

Jurisdictional Urban Runoff Management Plan

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13.0 EFFECTIVENESS ASSESSMENT COMPONENT

13.1 Introduction

The overall goal of the Effectiveness Assessment Component is to establish a strategy for ongoing assessment of program activities on a variety of temporal and spatial scales, and specific to particular areas of activity. This assessment will allow the County to demonstrate compliance with applicable Permit requirements, and to allocate resources toward the most effective programs and solutions.

- To demonstrate the success of stormwater program implementation, including whether or to what degree specific implementation targets have been met;
- To demonstrate compliance with minimum Permit requirements;
- To foster management effectiveness by ensuring the measurability of specific program activities;
- To provide an informational basis for relating stormwater program implementation outcomes (Level 1) to those measured in target audiences (Levels 2-4); and
- To demonstrate that intended outcomes are being achieved cost-effectively.

13.2 Effectiveness Assessment Approach

The County's overall approach to effectiveness assessment continues to evolve each year as a result of implementation experience and continued collaboration with the Copermittees.

13.1.1 Implementation Assessment (Outcome Levels 1 through 4)

As described in previous submittals, annual JURMP assessments rely primarily on the use of Implementation Assessment measures and methods (Outcome Levels 1 through 4). Provisional outcomes, measures, and methods are presented throughout each applicable element of this JURMP, with additional detail being developed as part of the ongoing annual reporting process. Rather than being approached as a separate assessment element in itself, assessment of the JURMP as a whole consists of the collective results of the program components comprising it.

By focusing on changes in targeted audiences, Level 2 and 3 Outcomes provide an important bridge between program activity and potential pollutant load reductions. In some cases, a combination of Level 2 and 3 Outcomes is appropriate; in others, Level 2 Outcomes comprise an end in themselves, or can be used as a means of demonstrating progress toward expected behavioral change. The County attempts to provide an effective mix of these measures in all of its program elements.

As previously described, the County is committed to the routine incorporation of pre- and post-testing into many of its JURMP elements. Pre- and post-testing serves two primary purposes. First, it provides a measure of whether training or outreach has been effectively conveyed to target audiences at the time it is provided. Second, it provides a measure for determining whether

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knowledge, awareness, and to a lesser extent behavior, is changing in individuals or populations over extended periods of time.

The County is also currently working to do define the specific application of testing and surveying tools. Extensive use of these tools will begin occurring in FY 2008-09, and will subsequently be reported in September 2010.

The County will also continue to use load reduction estimations as a means of characterizing the overall success of management efforts for selected program activities. In FY 2006-07, this included the following types of activities:

- Street sweeping;
- Conveyance system and right-of-way cleaning;
- Used oil recycling; and
- Household hazardous waste collection.

In each JURMP Annual Report, program activities and outcomes are assessed within the context of comprehensive and coherent management strategies. In most sections, these strategies are introduced visually with a figure illustrating the primary strategic elements, and relating each to the first four assessment levels (Outcome Levels 1-4). Figure 13. 1 provides an example. As shown, all major program elements, activities, and outcomes, in this case for the Industrial Element, are organized according to Outcome Levels 1-4. This allows the reader to better understand the inter-relationship of each of these pieces. Moreover, it provides a conceptual framework for the “Targeted Outcomes and Results” tables that follow.




DPW Industrial Businesses Sub-element			
Program Implementation  - DPW Watershed Protection	Target Audiences  - Industrial Business Owners, Operators, & Employees	Sources  - Industrial Businesses (see inventory, Table 5.2)	
OUT COME LEVEL 1	OUT COME LEVEL 2	OUT COME LEVEL 3	OUT COME LEVEL 4
Stormwater Program Activities	Knowledge & Awareness	Behaviors	Source Reductions
Program Administration <input checked="" type="checkbox"/> Program reviews & updates <input checked="" type="checkbox"/> Source inventory updates <input checked="" type="checkbox"/> Staff training Facilitation Activities <input checked="" type="checkbox"/> Education & outreach <input checked="" type="checkbox"/> Enforcement / return to compliance Feedback Activities <input checked="" type="checkbox"/> Routine site inspections <input checked="" type="checkbox"/> Complaint investigations <input checked="" type="checkbox"/> Special investigations (See Table 5.3 for Level 1 Results)	<input checked="" type="checkbox"/> Not Targeted or Assessed	<input checked="" type="checkbox"/> Administrative & procedural behaviors <input checked="" type="checkbox"/> Illicit discharge control <input checked="" type="checkbox"/> BMP implementation <input checked="" type="checkbox"/> Regulatory compliance	<input checked="" type="checkbox"/> Not Targeted or Assessed
(See Table 5.3 for Level 1 Results)	(See Table 5.8 for Level 3 Results)		

Figure 13. 1 - Sample Implementation and Assessment Strategy Table (Industrial Sources)

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Figure 13. 2 provides an example of a “Targeted Outcomes and Results” table, in this case for the Streets, Roads, and Highways Sub-element. As shown, it consists of five columns.


