



**Santa Clara Valley
Urban Runoff
Pollution Prevention Program**

VII

DATA MANAGEMENT AND REPORTING

VII.1 INTRODUCTION

Because of the comprehensive information needs required by Permit Provision C.3, Co-permittees are encouraged to enter and store the appropriate data in a comprehensive database for efficient tracking, analysis, and reporting. This chapter of the Handbook provides guidance on collecting the appropriate data necessary for showing compliance with Provision C.3. It includes information about the SCVURPPP model data collection form, guidance for municipalities on preparing a database to track projects through their life, insight into the data management considerations needed for long-term operation and maintenance, and guidance on reporting the data to the Regional Board via annual reports.

VII.2 C.3 DATA NEEDS

Attachment VII-1 contains a comprehensive list of the data needs to comply with the SCVURPPP's Permit Provision C.3. (New and Redevelopment Requirements). The list comprises the data necessary from all stages of the development project review process to ensure compliance with specific chapters of Provision C.3, rather than just the data needed for reporting. The Program developed a model Program C.3 data collection form to meet these needs (Attachment VII-2).

Although portions of the data sheet will be useful to project proponents early in the development planning process as guidance and encouragement for reducing impervious surfaces, the final data should be collected at the building permit stage. The following guidance is provided to assist Co-permittees and/or project proponents with completing the form.

Project Name: Provide name of owner/project proponent.

APN #: Provide Assessor's Parcel Number of site.

Applicant Name: Provide full legal name of owner/project proponent.

The goal of this Chapter is to provide guidance on collecting and providing data necessary for reporting on Provision C.3 implementation progress to the Regional Board.

Project Location: On the first line, indicated the address of the proposed project site. If a street address is not available, provide other descriptors such that the site could be located. On the second line, indicate the watershed that the project is located in (main creek/river, or Bay) and the immediate receiving water (tributary, creek, Bay). For more information, see Chapter V.

Item 1. Project Type. Indicate whether the project is Residential, Commercial Industrial, Public, or Roadway per the definitions in the municipality's zoning code. For mixed-use developments, select all applicable boxes. Public projects include institutional developments such as governmental offices and public schools. Although often a subcategory of public projects, roads are listed separately due to their distinguishing characteristics. Also, indicate whether the project will be located on an undeveloped site (New Development) or at a site with existing development (Redevelopment).

If the project is a single-family residential home that is not part of a larger common plan of development, then the project will be considered in compliance with Provision C.3 despite the amount of impervious surface area if appropriate pollutant source control and site design measures. This includes the use of landscaping to appropriately treat roof and house-associated impervious surface runoff.

Item 2. Project Size. The six subsections in this item provide a pathway for determining the total and percent increase or replacement of impervious surface area (see items d. and e., respectively). The amount of impervious surface at the site is essential to determining the applicability of Group 1 and Group 2 requirements for requiring and sizing stormwater treatment BMPs.

Item 3. Type of Pesticide Reduction Measures Used. This item addresses those parts of Provision C.3 that require Co-permittees to collect information regarding the types of pesticide reduction measures implemented for those new development and significant redevelopment projects falling into the Group 1 and Group 2 categories defined in the permit amendment. Provision C.3.n.ii calls for a "summary of the types of pesticide reduction measures required for those new development and significant redevelopment projects to be addressed under Provision C.3.c¹...." Provision C.9.d.ii contains several tasks related to the control of pesticide use at new and redevelopment projects, including requiring mechanisms to encourage the consideration of pest-resistant landscaping and design features. Co-permittees should check the appropriate boxes if educational materials such as fact sheets or information on pest resistant plants is provided to the owner/project proponent (Education), or if the pesticide-reduction related Conditions of Approval were placed on the project (Conditions of Approval) (See Chapter

¹ C.3.c. refers to applicable projects: Group 1 projects (projects having 1 acre or more of impervious surface area) shall implement the requirements by October 15, 2003. Group I projects (projects having 10,000 square feet or more of impervious surface area) shall implement the requirements starting on April 15, 2005.

