



SECTION A-3, PLAN DEVELOPMENT

A-3.0 PLAN DEVELOPMENT

A-3.1 Introduction

This Section provides information on the approach taken by the City of Newport Beach in developing the LIP and its companion document, the 2003 DAMP. This Section also discusses a number of studies that the Permittees are participating in that will provide important feedback for future revision and improvement of these documents.

The field of stormwater 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 stormwater 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 runoff and stormwater pollution 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.



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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 runoff and stormwater pollution. 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 (including source controls); and
- Removal-oriented programs (including treatment controls)

The pollution prevention-oriented programs are the focus of **Sections A-4 to A-11** of the City's LIP. The removal oriented programs are currently being revised as **Sections A-12** and will include structural BMPs and retrofitting opportunities that are identified through the water quality planning process on a watershed scale. Removal oriented BMPs are also proposed for priority new development projects (**Section A-7**).

A-3.2.2 Approach to Development of City of Newport Beach 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 1993 DAMP and the programs proposed in the Second Term Permit Report of Waste Discharge.

The complexity of the permits has necessitated the development of this LIP by the City in order to provide for 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 on at least an annual basis by the City or as directed by the Regional Board. The City in the Annual Progress Report will report revisions to the LIP.



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A-3.3 BMP Effectiveness Investigations

Although the DAMP and LIP provide for the implementation of a successful municipal stormwater program through the BMPs that have already been selected and/or developed and implemented, the City recognizes that the field of stormwater quality is highly dynamic and that the BMPs must be continually assessed for effectiveness and then revised, deleted or added to as necessary in order for the program to remain successful.

As a part of this assessment, 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 will address the following:

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

It is expected that these elements will be initiated and/or completed during the 2002-2003 reporting period.

The City will also continue to collect and report data that has been presented in the Annual Progress Reports for a number of years on ongoing BMPs. This non-conventional monitoring is defined by the California Stormwater 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 Stormwater Science

The City is also collaborating, through the Principal Permittee, in the Stormwater Monitoring Coalition (SMC) on studies that may shape plan development and the selection of future BMPs as well as improving the City's understanding of stormwater science. The current studies are:

1. Develop standardized sampling and analysis protocols



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This project is an attempt to build a stormwater 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 quality assurance inter-calibration 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 the techniques 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.