



**New Development Subcommittee  
Proposed Agenda  
April 5, 2011 – 1:30 to 3:30 pm  
Burlingame City Hall, Conference Room A  
501 Primrose Road  
Burlingame**

*NOTE: If you would like to participate in a tour of the **Donnelly Street green street** and parking lot project, please meet at the City Hall first floor lobby at **12:50 p.m.***

- I. Introductions, Announcements, Minutes & Agree on Agenda** – Matt Fabry, All (5 min.)  
*Objective: Meet attendees, review and approve previous meeting summary, make announcements, and agree on agenda.*
- II. Construction Site Stormwater Control Training** – Matt, Fred Jarvis, All (15 min.)  
*Objective: Hear feedback on CalBIG training regarding municipal stormwater permit requirements for construction site control, hear about upcoming Qualified SWPPP Practitioner/Development training opportunity on April 26-28, and brainstorm suggestions for potential CalBIG training on construction site BMPs.*
- III. Review Alameda County’s Construction BMP Plan Sheet for Development Projects** – Fred, All (10 min.)  
*Objective: Review the BASMAA informational plan sheet on construction site BMPs that was recently updated by Unincorporated Alameda County. Identify any additional updates that may be appropriate to adapt it for use by the Countywide Program.*
- IV. Review Regional Proposal to Develop LID Feasibility Criteria** – Matt, Fred, All (15 min.)  
*Objective: Review minor revisions to draft regional criteria to determine when meeting stormwater treatment requirements with infiltration, evapotranspiration, and rainwater harvesting/use is infeasible – in which case projects will use biotreatment.*
- V. Update on Special Projects Criteria** – Fred, All (10 min.)  
*Objective: Review draft revisions to regional criteria for identifying transit oriented development projects that may receive low impact development (LID) treatment reductions – in which case certain projects may be allowed to use media filters.*

- VI. Architectural Copper BMPs** - Fred, All (15 min.)  
*Objective: Hear about (1) the requirement to certify in the 2011 Annual Report that your agency has legal authority to require BMPs for installing and cleaning architectural copper, and (2) plans for regional BMPs. Consider preparing an educational flyer.*
- VII. Update on C.3 Compliance Checklist for Development Projects** – Work group members (15 min.)  
*Objective: Hear about the status of the checklist.*
- VIII. Review the Applicability of C.3 and C.6 Requirements for School District and Special District Projects**– Fred, All (10 min.)  
*Objective: Review advice from the Alameda Countywide Clean Water Program’s attorney on the applicability of MRP requirements on public schools and special districts.*
- IX. Update on BASMAA Development Committee** - Matt, Fred, Everyone (5 min)  
*Objective: Hear how the Bay Area Stormwater Management Agencies Association’s committee is proceeding on regional MRP tasks.*
- X. Municipal Case Studies: Water Efficient Landscaping Model Ordinance and BAWSCA Alternative** – All (10 min.)  
*Objective: Share information and hear how other municipalities are implementing the Water Efficient Landscaping Model Ordinance or BAWSCA alternative ordinance, and how this may affect your stormwater program.*
- XI. Next Meeting** – Matt, Everyone (5 min.)  
*Objective: Schedule next meeting for June 7, 2011.*

## New Development Subcommittee (NDS)

**Meeting Date:** February 1, 2011

**Present:** David Huynh, Atherton; Dalia Corpus, Belmont; Matt Fabry, Brisbane; Kiley Kinnon, Burlingame; Muneer Ahmed, Colma and Half Moon Bay; Jeanne Naughton, Daly City; Laura Prickett, EOA; Catherine Chan, Hillsborough; Shaun Mao, Menlo Park; Tanya Benedik, Millbrae; Paul Willis, Redwood City; Laura Russell, San Bruno; Gavin Moynahan, San Carlos; Ken Pacini, City of San Mateo; Camille Leung and Diana Shu, County of San Mateo; Rob Lecel, S. San Francisco

### Subcommittee Actions:

1. Approved summary of December Subcommittee meeting.
2. Agreed to explore the possibility of partnering with the American Public Works Association (APWA) to offer Qualified SWPPP Practitioner/Developer QSP/QSD training to both municipal staff and contractors in late April.