II.6.). Some development projects may not have a landscaping component. In such cases “Doesn’t Apply” should be checked.

Item 4. Types of Stormwater Controls Used. This item provides three selections: treatment measures, source control measures, and site design measures. These chapters refer to categories of specific stormwater control measures found on page 3. Co-permittees and/or project proponents can indicate on page 3 what specific stormwater control measures will be incorporated into the project. If the control(s) fall under the headings of stormwater treatment, source controls, and/or site design, the requisite boxes should be checked on page 2 as well. Single-family residential homes not part of a common development need only consider or incorporate source control and site design measures to be compliant with Provision C.3. For additional information on stormwater treatment measures, see Chapter III, IV, and VI. For additional information on source controls and site design measures, see Chapter III. Additional resources include BASMAA’s Start at the Source (1999) available at www.scvurppp.org, and the California Stormwater BMP Handbooks, located on the web at www.cabmphandbooks.com.

Item 5. Hydromodification Management Plan (HMP) Applicability. The project may need to meet additional requirements associated with the Hydromodification Management Plan (Chapter V). In subsection 5.a. of this item, indicate whether the project will create an increase in impervious surface area compared to the pre-project condition. If “No”, the project is exempt from HMP. If “Yes”, proceed to subsection 5.b.

Under subsection 5.b, indicate whether the project discharges into a tidal area, a channel hardened continuously to the Bay or directly to the Bay. If “Yes,” the project is exempt from HMP. If “No”, proceed to subsection 5.c.

Under subsection 5.c, indicate whether the project is an “infill project in a highly developed watershed.” (This definition will be provided by the municipal stormwater staff.). If “Yes”, the project is exempt from HMP. If “No,” the requirements of the HMP will need to be met.

Specific Stormwater Control Measures. The list on page 3 of the data form provides a method to indicate the stormwater treatment, source control, and site design measures that will be incorporated into the project. The controls listed are consistent with those described in the selection matrices (see Chapter III). Boxes are provided to indicate the number of such systems installed, in the case of stormwater treatment BMPs. For database entry on long-term maintenance tracking, Co-permittees may want to assign codes for each of the measures to ease the entry process (see next chapter on developing a tracking database).

Treatment Control Details. A table is provided on Page 4, allowing the Co-permittee to enter additional details on the stormwater treatment BMPs being installed and maintained for the project. Information includes an identifier for each BMP installed, information on whether the BMP is flow or volume-based, or both (see the selection matrices in Chapter III for guidance), and

the sizing method used. (Chapter IV). Infiltration limitations, such as vertical distance, horizontal distance, and if the project site is in a Santa Clara Valley Water District (SCVWD) Recharge Area are provided (see Chapter III for more information on infiltration limitations to protect groundwater aquifers). Maintenance responsibility information that needs to be collected includes the name and contact information for the responsible party or parties and the type of O&M agreement entered into.

Reviewed By. This final chapter at the bottom of page 4 provides locations for representatives of the planning, building, engineering, and other departments or divisions to indicate their review and approval of the completed data form as a means of promoting interdepartmental communication regarding stormwater controls. There is also a location to indicate who performed data entry into the database. More information on creating an effective database is described next.

VII.3 OVERALL STRATEGY FOR EFFECTIVE DATA MANAGEMENT

To effectively manage data relevant to the reporting requirements described in Permit Provision C.3.e.iii, each Co-permittee should implement a useful data management structure. This structure should include the following:

- A data management structure that links the operations and maintenance verification program (C.3.e) and reporting requirements (C.3.n);
- A mechanism for maintaining and transferring relevant data among individual departments or units; and
- Standardized fields and categories used for reporting purposes.

A discussion of this structure is provided below. In addition, information relevant to the Santa Clara County Vector Control District, existing data management resources (City of Bellevue, WA) and a summary of the recommended data management approach is also provided.

a. 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 model reporting forms (Attachment VII-3) 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 stormwater treatment BMPs and BMP inspection results. The PPPS model reporting forms do not require the tracking or submittal of these data types.

b. Transfer of Data between Departments

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 that 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 among 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.

c. 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 good starting point for a list of BMP types are the list of Treatment Control BMP Fact Sheets is shown in Table VI.2.

