

C-13.0 WORKPLAN

C-13.1 Introduction

Established in 1990, the Program is a cooperative regulatory partnership of the Permittees who operate an interconnected municipal storm drain system which discharges stormwater and urban runoff and at the same time provides flood protection to the residents of the United States' sixth most populous county. The Program has accomplished very significant water quality successes, such as coastal recreational water quality, that can unequivocally be attributed to the management actions of the Program and the Permittees.

C-13.2 Program Development and Implementation

Implementation of a watershed-based planning approach across all of the County's principal watersheds potentially offers the opportunity for more comprehensively identifying the meaningful environmental and recreational amenities that can be realized in each watershed and the management strategies that will most effectively ensure their realization. Such plans will also provide an opportunity, through linkage and integration, for cogency to be brought to a number of related restoration projects and sub-regional water management efforts such as the Integrated Regional Water Management Plans. This future programmatic direction is also mandated by the WQIP provisions of the San Diego Region and the last draft of the Santa Ana Region Fifth Term Permits, respectively.

The Fourth Term Permits, with their emphasis on runoff retention, have ensured that the Program now includes elements of the wet weather management paradigm shift encouraged by the National Research Council (NRC)¹. Nonetheless, the Program needs to continue to evolve to address exceedances of water quality standards where urban runoff is determined to be causing or contributing to the exceedance. Consequently, there will be additional effort directed toward pollutant control and research related to bacteria, nutrients and pesticide related toxicity, which have been identified as the dominant pollutants of concern.

Bacteria

There continues to be highly significant progress to be reported in Orange County regarding trends in pathogen indicator bacteria in recreational waters. Indeed, dry weather coastal water quality is excellent in Orange County. At the same time, regional BMP approaches including storm drain diversion and stream discharge disinfection are effectively addressing the last of the problem sites. This very significant progress with respect to dry weather shoreline water quality underscores the impetus for action that comes from broad societal recognition of a problem, an unequivocally favorable cost-benefit ratio and the ability to implement pragmatic cost effective solutions. In inland surface waters the issue of systemic elevated concentrations of bacteria persists.

¹ Urban Stormwater Management In The United States, National Research Council, 2009.

However, intensive monitoring of the Aliso Creek watershed, for example, appears to show that reductions in dry weather flow have produced significant reductions in bacterial concentrations. This finding points to the value of efforts to curtail outdoor water usage. Consequently, collaboration with water districts on water conservation themed education and outreach, such as the “Overwatering Is Out” campaign will continue to be the focus of efforts to sustain the ongoing reductions in bacteria concentrations being observed in inland surface waters.

Nutrients

Across Orange County’s watersheds, nutrients continue to present a regulatory concern although the environmental significance of nutrients and the specific contribution of urban sources is not well understood. Benchmark thresholds are frequently exceeded in the County’s streams and channels. However, there are many less frequent occurrences of impacts, such as macroalgal overgrowth, due to these exceedances. Moreover, nutrient problems are not limited to the urban portion of the County; regional monitoring data show nutrient enrichment and impacts such as increased macroalgal cover and/or lower dissolved oxygen in streams and estuaries in undeveloped regions. Pending further research, the Program will continue to effect reductions in municipal fertilizer use through implementation of the Program’s municipal IPM policy and encourage water quality-sensitive landscape maintenance practices in the general population through education and outreach. In the Newport Bay watershed nutrient fluxes are being addressed by a nutrient TMDL; and the TMDL targets are being met (see **Section C-12.0**). This watershed has conducted extensive studies and implemented effective control efforts related to nutrients, including the natural treatment system and the IRWD treatment wetlands.

Pesticides

Synthetic pyrethroids have been identified as a significant urban runoff water quality issue both on a statewide basis² and locally (see **Section C-11.0**). Directly as a consequence of the efforts of CASQA, the Department of Pesticide Regulation (DPR) enacted regulations that became effective in July, 2012, specifically intended to limit where structural pest control businesses can apply pesticides in an effort to protect water quality in urban areas. The rules restrict the use of 17 pyrethroid insecticides applied by businesses and significantly limit the amount of pesticides that can be applied outdoors, especially to concrete and other hard surfaces more susceptible to runoff. The regulations also prohibit outdoor pest control applicators and maintenance gardeners from spraying when it rains or to standing water due to rainfall or watering. An evaluation of the regulations by UCCE suggested that they could affect an 80% reduction in pyrethroid concentrations in runoff. Nonetheless, the Program will continue to take additional steps including municipal IPM policy implementation (see **Section C-5.0**) and general public education and outreach (see **Section C-6.0**) to

² Review of *Pyrethroid, Fipronil and Toxicity Monitoring Data from California Urban Watersheds*, CASQA, 2013

encourage judicious use of these chemicals and the elimination of residential irrigation overwatering.