**Requested Technical Advisory Committee Action or Feedback/Guidance (if any):** None

### Other Information/Announcements:

1. **Discussed Notices of Violations** issued to MRP permittees, including violations of Provision C.6 (construction site control) and the fact that there is a disproportionate number in San Mateo County. The following suggestions were made: invite Water Board staff to a subcommittee meeting to clarify what they are looking for; get more information on what high-performing counties (Santa Clara or Contra Costa) are doing; have the Countywide Program/EOA provide individualized training to municipalities; pool resources to “job share” a stormwater person among several municipalities.
2. **Reviewed C.6 requirements.** Inspect sites that disturb 1 acre or more of land and “high priority sites” at least monthly during wet season. Record all stormwater inspections on inspection checklist and track results in a database or spreadsheet, such as the Countywide Program’s tracking spreadsheet. Whenever an inspector sees a stormwater problem, require it to be corrected. If it cannot be corrected while inspector is on site, issue a written notice of violation, to demonstrate enforcement to Water Board staff. Record violations/corrections on an inspection form and in the tracking spreadsheet. Verify correction within 10 business days, or escalate enforcement.
3. Reviewed BASMAA’s proposed approach to low impact development (**LID**) **feasibility** criteria.
4. Bay Area Stormwater Management Agencies Assn. (**BASMAA**) Development Committee update:
  - a. The public comment period for the Special Projects and Soil Specifications proposals closed on January 28. So far the comments have not been posted on the Water Board’s website.
  - b. Special projects feedback from Water Board staff was to revise the criteria to (1) increase density and (2) use graduated LID reductions, with maximum reduction less than 100%.
  - c. Alameda County is updating BASMAA’s plan sheet of construction BMPs for its own use and will make the updated plan sheet available to others.
5. The Countywide Program submitted a **grant application** to EPA’s San Francisco Bay Water Quality Improvement Fund to develop two green street projects in an area of San Carlos with elevated PCBs and to prepare a countywide green streets implementation plan.

**Work That Affects Other Subcommittees:** None

### Next Steps:

- Laura Prickett and Paul Willis will coordinate with APWA to plan QSP/QSD training.
- Laura Prickett will contact Burlingame staff about holding the April 5 Subcommittee meeting at Burlingame City Hall, with a tour of the new bioretention areas before the meeting.

**Next Meeting:** April 5, 2011, from 1:30 to 3:30 p.m. Location to be determined.

## **New Development Subcommittee (NDS)**

**Meeting Date:** March 1, 2011

**Present:** David Huynh, Atherton; Gilbert Yao, Belmont; Kiley Kinnon, Burlingame; Muneer Ahmed, Colma and Half Moon Bay; Jeanne Naughton, Daly City; Laura Prickett, EOA; Catherine Chan, Hillsborough; Shaun Mao, Menlo Park; Paul Willis, Redwood City; Laura Russell, San Bruno; Gavin Moynahan, San Carlos; Ken Pacini, City of San Mateo

**Subcommittee Actions:**

1. None

**Requested Technical Advisory Committee Action or Feedback/Guidance (if any):** None

**Other Information/Announcements:**

1. **Reviewed Draft Low Impact Development Feasibility Report.** The draft report describes the process that BASMAA proposes to submit to the Water Board on May 1, which will be used to determine the feasibility of using rainwater harvesting, infiltration or evapotranspiration to treat the Provision C.3.d amount of stormwater, for regulated projects that receive final discretionary approval on or after December 1, 2011. BASMAA's consultant Geosyntec has conducted modeling of the feasibility of bioinfiltration to treat the C.3.d amount of runoff using rain gages throughout the MRP permit area and soil hydraulic conductivity data available from the Natural Resources Conservation Service, and incorporating evapotranspiration rates in the model. Geosyntec has also conducted modeling of the feasibility of rainwater harvesting and use to treat the C.3.d amount of runoff, using rain gages throughout the MRP region. The modeling results were used to develop charts and tables that municipalities can use to determine LID feasibility. Municipal staff indicated that permit applications are already being submitted for projects that will not receive final discretionary approval until after December 1, 2011.
2. **Revised Construction Site Inspection Form** hard copies in triplicate were handed out to agency representatives. The Countywide Program has made 150 copies for each member agency.

**Work That Affects Other Subcommittees:** None

**Next Steps:**

- Written comments on the LID Feasibility Report are due March 11.
- Laura Prickett will coordinate with BASMAA's Development Committee to identify the process for beginning to use the LID feasibility criteria for permit applications that are submitted before the Water Board takes action on the LID Feasibility Report that BASMAA submits on May 1.
- Laura Prickett will bring hard copies of the construction site inspection form to the April 5 Subcommittee meeting, for municipalities that were not represented at the March 1 meeting.

**Next Meeting:** April 5, 2011, from 1:30 to 3:30 p.m., at Burlingame City Hall. A tour of the Donnelly Street rain garden will be held at 1:00 p.m.



## **Stormwater Training for Construction Site Control: Qualified SWPPP Practitioner/ Developer (QSP/QSD) Training**

### **Attention:**

- Do you need training on **construction BMPs** and an overview of the Construction General Permit?
- Are you responsible for implementing **Storm Water Pollution Prevention Plans** and/or supervising capital projects?
- Will you write, amend or certify **Storm Water Pollution Prevention Plans**?

