Santa Clara Valley
*Urban Runoff*
Pollution Prevention Program

# *MEMORANDUM*

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**TO:** **BMP O & M Verification Work Group**

**FROM:** **Paul Randall and John Fusco, Program Staff**

**DATE:** **May 20, 2004 [FINAL]**

**SUBJECT:** **Guidance for Managing Data Relevant to Permit Provision C.3.e Reporting Requirements**

The purpose of this memorandum is to provide guidance on the overall strategy to manage data relevant to the reporting requirements described in Permit Provision C.3.e.

## Introduction

Permit Provision C.3.e.iii of the Santa Clara Valley Urban Runoff Pollution Prevention Program's Municipal Storm Water NPDES permit requires the Co-permittees to "*report on their Treatment BMPs Operation and Maintenance Verification program in each Annual Report. The Annual Report shall contain: a description of the organizational structure of the Discharger's O&M Verification program; an evaluation of the Discharger's O&M verification program's effectiveness; summary of any planned improvements in O&M Verification; and a list or summary of treatment BMPs that have been inspected that year with inspection results."*

In addition, Permit Provision C.3.e.i requires Co-permittees to compile "a list of properties (public and private) and responsible operators for all treatment BMPs[1]. This information will be provided by each Co-permittee as part of the reporting requirements identified in Permit Provision C.3.n and the revised Performance Standard for Planning Procedures for New Development and Redevelopment.

During the September 25, 2003 BMP O & M Verification Work Group meeting, Program staff were requested to develop a memorandum which would assist Co-permittees in developing a useful data management structure for implementing the reporting requirements described in Permit Provision C.3.e. It was agreed that the guidance should describe a data management structure that links C.3.e and C.3.n reporting requirements; provide a list of information relevant to the Santa Clara County Vector Control District; suggest standardized fields and categories (for Co-permittee use) to report; list options for developing a mechanism for maintaining and transferring relevant data between individual departments/units; discuss existing data management resources (City of Bellevue, WA); and recommend a data management approach.

## Linkage of C.3.e and C.3.n Data

To demonstrate implementation of the revised Performance Standard for Planning Procedures for New Development and Redevelopment (PPPS), the C.3 Permit Oversight Ad Hoc Task Group developed

[1] For clarification, in this memorandum the following terms have the same meaning: stormwater treatment controls, stormwater BMPs, BMPs, treatment control BMPs, stormwater treatment BMPs and stormwater treatment systems.

model reporting forms for Co-permittee use. The data provided within each form will be submitted within individual Co-permittee Annual Reports. Some of the fields listed in the PPPS model reporting forms will demonstrate implementation of BMP O & M verification programs (C.3.e). They include property owner, responsible party and type of treatment BMP. In addition, Co-permittees are required to provide information which identifies inspected treatment BMPs and BMP inspection results. The PPPS model reporting forms does not require the tracking or submittal of these data types.

The BMP O & M Verification Work Group agreed that some mechanism is needed to manage C.3.n and C.3.e data. Depending on the structure of the organization, this data could be managed together or separately. In some cases, the tracking of C.3.n and C.3.e data may be performed by different departments/units. As a result, a mechanism which allows for the efficient transfer of data should be developed. For example, if a municipality's planning department/unit tracks pre-construction data (e.g., property owner/responsible party and treatment BMP type) and its code enforcement department/unit tracks post-construction data (e.g., treatment BMP inspection results), the data management structure should be developed to allow for the seamless transfer of data between different department/units.

At a minimum, the mechanism should include standardized fields to ensure that consistent data is transferred. Recommended standardized fields are described below. Information may be transferred using hard copy report forms or electronic files. The storage of data within a spreadsheet or relational database would be the most efficient mechanism for transferring relevant data between individual departments/units.

## Standardized Fields and Categories

Standardized fields are recommended to maintain consistency among various data management structures and provide for efficient transfer of data between them. Co-permittees should use the following standardized fields to satisfy C.3.e reporting requirements:

1. Property owner;
2. Responsible party;
3. Treatment Control BMP Type*;
4. Address or physical location of BMP;
5. Treatment Control BMP Inspection Date; and
6. Inspection results.

* For treatment control BMP type, standardized categories should be used. A list of potential treatment control BMPs are provided within Table 1.