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. Information relevant to the Vector Control District and procedures regarding the submittal of information to the Program on a routine basis is provided in Chapter VI. Co-permittees should use standardized fields to allow for the efficient compilation and transfer of data to the Vector Control District and individual Co-permittees.

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 can be found on their website at <http://www.ci.bellevue.wa.us/page.asp?view=1318>.

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) among 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.

VII.4 REPORTING REQUIREMENTS

Co-permittees are required to submit an annual report to the Regional Board yearly by September 15th, indicating their compliance with the NPDES permit requirements, and progress in continually improving the local stormwater program. Program staff has prepared a standard stormwater reporting form for new and redevelopment activities (see Attachment VII-3).



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ATTACHMENT VII-1

Provision C.3 Data Requirements

Attachment VII-1 C.3 Data Requirements

I. General Project Information

- A. Project Name*
- B. Applicant Name
- C. Project Location (address, watershed)
- D. Type of Project (new or redevelopment; residential, commercial, industrial, or road)*
 - 1. If new development:
 - a. Site size (acres, sq.ft.)*
 - b. Total impervious surface area (acres, sq.ft.)*
 - c. Percent imperviousness
 - 2. If redevelopment:
 - a. Site size (acres, sq.ft.)*
 - b. Existing impervious surface area (acres, sq.ft.)
 - c. Impervious surface area added or replaced (acres, sq.ft.)*
 - d. Total impervious surface area (acres, sq.ft.)
 - e. Percent increase/replacement of impervious surface area ($c/b \times 100\%$)
 - f. Area of land disturbance (acres, sq.ft.)*

II. Best Management Practices (BMPs)

- A. Treatment BMPs Constructed (description or code)
- B. Numeric Sizing Criteria Used (flow and/or volume-based, method, by BMP)
- C. Infiltration Limitations
 - 1. Vertical distance from the base of the infiltration device to the seasonal high groundwater mark (ft.)
 - 2. Horizontal distance from any water supply wells (ft.)
 - 3. Located in a designated SCVWD recharge area? (Y/N)
- D. Site Design Measures Used (description or code)
 - 1. Designated open space area (acres, sq. ft.)
 - 2. Is the site near a stream or waterway?
 - a. Distance from the top of the bank to the nearest impervious surface
- E. Source Control Measures Required (description or code, from model list)
- F. Maintenance of BMPs
 - 1. Responsible Party (public/private)
 - 2. Name and address of responsible party
 - 3. Type of O&M Agreement (list or code)

III. Receiving System

- A. Discharge point of project (municipal storm drain system, creek, or Bay)
- B. Receiving Water

IV. Miscellaneous

- A. Waiver (Project name, location and type from Section I.)
 - 1. Percent impervious surface in final design
 - 2. Reason for granting a waiver
 - 3. Terms of the waiver
 - 4. Stormwater treatment project receiving benefit
 - 5. Date of completion of project receiving benefit
- B. Types of Pesticide Reduction Measures Used (description or code from model list)*

*Data collected since April 17, 2002 per NPDES permit Provision C.3.n



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ATTACHMENT VII-2

C.3 Data Form



**Santa Clara Valley
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STAFF ONLY
Date of Building Permit: _____
Permit #: _____

PROVISION C.3 SUMMARY DATA FORM

What Projects Apply?
All projects creating, adding, or replacing 43,560 sq. ft.* (1 acre) or more of impervious surface on the project site must fill out this worksheet and submit it to the Building Division prior to building permit issuance. Interior remodeling projects and routine maintenance or repair projects, and projects involving only construction of sidewalks, bicycle lanes, trails, bridge accessories, guardrails, and landscape features are NOT required to complete this worksheet.

What is an Impervious Surface?
An impervious surface prevents the infiltration or passage of water into the soil. Onsite impervious surfaces include building rooftops, paved patios, covered patios, driveways, parking lots, paved walkways, sidewalks and streets.