**April 26-28, 2011**

**8:00 a.m. to 5:00 p.m.  
Michael's @ Shoreline  
2960 Shoreline Blvd.  
Mountain View, CA 94043**

The 2009-0009-DWQ Construction General Permit (CGP) requires that Qualified SWPPP (Storm Water Pollution Prevention Plan) Developers (QSDs) and Qualified SWPPP Practitioners (QSPs) attend a State Water Board Sponsored Training Course **by September 2, 2011**. In accordance with these requirements the APWA Silicon Valley Chapter and the San Mateo Water Pollution Prevention Program are offering this State Approved Course.

This training workshop is designed to meet the needs of municipal staff, consultants, and contractors to implement the requirements of the 2009 Construction General Permit (CGP) for projects that disturb one acre or more of land. The April 26 workshop session will also provide training on the proper use of construction best management practices (BMPs) applicable to projects of any size.

In order to qualify to take the State Water Board's QSP or QSD certification exam, you ***must 1) be a registered or certified professional (P.E., P.G., C.E.G., CPESC, CPSWQ, CESSWI, CISEC, etc.), and 2) attend the two day (for QSP) or the three-day (for QSD) training workshop.*** For information on prerequisite QSP/QSD registration/certification, click [here](#) to go to the State Water Resources Control Board.

### **Workshop options:**

For QSP training - attend April 26 and 27                      \$200 APWA Members/ \$ 300 Non-Members\*

For QSD training - attend April 26, 27, and 28                \$300 APWA Members/ \$ 450 Non-Members

Municipal staff who need general training on the Construction General Permit and construction BMPs, but do not need QSP or QSD certification may attend the session on April 26\*.

### **Online Registration (by 4:00 PM, Friday, April 22, 2011):**

Click [here](#) to register online with credit/debit card at APWA Silicon Valley Chapter's website. **Space is limited.** If paying by check, your registration will be confirmed after receipt. (For new members and guests, click [here](#) to create an APWA account with a username and password. For registration assistance, contact Robert Fontanilla at [rfontanilla@cornerstoneearth.com](mailto:rfontanilla@cornerstoneearth.com) or 408-245-4600 x 117.)

*\*For Staff Members Only of Municipalities in San Mateo County (subject to space availability) – Registration fees for QSP training on April 26 and 27 are sponsored by SMCSWPP. For QSD training certification and attendance of the April 28 session, the cost is \$100 (APWA members) or \$150 (for non-members). Contact Laura Prickett, [lprickett@eoainc.com](mailto:lprickett@eoainc.com), 510-832-2852 x123, for verification questions and discount code.*



**SAN MATEO COUNTYWIDE  
Water Pollution Prevention Program**

Clean Water. Healthy Community.

[www.flowstobay.org](http://www.flowstobay.org)

**VERIFICATION REGISTRATION FORM  
FOR  
SAN MATEO COUNTY MUNICIPALITIES  
ONLY**

**QSP/QSD Training**  
(Subject to Space Availability)

*April 26, 27 and 28*

8:00 a.m. to 5:00 p.m.

Michael's at Shoreline

2960 Shoreline Boulevard, Mountain View, CA 94043

**Registration Options:**

- For General training on April 26 only (Sponsored by SMCSWPPP)
- For QSP training on April 26 and 27 (Sponsored by SMCSWPPP)
- For QSD training on April 26, 27, and 28 \$100 APWA Members/ \$ 150 Non-Members

**Online Registration (by 4:00 PM, Friday, April 22, 2011):**

Click [here](#) to register online with credit/debit card (VISA/Mastercard only) at APWA Silicon Valley Chapter's website. If paying by check, your registration will be confirmed after receipt. Apply code (from Laura Prickett) at checkout for discount.

*(For new members and guests, click [here](#) to create an APWA account with a username and password. For registration assistance, contact Robert Fontanilla at [rfontanilla@cornerstoneearth.com](mailto:rfontanilla@cornerstoneearth.com) or 408-245-4600 x 117.)*

***For payment by check please make it out to "APWA Silicon Valley" and mailed to:  
Cornerstone Earth Group c/o Robert Fontanilla, 1259 Oakmead Parkway, Sunnyvale, CA 94085. All payments must be received by the registration due date noted above.***

***You will be sent a reminder and agenda approximately 2-3 days prior to the workshop.***



May 12, 2003

Ms. Joann Pavlinec  
Community & Economic Development Agency  
City of Oakland  
Frank H. Ogawa Plaza, Suite 3330  
Oakland, CA 94612-2032

RE: Proposed New Mausoleum at Mountain View Cemetery

Dear Ms. Pavlinec:

I have evaluated the potential for water quality impacts associated with the use of copper as a building material for the chapel portion of a proposed new mausoleum at the Mountain View Cemetery in Oakland, California. This letter summarizes my findings. I have identified several measures that, if implemented, would ensure that potential impacts would be reduced to a less than significant level.

