

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. In Orange County, the impact of urbanization on hydrologic systems and the adverse consequences of both changed hydrology and pollutant source creation are evident today. However, at the same time, there are 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 is viewed as the most important next step to take in the development of the Program. Such an approach 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. These 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 will also be mandated by the WQIP and Watershed Management Plan provisions of the San Diego Region and 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.

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-

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

benefit analysis and the ability to implement pragmatic cost effective solutions. In inland surface waters the issue of systemic elevated concentrations of bacteria persists. 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; indeed, the TMDL targets are being met (See **Section C-12.0**), and there is a long history in this watershed of extensive study and effective control efforts related to nutrients.

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 make additional progress with 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 enhancements will be undertaken in 2016-17 concurrent with a greater emphasis on watershed-based planning:

PLAN DEVELOPMENT

- Evaluate efficacy of the countywide/jurisdictional management approach in addressing the priority water quality constituents of concern (see **Section C-3.3.1**), and
- Initiate Watershed Management Plans to address anticipated Fifth Term permit requirements and complete WQIP for south Orange County (see **Section C-3.3.1**).

LEGAL AUTHORITY

- Deliver updated training modules to support implementation of revised Enforcement Consistency Guide (see **Section C-4.0**).

MUNICIPAL ACTIVITIES

- Continue to coordinate with UCCE to support municipal Model IPM Policy implementation throughout the County and create on-line training modules (see **Section 5.3.2**);
- Develop and deliver 6-module Water Protection Certification course to city staff engaged in landscape maintenance (see **Section 5.3.2**);
- Adapt the 6-module Water Protection Certification course into an online training version to improve ease of participation, especially among contracted landscape professionals (see **Section 5.3.2**);
- Continue to coordinate with OCTA on implementation of Tier One and Tier Two Measure M funding to assist Permittees in controlling transportation-generated pollution (see **Section 5.3.3**);
- Provide guidance to support Permittees with compliance with Trash Amendments (see **Section 5.3.3**), and
- Continue to develop guidance for municipal trash collection and haulage contracts that addresses water quality protection issues (see **Section 5.3.3**).

PUBLIC EDUCATION & OUTREACH

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- Continue to achieve 50% of impressions through earned media (see **Section C-6.3.1.2**);
- Continue to encourage residents and business representatives to sign-up for action campaign communication at events and speakers' bureau presentations (see **Section C-6.3.1.2**);
- Continue to increase engagement with *H₂OC* Facebook audience (see **Section C-6.3.1.3**);
- Review outreach materials and determine need for any revisions or updates (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**);
- Continue implementation of the *Overwatering action campaign* through the duration of the drought (see **Section C-6.3.2**);
- Continue to implement the OCGF Program and investigate new partnerships and venues for these events (see **Section C-6.3.2**), and
- Implement companion action campaign focused on pesticide reduction (see **Section C-6.3.2**).

LAND DEVELOPMENT

- Coordinate with OCWD to identify potential regional infiltration BMP sites and determine feasibility of model runoff retention credit trading framework (see **Section C-7.3.1**);
- Create web-based portal for land development documentation with geodatabase elements (See **Section C-7.3.1**);
- Enhance the data collected for WQMPs to have a better understanding of water quality benefits to support reasonable assurance studies (see **Section C-7.3.1**), and
- Complete revision of the Model WQMP and TGD documents to comply with changes to the New Development/Significant Redevelopment requirements in the 5th term Santa Ana and San Diego Region permits and deliver training (see **Section C-7.3.1**);

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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**); and
- Conduct QSD/QSP training (see **Section 8.3.1**).

EXISTING DEVELOPMENT

- Incorporate updated CASQA BMP Fact sheets into Existing Development Model Program (see **Section C-9.3.1**);
- Evaluate facility performance using updated metrics from revised Model Inspection Form (see **Section C-9.3.1**);
- Request executive Officer approval for annual inspection of 20% of industrial/commercial facility inventories in Santa Ana Region (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 better enabling staff reporting of ID/IC (see **Section C-10.3.1**), and
- Implement updated *Enforcement Consistency Guide* (see **Section C-10.3.2**).

WATER QUALITY MONITORING

- The ROWD State of the Environment and 2013-14 PEA incorporated the use of a new water quality index (based on the CCME index) to assess water quality data and establish priorities in monitoring and program management. The Permittees are expected to expand the use of this new assessment tool in 2016-17 to many of the core monitoring program elements (see **Section C-11.5**);

WATERSHED PLANNING

- Complete WQIP for the San Juan Hydrologic Unit (see **Section C-12.3.2**);
- Use foundational elements of the WQIP-equivalent watershed-based planning in the watersheds of north Orange County after fifth term permit approval (see **Section C-12.3.2**), and
- Direct DAMP/LIP and WQIP planning processes toward addressing Nutrients and Pesticides, in addition to Fecal Indicator Bacteria (see **Section C-12.3.2**).