For More Information
For more information regarding selection of Best Management Practices for stormwater pollution prevention or stormwater treatment contact: _____

Project Name: _____ **APN #** _____ - _____ - _____

Project Description: _____

Applicant Name: _____

Project Location: _____
(address)

Project Location: _____
(watershed) (receiving water)

1. Project Type (Check all that apply):

- Residential Commercial Industrial Public Road
- New Development Redevelopment

If Residential, does the project consist of a single-family home that is not part of a larger common plan of development? Yes No

If yes, skip to Question 3. The project will be considered in compliance with Provision C.3 with the incorporation of appropriate pollutant source control and site design measures, and the use of landscaping to appropriately treat runoff from the roof and house-associated impervious surfaces (e.g., runoff from roofs, patios, driveways, sidewalks, and similar surfaces).

*** NOTE: After April 15, 2005, the threshold may be reduced to 10,000 sq. ft. or other minimum project size. See municipal stormwater staff for information.**

2. Project size:

- a. Site size _____ sq. ft.
- b. Existing impervious surface area (includes land covered by buildings, sheds, patios/covers, parking lots, streets, sidewalks, paved walkways and driveways onsite) _____ sq. ft.
- c. Impervious surface area created, added, or replaced _____ sq. ft.
- d. Total impervious surface area (new + existing) _____ sq. ft.
- e. Percent increase/replacement of impervious surface area _____ %
c/b(100%)
- f. Estimated area of land disturbance during construction _____ sq. ft.
(including clearing, grading, or excavating).

3. Type of Pesticide Reduction Measures Used (Check all that apply):

- Education (e.g., fact sheet, plant list)
- Conditions of Approval
- Doesn't Apply
- Other (Describe: _____)

4. Types of Stormwater Controls Used (check all that apply, using lists at end):

- Treatment Measures
- Source Control Measures
- Site Design Measures
- Alternative Compliance (attach documentation)

5. Hydromodification Management Plan Applicability:

- a. Does project create an increase in impervious surface from the pre-project condition (i.e., is 2.d. > 2.b.)?
 - Yes (continue)
 - No – exempt from HMP, go to page 3
- b. Does project discharge to a tidal area, a channel hardened continuously to the Bay, or directly to the Bay?
 - No (continue)
 - Yes – exempt from HMP, go to page 3
- c. Is project an “infill project in a highly developed watershed” (check with municipal stormwater staff for definitions).
 - No, project must implement HMP requirements
 - Yes – exempt from HMP, go to page 3

Specific Stormwater Control Measures:

Stormwater Treatment

- Biofilter (vegetated swale or strip)
- Bioretention
- Detention basin (dry)
- Wet pond (detention)
- Underground detention (e.g. Porous Pavement Recharge Bed)
- Media filter (sand, organic matter, manufactured)
- Hydrodynamic device (commercially available in-line treatment unit e.g. wet vault, vortex separator)
- Infiltration trench or basin
- Retention/irrigation
- Constructed wetland (basin or channel)
- Water quality inlet filter
- Drain insert
- Green Roof (rooftop vegetation)
- Other _____

Source Controls

- Alternative Building Materials
- Wash area/racks, drain to sanitary sewer
- Covered dumpster area, drain to sanitary sewer
- Swimming pool/fountain drain to sanitary sewer
- Beneficial landscaping (minimizes irrigation, runoff, pesticides and fertilizers; promotes treatment)
- Outdoor material storage protection
- Covers, drains for loading docks, maintenance bays, fueling areas
- Maintenance (street sweeping, catch basin cleaning)
- Storm Drain Signage
- Green or Blue Roofs
- Other _____

Site Design

- Minimize land disturbance
- Minimize impervious surfaces
- Minimum-impact street design
- Minimum-impact parking lot design
- Cluster structures/pavement
- Permeable pavement
- Alternative driveway design
- Disconnect downspouts
- Microdetention in landscape
- Preserved open space: _____ ac. or ft.(circle one)
- Protected riparian and wetland areas, riparian buffers (Setback from top of bank: _____ft.)
- Other _____