#### **Data Sources**

The information in this letter was obtained from the following sources:

- A March 10, 2003 meeting with you, Jeff Lindeman (General Manager of Mountain View Cemetery), and Joe Runco (project landscape architect from SWA Group) to review the project design and runoff management plans;
- A visit to the project site;
- Maps of the project site and watershed;
- Regulatory documents from the State Water Resources Control Board and Regional Water Quality Control Board, including the current California list of impaired water bodies<sup>1</sup> and the NPDES Municipal Stormwater Permit for the Alameda Countywide Clean Water Program (which includes the proposed project site in the City of Oakland);<sup>2</sup>
- A technical report<sup>3</sup> and papers<sup>4</sup> from the peer-reviewed literature on copper releases from architectural use of copper;

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<sup>1</sup> U.S. EPA, California 1998 Section 303(d) list of impaired water bodies, approved by U.S. EPA on November 3, 1998.

<sup>2</sup> San Francisco Bay Regional Water Quality Control Board, Alameda Countywide NPDES Municipal Stormwater Permit, Order R2-2003-0021, NPDES Permit No. CAS0029831, 2003.

<sup>3</sup> Barron, Thomas S., *Architectural Uses of Copper: An Evaluation of Stormwater Pollution Loads and BMPs*, prepared for the Palo Alto Regional Water Quality Control Plant, November 2000.

<sup>4</sup> Leuenberger-Minger, A. U., et al., *Materials and Corrosion*, Vol. 53., p. 157-164, 2002; Wallinder, I. O., and C. Leygraf, *Corrosion Science*, Vol. 43, P. 2379-2396, 2001.

- Product specification sheets and related information obtained from Mountain View Cemetery for products proposed to be used to treat and coat the copper building materials,<sup>5</sup> and
- My education as a chemist<sup>6</sup> and my professional experience with architectural copper and other sources of copper in urban runoff.<sup>7</sup>

### **Project Watershed**

The site of the proposed mausoleum drains to Glen Echo Creek, commonly known as Cemetery Creek in the region of the project site. Glen Echo Creek drains to San Francisco Bay via Lake Merritt and Oakland Inner Harbor. Runoff from the proposed project site flows into storm drains that discharge, without treatment, into Cemetery Creek, which is about 0.25 miles from the proposed mausoleum site.

The proposed project design would maintain the current drainage pattern (flow to storm drain discharging to the creek), with one exception—a reflecting pond adjacent to one side of the proposed chapel would discharge to the sewer system.<sup>8</sup> Sewer discharges receive treatment at the East Bay Municipal Utilities District (EBMUD) wastewater treatment plant in Oakland prior to discharge to central San Francisco bay. Such treatment removes most—but not all—metals in wastewater. Mountain View Cemetery has an industrial wastewater permit from EBMUD). Compliance with industrial wastewater permits involves assuring that levels of pollutants (like copper) do not exceed local discharge limits).

### **Environmental Fate of Copper Architectural Materials**

Unlike ordinary building materials, copper—if uncoated—will oxidize with age and react with pollutants in air (like nitrates and sulfates) to create water soluble copper-containing substances that wash off the copper surface when it rains. While corrosion rates decrease somewhat with age, uncoated copper building materials continue to corrode and the oxides continue to wash off indefinitely, contributing copper to runoff, and changing the appearance of the copper surface. Over a period of decades, corrosion will eventually cause failures (*e.g.*, corrosion pits will form holes) in copper-containing building materials.

### **Possible Impact—Copper Treatment**

The copper used to construct the proposed chapel would be treated to obtain the desired shade of brown. Treatment may occur at the project site. Solutions used to treat copper

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<sup>5</sup> Triple S Chemical Products, Inc, product specification sheets for Tribrown C-1, AL-70 Quick-Dry lacquer, and Trilac- 747, and coating frequency information obtained from SSS's owner and chemist. This analysis assumes that these or similar products would be used as the proposed copper treatment.

<sup>6</sup> Doctorate in Chemistry, U.C. Berkeley.

<sup>7</sup> 10 years of experience working with dozens of sources of copper discharges to San Francisco Bay.