C-13.3 Future Program Development

Based upon the prior discussion and in response to the findings of the environmental quality monitoring program, the following program areas will be focused on in 2017-18 concurrent with a greater emphasis on watershed-based planning:

PLAN DEVELOPMENT

- Utilize NOC WIHMP documents in preparation for Watershed Management Plan incorporation into the next MS4 permit;
- Continue to evaluate efficacy in addressing the priority water quality constituents of concern (see **Section C-3.3.1**);
- Continue preliminary Watershed Management Plans stakeholder meetings to address anticipated Fifth Term permit requirement; and
- Continue WQIP implementation meetings for south Orange County upon approval (see **Section C-3.3.1**).

LEGAL AUTHORITY

- Evaluate the applicability of the updated *Enforcement Response Plan* to the Santa Ana Permittees (see **Section C-4.3**).

MUNICIPAL ACTIVITIES

- Continue to coordinate with UCCE to support municipal Model IPM Policy implementation throughout the County (see **Section 5.3.2**);
- Continue to develop a more reliable and impactful fertilizer and pesticide reporting method to evaluate the success of IPM Policy implementation by Permittees (see **Section 5.3.2**);
- Continue to support UCCE in the adaptation of a 6-module Water Protection Certification course into an online training version to improve ease of participation, especially among contracted landscape professionals, with the initial focus on pesticide impacts on water quality (see **Section 5.3.2**);
- Continue to coordinate with OCTA on implementation of Tier I and Tier II Measure M funding to assist Permittees in controlling transportation-generated pollution (see **Section 5.3.3**);
- Conduct scoping survey on the need for an Orange County-specific Trash Generation Rate Model (see **Section 5.3.3**).

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PUBLIC EDUCATION & OUTREACH

- Review and make any necessary updates to the *2012 Strategic Plan* (see **Section C-6.2**);
- Continue to achieve at least 50% of impressions through earned media to meet impression benchmarks and record public exposure to messaging in support of Program goals (see **Section C-6.3.1.2**);
- Continue to encourage residents and business representatives to sign-up for action campaign communication at events (see **Section C-6.3.1.2**);
- Continue to increase engagement with *H₂OC* Facebook audience (see **Section C-6.3.1.3**);
- Update select outreach materials per Public Education Sub-committee review (see **Section C-6.3.1.3**);
- Expand OC WEAP to other colleges and universities within the County (see **Section C-6.3.1.4**);
- Pursue grant opportunities to support funding of additional youth outreach activities (see **Section C-6.3.1.4**);
- Conduct evaluation of the *Overwatering action campaign* (see **Section C-6.3.2**); and
- Begin to develop action campaign focused on trash reduction (see **Section C-6.3.2**).

LAND DEVELOPMENT

- Continue coordinating with OCWD to identify potential regional infiltration BMP sites (see **Section C-7.3.1**);
- Investigate utility and feasibility of a web-based portal for land development documentation including geodatabase elements. (See **Section C-7.3.1**);
- Evaluate options for improved data collection related to Project WQMP implementation to enable an accounting of water quality benefits (see **Section C-7.3.1**); and
- Deliver training on the updated Model WQMP and TGD (see **Section C-7.3.1**);

CONSTRUCTION

- Pilot a GIS and internet-based database to track construction sites (see **Section 8.3.1**);

- Conduct pilot field-testing of personal electronic devices to document inspections onsite (see **Section 8.3.1**);
- Deliver training modules supportive of the specified expertise and technical competencies established for individuals in the *Construction Inspector* position (see **Section 8.3.1**);
- Conduct annual pre-wet season training (see **Section 8.3.1**);
- Update Construction Runoff Guidance Manual; and

EXISTING DEVELOPMENT

- (see **Section C-9.3.1**);
- Continue review of existing residential, municipal, and fixed facility BMP fact sheets (see **Section C-9.3.1**); and
- Continue implementation of the Santa Ana Region CIA/HOA Pilot Program (see **Section C-9.3.2**).

ILLEGAL DISCHARGES/ILLICIT CONNECTIONS

- Evaluate efficacy and continued implementation of the seasonal Dry Weather Reconnaissance Program in the Santa Ana Region as part of the development of the monitoring program to support Fifth Term Permit implementation (see **Section C-10.3.1**);
- Research and develop recommendations for a standardized reporting database potentially accessible by all Permittees (see **Section C-10.3.1**);
- Develop and implement recommendations for enhancing staff reporting of ID/IC (see **Section C-10.3.1**), and
- Provide training on updated *Enforcement Consistency Guide* called the *Enforcement Response Plan* (see **Section C-10.3.2**).

WATER QUALITY MONITORING

- Further integrate NPDES and TMDL monitoring and assessment programs on watershed scales (see **Section C-11**);
- Substitute of *Ceriodaphnia dubia* testing with alternative and equivalent test organisms to collect more reliable water quality data (see **Section C-11**); and
- Remove organophosphate pesticides from the Dry Weather Reconnaissance Monitoring Program for outfalls and evaluate replacement sampling alternatives (see **Section C-11**).

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WATERSHED PLANNING

- Continue pre-planning of Watershed Management Plans for North Orange County (see **Section C-12.3**).