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STAFF ONLY Date of Building Permit: _____ Permit #: _____

Treatment Control Details

Treatment BMP	Numeric Sizing Criteria Used			Infiltration Limitations	
	Flow	Volume	Sizing Method	Vertical Distance	Horizontal Distance

- A. Property Owners Name _____
- B. Responsible Party—Stormwater Treatment Measure Owner or Operator’s Information:
- a. Name: _____
- b. Address: _____
- c. Phone/Fax/E-mail: _____

This section to be completed by Municipal staff

More Detailed Information About Access Assurance and O&M Responsibilities:

Describe how access permission is assured for O&M verification by public agencies or their representatives (e.g., municipality, Regional Water Quality Control Board, and County Vector Control District):

Indicate how responsibility for O&M is assured. Check all that apply:

- Signed statement from private entity accepting responsibility for O&M until responsibility is legally transferred.
- Signed statement from public entity _____ accepting responsibility from O&M until responsibility is legally transferred. (Name)
- Written conditions in the sales or lease agreement requiring the buyer or lessee to assume O&M (in case of purchase and sale agreements, conditions shall survive the close of escrow).
- Written test in projects conditions, covenants and restrictions for residential properties assigning O&M responsibilities to the homeowner association.
- Any other legally agreement or mechanism that assigns responsibility (describe below).

Reviewed:

Community Development Department

Planning Division: _____

Building Division: _____

Public Works Department

Engineering: _____

Other (Specify): _____

Return form to: _____

Data entry performed by: _____



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ATTACHMENT VII-3

Co-permittee Reporting Form for Planning Procedures Performance Standard and Provision C.3.n.i Reporting Requirements

[Co-permittee Name]
**Reporting Form for Planning Procedures Performance Standard
 and Provision C.3.n.i. Reporting Requirements**

Part 1

**New Development and Significant Redevelopment Projects¹
 Reviewed and/or Approved During _____**

Project Name	Project Type ²	Site Size (ac. or s.f.)	New Impervious Surface (s.f.) ³	Area of Land Disturbed (Ac.) ⁴	Project Status	Storm Water Control Measures Included in Project
Private Projects						
Public Projects						

¹ Prior to April 15, 2005, list all projects with new impervious surface area greater than 1 acre (43,560 s.f.).

After April 15, 2005, list all projects with new impervious surface area greater than 10,000 s.f.

² Describe project type, as defined in Provision C.3.c.

³ "New" is defined as impervious surface created, added or replaced.

⁴ If the site is a "significant redevelopment", list the area of land disturbance, if information is readily available.

[Co-permittee Name]
**Reporting Form for Planning Procedures Performance Standard
 and Provision C.3.n.ii. & iii. Reporting Requirements**

Part 2

Stormwater Control Measures⁵

Reviewed and/or Approved During FY_____

Project Name	Treatment BMPs	Numeric Sizing Criteria Used	O&M Responsibility Mechanism and Responsible Party	Site Design Measures	Source Control Measures	Pesticide Reduction Measures
Private Projects						
Public Projects						

⁵ Prior to April 15, 2005, list all* projects with new impervious surface area greater than 43,560 s.f. (1 acre).

After April 15, 2005, list all projects with new impervious surface area greater than 10,000 s.f.

See SCVURPP "C.3. Handbook: Guidance for Implementation of Stormwater Requirements for New and Redevelopment Projects".

*Projects that do not require stormwater treatment because they fall under the Alternative Compliance Program must be reported as per Provision C.3.g.v. (see Reporting Form Part 3).

[Co-permittee Name]
*Reporting Form for Planning Procedures Performance Standard
 and Provision C.3.g.v. Reporting Requirements*

Part 3

*Alternative Compliance/Waiver Program Projects
 Reviewed and/or Approved During FY_____*

Project Name and Location	Project Type	Final Percent Impervious Surface	Reasons for Allowing Alternative Compliance	Alternative Compliance Terms	Project Receiving Benefit (Date of Completion)
Private Projects					
Public Projects					