<sup>8</sup> Directing pond discharges to the sewer system is typically recommended by both wastewater and storm water regulatory agencies to ensure that water quality control chemicals used in the pond (some of which may be water pollutants) are not discharged to the storm drain.

architectural materials to obtain the desired color (*e.g.*, brown or green) typically contain acids. After treatment, the copper is usually rinsed. Depending on the pH and copper concentration, EBMUD may allow a one-time discharge of this rinse water (such discharge could conveniently occur through the proposed pond's outlet, which would flow to the sewer system). It may also be suitable for on-site infiltration in a lawn area. Otherwise, it would need to be hauled off-site for disposal at a facility that accepts such wastewater. If allowed to flow to the storm drain, the acid and copper in this rinse water could create a short-term threat to beneficial uses of Cemetery Creek.

Mitigation. If the copper architectural materials are treated at the project site, impacts can be prevented by collecting the rinse water. When rinse water from building washing needs to be collected, the normal practice is to insert a temporary closure into the drainage outlet<sup>9</sup> of the nearest storm drain. The rinse water is collected in the storm drain catch basin (and sometimes in the adjacent gutter), from where it may be pumped with a portable pump into a container for removal. For the proposed project, an alternative collection point may be more convenient; for example, the proposed pond next to the chapel would be a natural collection point (if the proposed sewer connection were temporarily sealed).

Once collected, the rinse water should be disposed of appropriately (pH and copper testing may be required to determine disposal options). The Bay Area Stormwater Management Agencies Association (BASMAA) has a program to train professional surface cleaners in appropriate management practices and to certify cleaners that have passed the training. Following the BASMAA practices for rinse water management would mitigate any impact to a less than significant level.

### **Possible Impact—Copper and Surface Water Quality**

If the copper is unprotected, runoff from copper architectural materials—like those planned for the proposed chapel—contains copper concentrations high enough to threaten beneficial uses of creeks receiving runoff and can contribute to copper-related impairment of surface water bodies.

- Copper concentrations in runoff from architectural copper far exceed applicable water quality criteria. Copper concentrations in runoff from copper buildings typically exceed 1,000 parts per billion. Water quality criteria<sup>10</sup> for copper in fresh water depend on hardness—for the typical hardness range in San Francisco Bay area creeks, acute and chronic criteria are between about 9 and 25 parts per billion.<sup>11</sup> The criteria for San Francisco Bay are: maximum (1-hour)—4.8 parts per billion; chronic (4-day)—3.1 parts per billion.<sup>12</sup> (All criteria are expressed as dissolved copper). While runoff from the proposed copper chapel (if the copper

<sup>9</sup> Usually a tube that can be plugged with a simple device that may be purchased at a hardware store.

<sup>10</sup> U.S. EPA, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule, *40 Code of Federal Regulations Part 131*, May 18, 2000.

<sup>11</sup> At a hardness of 100 parts per million the acute (1-hour) criterion is 9 parts per billion and the chronic (4-day) criterion is 13 parts per billion.

<sup>12</sup> Regulatory activities are in progress that are likely to result in an eventual increase in the values.

were to be unprotected) would be diluted with other runoff flows, the copper concentration would likely be so high that it would probably cause a portion of Cemetery Creek to exceed water quality criteria when it rains.

- The quantity of copper released from copper buildings makes a non-negligible contribution to existing unacceptably high copper levels in San Francisco Bay. San Francisco Bay has been designated as impaired due to elevated copper levels.<sup>13</sup> After copper releases from Central Valley mines (which primarily affect the North Bay and Delta), urban runoff is the major source of copper discharge to San Francisco Bay. Architectural copper has been estimated to be the source of about 20% of copper in urban runoff, with each 2,500 of architectural copper surface area has been estimated to release up to 2.5 pounds of copper per year into runoff.<sup>14</sup>

Mitigation. Coating the copper with a durable, water-impervious coating would prevent corrosion and runoff of copper from the proposed chapel. Coating the copper would have the added benefit of maintaining the desired copper color for the lifetime of the building and would prevent corrosion-related degradation of the building material.

Since clear metal coatings can degrade from sunlight and environmental exposures, regular maintenance will be needed to ensure that the copper is protected. Recoating of the building at the interval recommended by the coating manufacturer (every 5 years) should be sufficient to ensure that no significant corrosion or runoff of copper will occur. Between coatings, if changes in the copper color are noted, the affected area should be checked and spot-coated if appropriate.

If recoating involves power washing, rinse water could contain elevated copper levels and therefore should not be discharged to the storm drain. Following the BASMAA practices for rinse water management (see above) would mitigate any impact to a less than significant level. (Sewer discharge of the rinse water will likely be appropriate—EBMUD should be consulted prior to the washing operation.)