## Information Relevant to Santa Clara County Vector Control District

Due to problematic designs and improper maintenance, certain treatment control BMPs may provide suitable habitat for mosquito production. To evaluate and reduce all potential mosquito breeding sites within Santa Clara County, the Santa Clara County Vector Control District (Vector Control district) would like to have the ability to review and inspect certain stormwater BMPs. To assist them in inventorying stormwater BMPs which may be mosquito sources, Co-permittees should submit the following information to the Program on a routine basis:

- List of properties (public and private) with their physical address;
- Property owner/responsible party contact information;
- The type of treatment control BMP installed on the property.

Program staff requests that Co-permittees use standardized fields (described above) to allow for the efficient transfer and compilation of data between the Vector Control District and individual Co-permittees. In addition, Program staff initially suggested submitting information on a biannual basis due to the Vector Control District's declaration that an annual submittal is neither adequate nor manageable. To determine if a biannual submittal is necessary, Program staff will evaluate the entire universe of treatment control

BMPs in late 2004. Based on the total number of BMPs within the universe, Program staff will set the frequency of submittal and how the Program will continue to collaborate with the Vector Control District.

## Data Management Approach

During the September 25, 2003 BMP O & M Verification Work Group meeting, Program staff presented two approaches relating to data management relevant to the C.3.e reporting requirements. They included the following:

1. Co-permittees incorporate information into their data management schemes using standardized fields developed by the Work Group. This option is appropriate if Co-permittees have an existing data management structures in place which track data relevant to BMP O & M verification programs; and

2. Program staff develops a relational database (for individual use) which uses standardized fields. The database would house and track C.3.e and C.3.n.data. This option is appropriate if Co-permittees do not have existing data management schemes in place.

Work Group members decided that it was not necessary to develop a relational database for C.3.e reporting at that time. Certain Work Group members stated that their agencies had existing databases that could be modified to track BMP O & M verification information. Other members stated that they would not use a Microsoft Access® database due to their desire to use existing databases. In addition, the number of Group 1 projects anticipated for many of the smaller cities is small. As a result, there would be very few projects to track, making a database unnecessary. However, projects may increase once Group 2 project requirements are implemented. The Work Group suggested revisiting the need for a database once Group 1 and Group 2 requirements are implemented.

## Existing Data Management Resources

Existing databases (used to track and manage stormwater BMP inspection data) are useful resources Co-permittees may use to enhance or develop their data management mechanisms. One example is the Microsoft Access® database developed by the City of Bellevue, WA. The City of Bellevue database is a relational database used to track inspections and stormwater maintenance of privately-owned BMPs. It has the capability to generate reports and letters used for the City's BMP O & M verification program. Information on the City of Bellevue's inspection program is found at http://www.ci.bellevue.wa.us/page.asp?view=1318. Example entry screens are attached to this memorandum.

## Data Management Recommendations

It is strongly suggested that individual Co-permittees adopt the following data management approach for tracking and managing data relevant to their BMP O & M verification programs:

1. Develop a mechanism for maintaining and transferring relevant pre-construction data (C.3.n) between individual municipal departments/units that track and manage BMP inspection data (C.3.e).
2. Adopt the six (6) standardized fields and standardized categories for treatment control BMPs discussed above.
3. Incorporate standardized fields and categories into existing data management schemes.
4. Develop or improve data management structures that allow tracking of C.3.e and C.3.n data.

**Table 1: Potential Treatment Control BMPs**

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|---|
| ✓ Bioretention |
| ✓ Drain Insert* |
| ✓ Exfiltration Trench |
| ✓ Extended Detention Basin |
| ✓ Hydrodynamic Separators* |
| ✓ Infiltration Basin |
| ✓ Infiltration Trench |
| ✓ Media Filter†* |
| ✓ Multiple Systems |
| ✓ Planter Boxes |
| ✓ Porous Pavement |
| ✓ Retention/Irrigation |
| ✓ Roof Gardens |
| ✓ Underground Detention Systems* |
| ✓ Vegetated Buffer Strip |
| ✓ Vegetated Swale |
| ✓ Vortex Separator* |
| ✓ Water Quality Inlet |
| ✓ Wet Pond |
| ✓ Wet Vault* |
| ✓ Wetland* |

* Indicates Treatment Control is Manufactured (Proprietary)
† Public Domain and Proprietary