

## C-13.0 WORKPLAN

### C-13.1 Introduction

2012 marks the 40th anniversary of the passage of the 1972 Federal Water Pollution Control Act. This Act introduced technology and water quality based effluent limitations to be applied to point source discharges through a nationwide permitting program. In addition, the construction of publicly owned treatment works would be facilitated by a construction grant program and timely progress would be ensured by the inclusion of citizen suit provisions. Nonpoint source issues would be addressed by the States.

The positive water quality outcomes that have been achieved through the application of technology based effluent limits to traditional point source discharges are real and significant. Recent University of Southern California research, for example, has demonstrated that waters between Pont Dume and Long Beach are exhibiting a 100 fold decrease in lead and a 400 fold decrease in copper and cadmium in 2012 compared to samples taken in 1976 in the same locations. In addition, SCCWRP's forty year retrospective look at the condition of the Southern California Coastal Ocean<sup>1</sup> draws significant positive conclusions about the overall condition of southern California's ocean waters but also points to controlling pollutants in urban runoff as the focal point for future water quality management.

This continued concern regarding the quality of urban runoff and seemingly intractable presence of pollutants such as bacteria, nutrients from excessive fertilization, and toxicity from pesticides was highlighted by the National Research Council's (NRC) 2008 assessment of USEPA's stormwater permitting program. This nationwide assessment concluded that "EPA's current approach is not likely to produce an accurate picture of the extent of the problem, nor is it likely to control stormwater's contribution to impairing water quality. The NRC concluded that the stormwater program in the future needed to focus less on chemical pollutants and more on "stormwater flow." It also concluded that the cumulative impact of multiple stressors needed to be given account and, perhaps most significantly, that the federal government needed to contribute more financial support to state and local efforts to regulate stormwater.

The Fourth Term Permits, with the emphasis on runoff retention, certainly included elements of the paradigm shift being encouraged by the NRC. Nonetheless, the Program is obligated to address exceedances of water quality standards where urban runoff is determined to be causing or contributing to the exceedance. However, while all exceedances represent a regulatory concern, they also represent degrees of environmental significance which may be characterized as: (1) frequent exceedance and actual beneficial use impacts, (2) frequent to infrequent exceedances but no impact on beneficial uses, and (3) sporadic exceedances with unknown impacts. Understanding how bacteria, nutrients, metals and toxic organics fit this categorization in Orange

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<sup>1</sup> Forty Years after the Clean water Act: A Retrospective Look at the Southern California Ocean, SCCWRP, 2012.

County still needs to be elucidated and this uncertainty complicates decisions regarding prioritization of the constituents of concern and the appropriate degree of emphasis on a particular constituent in the continued development of the Program. At the same time the uncertainty is being compounded by ongoing and potentially significant shifts in the regulatory landscape including impending promulgation of new water contact standards, development of nutrient numeric endpoints criteria and suspension of recreational use designations in highly modified channels during storm events (Santa Ana Region).

### **C-13.2 Future Program Development**

The Program addresses the impacts to creeks, rivers, streams and coastal waters that can arise from the imprint of urban development on the landscape. Urbanization creates an impervious landscape (see **Section C-1.0**) which (1) increases the timing and volume of rainfall runoff (compared to pre-development conditions) and (2) provides a source of pollutants that are flushed or leached by rainfall runoff or dry weather runoff into surface water systems. The Program addresses both aspects of imperviousness.

During the reporting period there has continued to be a significant allocation of resources to addressing new permit requirements, notably the integration of LID and hydromodification control practices into local land development regulation. Going forward this element of the Program will continue to be a major focus of activity as the Permittees look to create off-site and in-lieu fee options for alternative compliance pathways for land development and re-development. This continued emphasis also aligns with broader State Board integrated water resource management goals centered on better use of stormwater for local water supply augmentation. Concurrently, there will be an effort to bring a holistic watershed context to hydromodification control.

With respect to specific water quality constituents of concern, there will be additional effort directed toward pesticide related toxicity, bacteria, and nutrients.