### Conclusions

If the above measures are implemented, copper discharges would nearly be eliminated, reducing potential impacts to a less than significant level. My review of the project did not identify any other unusual potential water quality impacts, though it should be noted that any construction project has potential short-term (construction) and long-term (flow

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<sup>13</sup> In the 2002 update to the 303(d) list (which has not yet been reviewed by U.S. EPA), California has proposed to remove the copper impairment designation for the Bay in anticipation of adjustment of the water quality criteria and implementation of strict measures to prevent additional copper discharges to San Francisco Bay. U.S. EPA has informally indicated that it may not approve this change until the control measures are in place.

<sup>14</sup> Barron, *op. cit.*

Ms. Joann Pavlinec  
May 12, 2003  
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volume and quality) impacts that can be mitigated through implementation of measures required by the Alameda County NPDES Municipal Stormwater permit.<sup>15</sup>

If you have any questions, please give me a call.

Sincerely,

Kelly D. Moran, Ph.D.  
President

cc: Mr. Jeff Lindeman, General Manager, Mountain View Cemetery  
Ms. N. Teresa Rea, Real Estate Planning Strategies

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<sup>15</sup> Note that if the project is not constructed prior to August 15, 2006, permanent runoff treatment measures may be required in accordance with provision C.3. of the Alameda County NPDES Municipal Stormwater permit.

Applicability of MRP Stormwater Requirements

**1. Enter Project Data** (If project is a "C.3 Regulated Project," data in Section 1 must be reported in Annual Report.)

- 1.1 Project Name: \_\_\_\_\_
- 1.2 Project Address: \_\_\_\_\_
- 1.3 Project APN: \_\_\_\_\_ Project Watershed: \_\_\_\_\_
- 1.4 Applicant Name: \_\_\_\_\_ Applicant Phone: \_\_\_\_\_
- 1.5 Applicant Address: \_\_\_\_\_
- 1.6 Development type:  Residential  Commercial  Industrial  Mixed-Use  
(check all that apply)  
 Streets, Roads, Highways, Freeways, etc.  
 'Redevelopment' as defined by MRP: creating, adding and/or replacing exterior existing impervious surface on a site where some past development has occurred, excluding roadway projects<sup>1</sup>  
 'Special land use categories' as defined by MRP: (1) auto service facilities<sup>2</sup>, (2) retail gasoline outlets, (3) restaurants<sup>3</sup>, (4) uncovered parking area (stand alone or part of other project)
- 1.7 Project Description<sup>4</sup>: \_\_\_\_\_
- 1.8 Total Area of Site: \_\_\_\_\_ acres ; Total Area of Land Disturbed: \_\_\_\_\_ acre(s)

- If less than 5,000 square feet is disturbed, skip to Item 3. If 5,000 square feet or more, continue to Item 2.1.
- NOTE: If 1 acre or more of land is disturbed, go to <https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp> to obtain coverage under the state's Construction General Permit. Submit to the municipality a copy of your Notice of Intent and Storm Water Pollution Prevention Plan (SWPPP) before a grading or building permit will be issued.

**2. Is the project a "Regulated Project" per MRP Provision C.3.b?**

2.1 Enter the amount of impervious surface created and/or replaced by the project in the following table:

Type of Impervious Surface	Pre-Project Impervious Surface (sq.ft.)	Existing Impervious Surface to be Removed (sq.ft.)	New Impervious Surface to be Constructed (sq.ft.)
Roof area(s) – excluding any portion of the roof that is vegetated ("green roof")			
Impervious sidewalks, patios, paths			
Impervious driveway and surface parking <sup>6</sup>			
Streets (public)			
Streets (private)			
<b>Total Impervious Surfaces:</b>			
<b>Total Replaced + New Impervious Surface</b>			

<sup>1</sup> Roadway projects that replace existing impervious surface are subject to C.3 requirements only if one or more lanes of travel are added.  
<sup>2</sup> See Standard Industrial Classification (SIC) codes [here](#)  
<sup>3</sup> Restaurants described by SIC code 5812: Retail sale of prepared food and drinks for on-premise or immediate consumption.  
<sup>4</sup> Project description examples: 5-story office building, industrial warehouse, residential with five, 4-story buildings to contain 200 condominiums, etc.  
<sup>5</sup> Per the MRP, pervious pavement underlain with pervious soil or pervious storage material, such as a gravel layer sufficient to hold at least the volume of rainfall runoff specified in MRP Provision C.3.d is not an impervious surface.  
<sup>6</sup> "Surface parking" includes top level of a parking structure.