Column 1		Column 2	Column 3	Column 4	Column 5
 Outcome Level 1		Table 4.2.2 – Program Implementation and Assessment Results for the Streets, Roads, and Highways Element (Level 1 Outcomes)			
FY 2008-09 Targets (T) ⊙		Implementation Result (R _I) ☑	Assessment Result (R _A) ■	Next Fiscal Year Targets ⊙	Explanation ■
4.2.2	Inspect all improved County-maintained streets, roads, and highways (T = 3,157 curb-miles)	All improved (curbed and guttered) segments were inspected at least once (R _I = 3,157 curb-miles)	R _A = 100% completion	Inspect all improved County-maintained streets, roads, and highways	During FY 2008-09, 27,256 road inspections were conducted to determine maintenance and cleaning needs. Major County-maintained roads were generally inspected twice monthly and minor roads every other month. Table 4.2.5 provides a breakdown of inspection numbers and road station debris removal statistics.
☑ Surveys & tests		Beginning in FY 2008-09, quizzes were incorporated before and after implementers' and administrators' training as a means of evaluating whether changes in knowledge are being retained over time. The County's initial focus was to ascertain a baseline of general staff knowledge. During FY 2009-10, surveys will be expanded to evaluate staff's knowledge of specific job responsibilities. Analysis of results is reported along with those of other County staff in Table 4.14.2 .			

Figure 13. 2 - Sample Targeted Outcomes and Results Table Excerpt (Streets, Roads, and Highways Element)

Column 1 → Implementation Target (T). Although not always possible or appropriate, the County attempts to establish measurable targets for the activities and practices that comprise its program. In many cases, targets are dictated by Permit requirements. In others, they are based on experience or a desired change in the applicable target audience. In some cases, targets are absent either because they do not apply or insufficient data or experience are available to support their establishment.

Column 2 → Implementation Results (R_I). This column presents the result of implementing the activity or evaluation. In many cases, implementation results are presented with corresponding targets or assessment results. However, they are not always followed by an evaluation.

Column 3 → Assessment Results (R_A). This column relates the targeted outcome to the implementation result. Assessment results are typically expressed as “Completion,” “Confirmation,” “% Completion,” or “% Success.” “Assessment” implies an evaluation, or interpretation, of an implementation result. It only occurs when both Targeted Measurable Outcomes and Implementation Results have been established.

Implementation Results (R_I) and Assessment Results (R_A) are often presented as a single result (R_{I+A}). This is true in cases where the targeted outcome is either “completion” or “confirmation”. “Completion” is generally targeted for discrete tasks or activities such as updating a guidance manual or a source inventory. “Confirmation” is generally used in for ongoing sets of activity that do not have discrete endpoints, such as operating a hotline. In all other cases, the Assessment

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Result (R_A) describes the relationship of the target (T) and the Implementation Result (R_I). For example, if $T = 25$ inspections and R_I is 23 inspections conducted, then R_A is the percentage of targeted inspections conducted, or 92.0% completion.

Column 4 → FY 2009-10 Implementation Target. Where possible, the “Targeted Outcomes and Results” tables identify and explain activities that the County intends to implement in the upcoming fiscal year. This provides a blueprint for ongoing implementation and helps to provide continuity from year to year.

Column 5 → Explanation. This column provides any explanation needed for the current year targets or results, or FY 2009-10 targets. In some cases, explanation boxes have been widened to encompass multiple columns. This is simply to save space.

13.1.2 Water Quality Assessment (Outcome Levels 5 and 6)

The County will continue to annually conduct Water Quality Assessment activities as required by the Permit. Permit section I.1.a(4) requires that, as applicable and feasible, these methods also be considered in the annual evaluation of jurisdictional activities / BMPs and the JURMP as a whole. The County does not currently consider the use of Water Quality Assessment methods for annually assessing the JURMP, or elements of it, to be necessary or feasible. Such analysis is more appropriately considered as part of a longer-term evaluation. This goal will be furthered through the completion of the Long-term Effectiveness Assessment to be conducted pursuant to Permit section I.5.

13.1.3 Integrated Assessment (Outcome Levels 1 through 6)

Integrated Assessment methods may be utilized to a limited degree in the evaluation of the JURMP; however, this type of analysis is not feasible as part of an annual assessment process. The Copermittees intend to address the use of Integrated Assessment methods toward the evaluation of regional activities and programs as part of the Long-term Effectiveness Assessment required by Permit section I.3.a(5). Once a longer-term record has been established, and assuming that suitable assessment methodologies can be developed, the County will utilize the results of this exercise to determine whether or not this type of analysis is feasible for incorporation into its ongoing annual assessments.

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13.3 Program Review and Modification

Table 13.1 identifies modifications made to the Effectiveness Assessment Component since its March 24, 2008 submittal.

Table 13.1: Modifications to the Effectiveness Assessment Component

Date	Section(s)	Modification(s)
05-20-08	N/A	Addition of Table of Contents.
05-20-08	13.3	Addition of Section 13.3 for tracking JURMP modifications.
05-20-08	Multiple	Minor non-substantive corrections including formatting, punctuation, and grammar.
06-22-10	13.0	In accordance with the results of the County's FY 2008-09 JURMP Annual Report, JURMP Section 13.0 has been modified to incorporate a more comprehensive and updated description of the County's effectiveness assessment strategy. This consists primarily of a more detailed discussion of the presentation of Level 1-4 results in Section 13.1.1.