**Pesticides:** Synthetic pyrethroids have been identified as a significant urban runoff water quality issue on a statewide basis. Directly as a consequence of the efforts of CASQA, the Department of Pesticide Regulation 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 UC Davis suggested that they could affect an 80% reduction in pyrethroid concentrations in runoff. Nonetheless, the Program will continue to seek to make additional progress with IPM policy implementation and general public education and outreach.

**Bacteria:** There is significant progress to be reported in Orange County regarding trends in bacterial contamination. For example, Huntington State Beach which was

closed due to bacterial contamination for an extended period in 1990, is now one of 3 Orange County beaches identified by Natural Resources Defense Council as a “5 star beach for outstanding water quality” in 2012. In addition, regional BMP approaches including drain diversion and stream discharge disinfection are effectively addressing the last of the problem sites. This very significant progress with respect to shoreline water quality underscores the impetus for action that comes from broad societal recognition of a problem, an unequivocally favorable cost-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 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 will continue to be the focus of efforts to sustain the ongoing reductions in bacteria concentrations being observed in inland surface waters.

Nutrients: Eutrophication of estuaries and coastal waters has been demonstrably linked to anthropogenic changes in watersheds and is of concern because of the potential for harmful algal blooms, hypoxia, and impacts on aquatic food webs. Nutrient fluxes in the Newport Bay watershed 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. Across Orange County’s other watersheds nutrients continue to present a regulatory concern although the environmental significance of nutrients and the specific contribution of urban sources is less understood in these other areas. Pending further research, the program will continue to effect reductions in municipal fertilizer use through implementation of the Program’s IPM policy and encourage water quality-sensitive landscape maintenance practices in the general population through education and outreach.

Based upon the prior discussion and in response to the findings of the environmental quality monitoring program, the following actions will be taken to further develop and adapt the Program in 2012-13 and 2013-14:

*Plan Development*

- Review and update, if necessary, list of programmatic assessment measures incorporating all CASQA outcome levels and additional metric guidance (see **Section C-3.3.1**);
- Roll out a training program for all core competencies (see **Section C-3.3.1**);
- Annual update and implementation of the Watershed Workplans in south Orange County (see **Section C-3.3.1**);
- Complete additional WIHMPs for North Orange County Watersheds (see **Section C-3.3.1**);

- Review initial hydromodification susceptibility mapping and potentially conduct field work to confirm whether certain constructed earthen channels are erodible or should be classified as non-susceptible (see **Section C-3.3.1**);
- Continue implementation of *Santa Ana Region Monitoring Program* and TMDL monitoring programs within Orange County (see **Section C-3.3.2**);
- The Permittees will continue to coordinate with Orange County Water District to identify additional potential runoff infiltration evaluation projects for development and implementation (see **Section C-3.3.4**); and
- The Permittees will continue to coordinate with OCTA regarding the future competitive disbursement of Measure M funding for BMP retrofit projects (see **Section C-3.3.5**).

*Municipal Activities*

- Continue to coordinate with UCCE to support municipal Model IPM Policy implementation throughout the County (see **Section 5.3.2**);
- Continue to coordinate with Orange County Transportation Authority (OCTA) on implementation of Tier One and Tier Two Measure M funding to assist Permittees in controlling transportation-generated pollution (see **Section 5.3.2**); and
- Develop guidance for municipal trash collection and haulage contracts that addresses water quality protection issues (see **Section 5.3.2**).

*Public Education & Outreach*

- Utilize “higher quality” earned media impressions to meet impression benchmarks and record public exposure to messaging in support of Program goals (see **Section C-6.3.1.2**);
- Develop a relationship with local manufacturing facilities and encourage the holding of a workshop for other local businesses through the NPDES Public Education Sub-committee (see **Section C-6.3.1.4**);
- Utilize 2012 Survey results to focus outreach efforts on specific behaviors to eliminate identified barriers and document small-scale behavior change to complement public opinion surveys (see **Section C-6.4.1**);
- Maximize opportunities to “cross-pollinate” water use efficiency and runoff reduction messaging (see **Section C-6.4.1**);

- Include community-focused outreach based on shared traits, barriers, motivators and behaviors (see **Section C-6.4.1**);
- Maximize earned media opportunities to reach more general audience to continue encouraging enhanced knowledge and behavior change (see **Section C-6.4.1**);
- Evaluate the effectiveness of “click-through” online advertising (see **Section C-6.4.2**); and
- Develop a community-based social marketing (CBSM) initiative to broaden *Project Pollution Prevention* messaging to promote onsite water retention and water use reduction (see **Section C-6.4.3**).

