	N/A	<ul style="list-style-type: none"> • Maintenance of this reach includes removal of invasive vegetation, repair of riprap levees, maintenance of outlet structures and mechanical equipment to remove sediment deposits. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan.
118	Rustic Canyon	N/A	<ul style="list-style-type: none"> • All vegetation within the reach will be removed using hand tools. • Mapped wetlands will be cleared by hand only and machinery will not enter these areas. • Vegetation will be removed by hand using hand tools, such as weedeaters, hedge trimmers, chainsaws, hoes, pitch forks, loppers, machetes, and using a rubber-tracked skidsteer as necessary. • Minor repair work to the wooden wall structures will be conducted as needed. • These structural repairs may include filling voids with onsite material, repairing small portions of the wood walls, replacing support structures for the walls and appurtenant structures, and other miscellaneous items encountered. • In order to move a skidsteer from one section of the channel to the next, temporary earthen ramps will be constructed at the drop structures with available onsite soils. The earthen ramps will be removed after vegetation is removed and earthen material will be redistributed evenly throughout the site. • The site will be accessed through a private property, located at 14470 West Sunset Boulevard, Pacific Palisades, California 90272, that is also to be used as a staging area. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan.

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
119	Rivas Canyon	N/A	<ul style="list-style-type: none"> • All vegetation within the reach will be removed using hand tools. • Mapped wetlands will be cleared by hand only and machinery will not enter these areas. • Vegetation will be removed by hand using hand tools, such as weedeaters, hedge trimmers, chainsaws, hoes, pitch forks, loppers, machetes, and using a rubber-tracked skidsteer as necessary. • Minor repair work to the wooden wall structures will be conducted as needed. • These structural repairs may include filling voids with onsite material, repairing small portions of the wood walls, replacing support structures for the walls and appurtenant structures, and other miscellaneous items encountered. • In order to move a skidsteer from one section of the channel to the next, temporary earthen ramps will be constructed at the drop structures with available onsite soils. The earthen ramps will be removed after vegetation is removed and earthen material will be redistributed evenly throughout the site. • The site will be accessed through a private property, located at 14470 West Sunset Boulevard, Pacific Palisades, California 90272, that is also to be used as a staging area. • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan.
120	Jake's Way (PD 2496)	N/A	<ul style="list-style-type: none"> • Hand and mechanical removal of all vegetation within 15 feet of the toe of slope along the bank protection structure lining throughout the entire reach. • All rock rip rap including at the outfall structure and turnaround areas and the concrete lined side slope will be maintained in a vegetation-free state. • Periodically remove any accumulated sediment, debris and vegetation in the vicinity of the outfall structure to allow water to drain. • Periodic removal of ponded water that cause odor problems • As-needed repairs to the outfall structure, rip-rap, concrete lined side slope, access road, invert ramp, turnaround area and other on-site structures • Clear trash, debris, and non-native vegetation by hand within easement boundaries. 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan.

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REACH NO.	REACH NAME	CURRENTLY PERMITTED MAINTENANCE ACTIVITIES BY REACH	PROPOSED MAINTENANCE ACTIVITIES BY REACH	EXPLANATION OF CHANGES
121	San Francisquito Creek (PD 2271)	N/A	<ul style="list-style-type: none"> • Maintenance will occur by means of hand and mechanical equipment to reduce the impact on flow in the channel and to maintain the structural integrity of the levee. • The channel clearing will involve mechanized removal of all vegetation within 15 feet of the toe of slope along the bank protection structure lining throughout the entire reach. • The rock rip rap for the outfall structure for storm drain MTD 1598 Unit 2, located adjacent to PD 2271's concrete lining, and the concrete lined side slope will also be maintained in a vegetation-free state. • The storm drain requires periodic maintenance to remove any accumulated sediment, debris and vegetation in the vicinity of the outfall structure to allow water to drain. • Grade to drain a 10-foot wide training channel from the outlet structure to the easement line and grade and clear a 10-foot wide path from the MTD's invert ramp to the toe of the PD's lining. • Periodic removal of ponded water that cause odor problems and as-needed repairs to the outfall structure, rip-rap, concrete lined side slope, access road, invert ramp, turnaround area and other on-site structures to maintain their structural integrity. 	<ul style="list-style-type: none"> • Not previously included in the 2005 Maintenance Plan.

Report Submittal Instructions

1. Specify the report or notification you are submitting.
 - **Annual Workplan**
 - **Annual Report:** This report will be submitted annually by May 1.
 - **Conditional Notifications and Reports:** Required on a case by case basis for accidental discharges of hazardous materials, violation of compliance with water quality standards, notification of in-water work, or other reports.
2. Sign the Report and Notification Cover Sheet and attach the report
3. **Electronic Report Submittal Instructions:**
 - Submit signed Report and Notification Cover Sheet and required information via email to: Valerie.CarrilloZara@waterboards.ca.gov
 - Include in the subject line of the email:
Subject: ATTN: Valerie CarrilloZara; File No: 99-011, Reg. Measure ID: 401529 Report

Map/Photo Documentation Information

When submitting maps or photos, please use the following formats.

1. **Map Format Information:**

Preferred map formats of at least 1:24000 (1" = 2000') detail (listed in order of preference):

 - **GIS shapefiles:** The shapefiles must depict the boundaries of all project areas and extent of aquatic resources impacted. Each shape should be attributed with the extent/type of aquatic resources impacted. Features and boundaries should be accurate to within 33 feet (10 meters). Identify datum/projection used and if possible, provide map with a North American Datum of 1983 (NAD38) in the California Teale Albers projection in feet.
 - **Google KML files** saved from Google Maps: My Maps or Google Earth Pro. Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. Include URL(s) of maps. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.
 - **Other electronic format** (CAD or illustration format) that provides a context for location (inclusion of landmarks, known structures, geographic coordinates, or USGS DRG or DOQQ). Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. If this

format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.

- Aquatic resource maps marked on paper **USGS 7.5 minute topographic maps** or **Digital Orthophoto Quarter Quads (DOQQ)** printouts. Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.

2. **Photo-Documentation:** Include a unique identifier, date stamp, written description of photo details, and latitude/longitude (in decimal degrees) or map indicating location of photo. Successive photos should be taken from the same vantage point to compare pre/post construction conditions.

REPORT AND NOTIFICATION COVER SHEET

Project: Maintenance Clearing Engineered Earth-Bottom Flood Control Channels
Permittee: Los Angeles County Flood Control District
Report Type: _____
Reg. Meas. ID: 401529 **Place ID:** 815900 **File No:** 99-011

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Print Name ¹

Affiliation and Job Title

Signature

Date

¹STATEMENT OF AUTHORIZATION (include if authorization has changed since application was submitted)

I hereby authorize _____ to act in my behalf as my representative in the submittal of this report, and to furnish upon request, supplemental information in support of this submittal.

Permittee's Signature

Date

***This Report and Notification Cover Sheet must be signed by the Permittee or a duly authorized representative and included with all written submittals**