



**CITY OF SAN CLEMENTE
LOCAL IMPLEMENTATION PROGRAM**

APPENDIX A-3

PLAN DEVELOPMENT

A-3.0 PLAN DEVELOPMENT

A-3.1 Introduction

This Section is intended to provide information on the approach taken by the City of San Clemente in developing the LIP and its companion document, the 2003 DAMP. It also discusses a number of studies that the City is participating in that will provide important feedback for future revision and improvement of these documents.

The field of storm water quality management is a dynamic and young one. It is therefore necessary to follow a systematic, but iterative process, of revising, adding or deleting BMPs as better information becomes available in order to maintain a successful and responsive compliance program and effect real improvements in urban water quality.

A-3.2 Plan Development

A-3.2.1 Approach to Development of 2003 DAMP

The City, in conjunction with the Principal Permittee and the other Permittees, has developed and enhanced a comprehensive approach to storm water management over a twelve year period. This approach is embodied in the 2003 DAMP, which sets forth a model programmatic countywide approach for urban storm water management by:

- Establishing a baseline set of BMPs that are applicable to all areas that are proven and cost-effective;
- Focusing on solving water quality problems in receiving waters ;
- Prioritizing waterbodies for corrective action with those listed as impaired having a higher priority;
- Promoting a water quality planning process, which is referred to throughout the 2003 DAMP, through a systematic and detailed evaluation of the impacts of urban storm water quality on beneficial uses to determine or validate that actual impairments exist that warrant corrective action;
- Promoting a watershed-level approach and regional BMPs that may also address existing development and non-urban sources; and
- Providing a common compliance approach for meeting the requirements of the Third Term Permits.

This programmatic approach utilizes information obtained from the countywide baseline water quality monitoring program and from the additional water quality planning initiatives being conducted in several of the watersheds to determine those with beneficial use impairments attributable to urban storm water. Once a water quality problem is identified, additional or new BMPs are evaluated for implementation to determine their effectiveness and applicability.

Overall, the 2003 DAMP programs fall into two general categories, pollution prevention-oriented programs and removal-oriented programs. The pollution prevention-oriented programs are the focus of **Sections A-4 to A-11** of this City's LIP. The removal oriented

programs are currently being revised as **Section A-12** and above and will include structural BMPs and retrofitting opportunities that are identified through the water quality planning process on a watershed scale.

A-3.2.2 Approach to Development of City of San Clemente LIP

The City, in response to the Third Term Permits, has collaborated with the Principal Permittee and other Permittees through the committee structures described in **Section A-2.2** in completing a thorough and comprehensive updating of the draft 2000 DAMP to meet the Third Term Permit requirements. The complexity of the permit requirements and the requirements of the permits for a local jurisdictional plan has necessitated the development of this LIP by the City in order to provide a city-specific plan within the broader programmatic framework of the 2003 DAMP. As noted above, the LIP focuses predominantly on the pollution prevention-oriented programs based on the models in the 2003 DAMP.

A-3.2.3 Plan Revision

The 2003 DAMP will be revised and submitted by the Principal Permittee as the proposed plan for each Report of Waste Discharge. The LIP is a more dynamic document plan that will be evaluated by revision on at least an annual basis by the City or as directed by the Regional Board. Revisions to the LIP will be reported by the City in the annual progress report.

A-3.3 BMP Effectiveness Investigations

The City is participating with the Principal Permittee and other Permittees on a number of studies to evaluate the effectiveness and applicability of a range of water quality control measures. It is anticipated that these studies will result in improved knowledge and the potential modification of BMPs cited in the 2003 DAMP and incorporated into this LIP. The studies being undertaken to address the following:

- Evaluate BMP Effectiveness and Applicability for Orange County;
- Trash and Debris BMP Evaluation;
- Erosion Control BMP Effectiveness Studies;
- Assessment of Septic Systems on Storm Water Quality;
- Portable Toilet Oversight Program;
- Dry Weather Diversion Plan

It is expected that these elements will be initiated and/or completed during the 2002-2003 reporting period. In addition, the City is coordinating with the County of Orange to install and determine the effectiveness of a pilot project urban runoff treatment facility at Poche Beach. The City and County are coordinating investigative and BMP implementation efforts pursuant to a directive by the San Diego Regional Water Quality Control Board which allows the pilot project to be tentatively considered a Best Management Practice (BMP) under the new Permit.

The City will also continue to collect and report data that has been presented in the annual progress report for a number of years on ongoing BMPs. This non-conventional monitoring

is defined by the California Storm Water Best Management Practices (BMP) Handbooks (1993) as the enumeration of some indicator other than water quality data to infer pollution reduction or water quality improvement. Examples include surveys of public opinion to demonstrate increasing environmental awareness, monitoring of the amount of used oil being delivered to household hazardous waste collection centers, the amount of material removed from catch basins, etc.

A-3.4 Improvements in Storm Water Science

The City is also collaborating through the Principal Permittee in the Storm Water Monitoring Coalition (SMC) on three studies that may shape plan development and the selection of future BMPs as well as improving the City's understanding of storm water science. These are:

1. Develop standardized sampling and analysis protocols

This project is an attempt to build a storm water monitoring infrastructure in order to increase comparability among programs throughout southern California. The SMC developed a four-step approach to accomplish this goal: (1) define the monitoring questions of interest, (2) assess what monitoring programs are currently doing to determine how well they are answering the monitoring questions, (3) create an optimum design for answering the monitoring questions, and (4) conduct QA intercalibration studies.

2. Microbial Source Tracking Method Comparison

There are numerous waterbodies throughout southern California, both marine and freshwater, that suffer contamination of fecal indicator bacteria such as total coliforms, fecal coliforms, and *enterococcus*. There are several Microbial Source Tracking (MST) techniques now being developed for determining sources (i.e. humans, dogs, cats, horses, etc.) of fecal indicator bacteria in receiving waters. However, all of them are in the early stages of development and none have been tested side-by-side for their ability to accurately discriminate or quantify these sources of fecal contamination. This study was designed to evaluate each of these new methods for accuracy and precision, using bacterial sources from southern California, and then make recommendations to the management community on the most effective and efficient method application(s).

Twenty-one of the most prominent researchers in the field are testing nine different MST techniques all at the same time on the same split samples. These techniques include techniques such as ribotyping, antibiotic resistance (ARA), pulsed-field gel electrophoresis (PFGE), polymerase chain reaction (PCR), and terminal restriction fragment length polymorphism (TRFLP).

3. Peak Flow Impacts

Watershed development increases imperviousness eventually leading to alterations in runoff flow regimes. This alteration in flow regime, particularly increased flows during high frequency events (i.e. 1-2 year storms), can result in downstream impacts such as increased erosion or habitat loss. The goal of this study is to quantify impacts from increased peak

flows as a result of watershed development. Ultimately, the objective of this study is to develop indicators of peak flow and resulting peak flow impacts so that regulators and regulated agencies can develop numerical criteria for peak flow.