### *Land Development*

- Update and integrate Program Documentation (DAMP, Model WQMP, TGD, WIHMP/HMP) (see **Section C-7.3.1**);
- Provide refresher training on the revised New Development/Significant Redevelopment Program (see **Section C-7.3.1**);
- Provide additional training for the implementation of the revised New Development/Significant Redevelopment Program upon approval of the Model SSMP and HMP for the San Diego Region (see **Section C-7.3.1**);
- Coordinate with the Orange County Water District to identify potential regional infiltration BMP sites for inclusion in the Watershed Infiltration and Hydromodification Master Plan (WIHMP) (see **Section C-7.3.3**);
- Develop a library of BMP performance reports (see **Section C-7.3.3**);
- Develop standard design checklist/plans/details for selected LID BMPs (see **Section C-7.3.3**);
- Develop recommendations for streamlining regulatory agency approval of regional treatment control BMPs (see **Section C-7.3.3**);
- Complete a LID BMP economic feasibility analysis and create foundational elements of an in-lieu compliance option (see **Section C-7.3.3**);
- Coordinate with Riverside and San Bernardino Counties to work toward greater tri-county consistency regarding local regulation of development for water quality protection (see **Section C-7.3.3**);
- Continue to provide training that targets different municipal departments/staff

## SECTION C-13.0, WORKPLAN

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responsible for plan checking WQMP/SSMPs and field verification of post-construction BMPs (**see Section C-7.3.3**); and

- Coordinate with Riverside and San Bernardino Counties to develop Project WQMP preparation and verification training materials (**see Section C-7.3.3**).

### *Construction*

- Complete update of the Orange County Construction Runoff Guidance Manual to be consistent with the new Construction General Permit (SWRCB Order No. 2009-0009-DWQ). The update to the manual will also include incorporation of the Erosion Control BMP Field Evaluation that was performed by RBF in 2004-2005 and will provide guidance on dewatering activities for construction sites and guidance for small construction sites (**see Section C-8.3.1**);
- Review the Enforcement Consistency Guide and provide further guidance to the Permittees on the use and reporting of the different types of enforcement actions (**see Section C-8.3.1**); and
- Prepare training modules supportive of the specified expertise and technical competencies established for individuals in the *Construction Inspector* position (**see Section C-8.3.1**).

### *Existing Development*

- Provide refresher training to HCA staff on NPDES issues specific to food facilities in the 2012-13 reporting period (**see Section C-9.3.1**);
- Contact surface cleaner / power washing mobile businesses and provide information on source control and BMPs in conjunction with an outreach workshop (**see Section C-9.3.1**);
- Evaluate the ability to include the self-certification quiz form on the Orange County Stormwater Program public education website (**see Section C-9.3.1**);
- Develop new training modules supportive of the specified expertise and technical competencies established for individuals in the *Authorized Inspector* and *Commercial/Industrial/Municipal Inspector* positions (**see Section C-9.3.1**); and
- Continue implementation of the Santa Ana Region CIA/HOA Pilot Program in 2012-13 (**see Section C-9.3.2**).

### *ID/IC*

- Continue implementation of the seasonal Dry Weather Reconnaissance Program in the Santa Ana Region, and implementation of the year-round Dry Weather

## SECTION C-13.0, WORKPLAN

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Non-stormwater Discharge Monitoring Program in the San Diego Region (**see Section C-10.3.1**);

- Develop new training modules supportive of the specified expertise and technical competencies established for individuals in the *Authorized Inspector* position (**see Section C-10.3.1**);
- Finalization of a Memorandum of Understanding (MOU) to be executed by all participating municipalities and agencies (**see Section C-10.3.2**); and
- Further implementation of the CASC on a countywide basis (**see Section C-10.3.2**).

### *Watershed Planning*

- Complete additional WHIMPs (**see Section C-12.0**).