		Yes	No	NA
2.2	In Item 2.1, does the Total of Replaced + New Impervious Surface equal 10,000 sq.ft. or more? (If YES, skip to Item 2.5 and check "Yes." If NO, continue to Item 2.3.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3	Does the Item 2.1 Total of Replaced + New Impervious Surface equal 5,000 sq.ft. or more, but less than 10,000 sq.ft.? (If YES, continue to Item 2.4. If NO, skip to Item 2.5 and check "No.")	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4	Is the project that creates 5,000 sq.ft. or more of impervious surface, but less than 10,000 sq.ft., a "Special Land Use Category" per Item 1.6 (If NO, go to Item 2.5 and check "No." If YES, go to Item 2.5 and check "Yes.")	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.5	Is the project a C.3 Regulated Project? (If YES, skip to Item 4; if NO, continue to Item 3.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 3. Projects that are NOT C.3 Regulated Projects

If you answered NO to Item 2.5, or the project disturbs less than 5,000 sq. ft. of land (see Item 1.9), then the project is NOT a C.3 Regulated Project, and stormwater treatment is not required, BUT municipality will require appropriate source controls and site design measures. Skip to Item 6.1.

### 4. Projects that ARE C.3 Regulated Projects

If you answered YES to Item 2.5, then the project is a C.3 Regulated Project. The project must include appropriate site design measures and source controls AND hydraulically sized stormwater treatment measures. Items 4.1 and 4.2 will help you determine whether Low Impact Development stormwater treatment requirements apply.

		Yes	No	NA
4.1	Is this project expected to receive final discretionary approval by the Planning Commission, Planning Department or City Council before December 1, 2011? (If NO, go to Item 4.2; if YES, continue to Item 5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2	Are LID treatment measures "feasible" per MRP Provision C.3.c.i(2)(b) LID Feasibility Criteria (see Appendix I of the C.3 Technical Guidance)? (If NO, stormwater treatment may be met through biotreatment. If YES, stormwater treatment must be met through rainwater harvesting and reuse, infiltration or evapotranspiration. Continue to Item 5.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 5. Is the project a Hydromodification Management (HM) Project?

If you answered NO to Item 2.2, the project is too small to be an HM project. Skip to Item 6. Otherwise, continue to Item 5.1

- 5.1 Does the project create and/or replace 1 acre (43,560 sq. ft.) or more of impervious surface? (Refer to Item 2.1.)
- YES. *Continue to Item 5.2.*
- NO. *Skip to Item 5.5 and check "No."*
- 5.2 Is the project site located in an HM Control Area per the HM Control Areas map at [www.flowstobay.org/bs\\_new\\_development.php](http://www.flowstobay.org/bs_new_development.php)?
- YES. *Skip to Item 5.4.*
- NO. *Attach map, indicating project location. Skip to Item 5.5 and check "No."*
- Further analysis required. *Continue to Item 5.3.*
- 5.3 Has an engineer or qualified environmental professional has determined that runoff from the project flows only through a hardened channel or enclosed pipe along its entire length before emptying into a waterway in the exempt area?
- YES. *Attach signed statement by qualified professional. Skip to Item 5.5 and check "No."*
- NO. *Continue to Item 5.4.*
- 5.4 Is the total impervious area increased over the pre-project condition?
- Yes. *The project IS required to incorporate HM measures. Go to Item 5.5, and check "Yes."*
- No. *The project is NOT required to incorporate HM measures. Go to Item 5.5 and check "No."*
- 5.5 Is the project a Hydromodification Management Project?
- Yes. *The project is subject to HM requirements described in Section 11 of this form.*
- No. *The project is EXEMPT from HM requirements.*

# Implementation of Stormwater Requirements

## 6. Include appropriate site design measures (applies to all projects).

In the table below, municipal staff will indicate which site design measures have been considered for the project, and will indicate which site design measures are included in the project plans.

### Are "Appropriate" Site Design Measures Included? -- MRP Provisions C.3.a.i(6) and C.3.c.i(2)(a)

Was the Site Design Measure Discussed with Applicant?		Is the Site Design Measure included in project plans?		On Plan Sheet No.	Site Design Measures
Yes	No	Yes	No		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Protect sensitive areas, including wetland and riparian areas, and minimize changes to the natural topography.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Minimize land disturbance and impervious surface (especially parking lots).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Minimize impervious areas from being directly connected to the storm drain system (e.g., direct runoff from roof downspouts and other impervious surfaces to landscaped areas where feasible).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Install rain barrel or cistern to capture and use rainwater for irrigation or other non-potable use.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Design areas of "micro-detention" in landscaping to retain rainfall runoff onsite, where appropriate.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Maximize permeability by clustering development and preserving open space, where appropriate.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Concentrate development density, where appropriate, to reduce impervious surface on a watershed basis.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Use permeable pavement surfaces where feasible.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Self-treating area (see Section 4.2 of the C.3 Technical Guidance)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Self-retaining area (see Section 4.3 of the C.3 Technical Guidance)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Use "Bay Friendly" landscape design (See <i>Bay-Friendly Landscape Guidelines - Sustainable Practices for the Landscape Professional</i> , <a href="http://www.bayfriendly.org">www.bayfriendly.org</a> ).

