

## EXECUTIVE SUMMARY

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The Orange County Stormwater Program (Program) is a cooperative municipal regulatory compliance initiative focused on the management of urban and stormwater runoff for the protection and enhancement of Orange County's creeks, rivers, streams, and coastal waters. The primary objective of the Program is to fulfill the commitment of the County of Orange, the Orange County Flood Control District and the cities of Orange County (collectively, "Permittees"), to develop and implement a program that satisfies the requirements of area-wide municipal National Pollutant Discharge Elimination System (NPDES) permits, specifically, Regional Water Quality Control Board Order R8-2009-0030 (Santa Ana Regional Board) and R9-2013-0001 as amended by Orders R9-2015-0001 and R9-2-150100 (San Diego Regional Board).

The purpose of this document is to comply with the requirement for an annual submittal of a progress report. This report discusses the Permittees' NPDES permit compliance activities over the period July 1, 2016 to June 30, 2017. It includes a description of all activities that were conducted during the reporting period and an assessment of program effectiveness. These compliance activities include countywide implementation of Low Impact Development (LID) and hydromodification control strategies as part of local land development regulation, implementation of an innovative public education and outreach campaign, and continued regulatory oversight of construction activities, municipal infrastructure management and the built environment. All of these activities have been informed by an extensive countywide environmental quality monitoring program.

Programmatic accomplishments in 2016-17 include:

- Coordinating with Orange County Transportation Authority (OCTA) to support disbursement of Measure M2 (M2) funding for water quality protection projects. Thus far, approximately \$20.1 million in Tier 1 funding has been awarded to 150 projects and \$28 million in Tier 2 funding has been awarded to 22 projects (**Section C-2.0**);
- Regional collaboration to improve the science and management of stormwater and further development and implementation of watershed management initiatives (**Section C-3.0**);
- Completion of 1,605 municipal facility inspections (**Section C-5.0**);
- Coordination with the University of California Cooperative Extension (UCCE) to conduct pesticide and fertilizer-related water quality improvement programs (**Section C-5.0**);
- Continuing implementation of *Baseline BMPs*, such as street sweeping, drainage facility maintenance, and household hazardous waste collection (**Section C-5.0**);
- Continuing implementation of the Program's Integrated Pest Management (IPM) policy (**Section C-5.0**);
- Producing over 86,000,000 public education impressions and applying community-based social marketing principles to an innovative campaign focused on eliminating irrigation overwatering (**Section C-6.0**);

## EXECUTIVE SUMMARY

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- Receiving National Association of Flood and Stormwater Management Agencies' *Excellence in Communication* award for the Program's *Overwatering Is Out* public education campaign in August 2016;
- Continuing implementation of the Low Impact Development (LID) based Model Water Quality Management Plan (WQMP) on a countywide basis and revisions to supporting Technical Guidance Document (TGD) (**Section C-7.0**);
- Processing of 353 Project WQMPs incorporating LID practices covering 2,641 acres of development (**Section C-7.0**);
- Inspecting 9,599 construction sites with 1,088 formal enforcement actions taken (**Section C-8.0**);
- Completing 7,592 commercial/industrial facility inspections with 1,561 formal enforcement actions (**Section C-9.0**);
- Completing 8,525 Food Service Establishment (FSE) inspections and performing 2,052 follow-up investigations/actions for water quality concerns (**Section C-9.0**);
- Implementation of an updated countywide mobile business database (**Section C-9.0**);
- Investigating 2,579 complaints and issuing 4,034 enforcement actions regarding illegal discharges or illicit connections (**Section C-10.0**);
- Conducting additional Long Term Mass Emissions and Estuary/Wetlands monitoring during larger storm events. The water year rainfall total was 20.69 inches at the Santa Ana rain gauge compared with the historical average rainfall total of 12.84 inches. (**Section C-11.0**);
- Implementing a variety of new field procedures and data analyses as part of the Urban Stream Bioassessment program. These included implementation of California Stream Condition Index (CSCI) scoring, Southern California Algae Index of Biotic Integrity (SoCA Algal IBI) analysis, and sediment toxicity testing using similar organisms to SWAMP's Stream Pollution Trends (SPoT) Monitoring Program. (**Section C-11.0**);
- Attaining low percentages of exceedances for indicator bacteria at beaches during dry weather conditions from Seal Beach to Coastal Cove. This trend was especially notable during the AB411 period, where the majority of regional beach stations had less than 2% exceedances and no station had more than 6% exceedances overall during this timeframe. (**Section C-11.0**);
- Initiating a process to update and merge the North and Central IRWM Plans (**Section C-12.0**); and
- Continuing implementation of metals, sediment, selenium, nutrients, toxics and bacteria Total Maximum Daily Load (TMDL) programs as applicable to Dana Point Harbor and the Newport Bay, San Gabriel River-Coyote Creek, Aliso Creek and San Juan Creek watersheds (**Section C-12.0**).

The development of the Program is principally informed by the findings of the monitoring and assessment program (see **Section C-11.0**). A comprehensive evaluation of the monitoring and assessment program was conducted in 2014 to provide an overview of patterns across the region for the ROWD, and conditions have not changed with respect to priorities. The assessment ranked the following constituents as requiring further evaluation:

## EXECUTIVE SUMMARY

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1. Indicator bacteria, primarily *Enterococcus*
2. Nutrients, primarily inorganic nitrogen and phosphorus
3. Pesticides and toxicity, primarily synthetic pyrethroids
4. Metals/trace elements and toxicity, primarily selenium and copper

The Permittees also consider a series of performance metrics termed Headline Indicators to further enable the effectiveness of the Program's elements to be evaluated (see **Table C-1.2**). These measures are intended to confirm program implementation and validate achievement of outcomes. The basis of this approach draws on the hierarchical taxonomy of programmatic outcomes, being advocated by the California Stormwater Quality Association (CASQA), which creates a framework for defining the relationships between compliance actions and, ultimately, positive changes in water quality.

The assessment of both the chemical, biological impacts of urban dry and wet weather runoff on the quality of the surface water environment in Orange County and the Program's Headline Measures are the basis for identifying the specific program development initiatives that are identified as *2017-18 Program Focus* initiatives. These initiatives are noted in each section of the report and summarized in **Section C-13.0**.