## 7. Select appropriate source controls (applies to all projects).

Municipal staff will review the project plans and indicate in the following table all project features for which source control measures from the Municipality's Source Control Measures List will be required.

Are appropriate source controls included in project plans? -- MRP Provisions C.3.a.i (7) and C.3.c.i (1 )		
Yes	No	Indicate whether the following features are included in the project. Source controls from the agency's Source Control Measures List are required for these project features.
<input type="checkbox"/>	<input type="checkbox"/>	On-Site Storm Drain Inlets
<input type="checkbox"/>	<input type="checkbox"/>	Interior Floor Drains
<input type="checkbox"/>	<input type="checkbox"/>	Parking Garages
<input type="checkbox"/>	<input type="checkbox"/>	Areas of Landscaping

Are appropriate source controls included in project plans? -- MRP Provisions C.3.a.i (7) and C.3.c.i (1 )		
Yes	No	Indicate whether the following features are included in the project. Source controls from the agency's Source Control Measures List are required for these project features.
<input type="checkbox"/>	<input type="checkbox"/>	Pools / Spas / Fountains
<input type="checkbox"/>	<input type="checkbox"/>	Food Service Equipment
<input type="checkbox"/>	<input type="checkbox"/>	Refuse Areas
<input type="checkbox"/>	<input type="checkbox"/>	Outdoor Process Activities/Equipment <sup>7</sup>
<input type="checkbox"/>	<input type="checkbox"/>	Outdoor Equipment/Materials Storage
<input type="checkbox"/>	<input type="checkbox"/>	Vehicle /Equipment Cleaning
<input type="checkbox"/>	<input type="checkbox"/>	Vehicle /Equipment Repair and Maintenance
<input type="checkbox"/>	<input type="checkbox"/>	Fuel Dispensing Areas
<input type="checkbox"/>	<input type="checkbox"/>	Loading Docks
<input type="checkbox"/>	<input type="checkbox"/>	Fire Sprinkler System
<input type="checkbox"/>	<input type="checkbox"/>	Boiler
<input type="checkbox"/>	<input type="checkbox"/>	Air conditioning unit
<input type="checkbox"/>	<input type="checkbox"/>	Roof top equipment
<input type="checkbox"/>	<input type="checkbox"/>	Washing and/or steam cleaning activities
<input type="checkbox"/>	<input type="checkbox"/>	Miscellaneous Drain or Wash Water

**8. Use construction best management practices (BMPs) (applies to all projects).**

Yes	No	Best Management Practice
<b><i>Erosion Control Practices</i></b>		
<input type="checkbox"/>	<input type="checkbox"/>	Stabilize all denuded areas and install and maintain all temporary erosion and sediment controls continuously between October 15 <sup>th</sup> and April 15 <sup>th</sup> of each year, until permanent erosion control have been established.
<input type="checkbox"/>	<input type="checkbox"/>	Delineate with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
<input type="checkbox"/>	<input type="checkbox"/>	Provide notes, specifications, or attachments describing the following: a) Construction, operation and maintenance of erosion and sediment control measures, including inspection frequency; b) Methods and schedule for grading, excavation, filling, clearing of vegetation, and storage and disposal of excavated or cleared material; c) Specifications for vegetative cover and mulch, including methods and schedules for planting and fertilization; d) Provisions for temporary and/or permanent irrigation.
<input type="checkbox"/>	<input type="checkbox"/>	Perform clearing and earth moving activities only during dry weather.

<sup>7</sup> Examples of businesses that may have outdoor process activities and equipment include machine shops and auto repair shops, and industries that have pretreatment facilities.

Yes	No	Best Management Practice
<b>Sediment Control Practices</b>		
<input type="checkbox"/>	<input type="checkbox"/>	Use sediment controls or filtration to remove sediment when dewatering site and obtain all necessary permits.
<input type="checkbox"/>	<input type="checkbox"/>	Prevent erosion and trap sediment on-site, such as using sediment basins or traps, earthen dikes or berms, silt fences, check dams, storm drain inlet protection, soil blankets or mats, covers for soil stock piles, and/or other measures.
<b>Run-on and Run-off Control</b>		
<input type="checkbox"/>	<input type="checkbox"/>	Divert on-site runoff around exposed areas and diverting off-site runoff around the site (e.g., swales and dikes).
<input type="checkbox"/>	<input type="checkbox"/>	Protect adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
<input type="checkbox"/>	<input type="checkbox"/>	<b>Active Treatment system, if necessary</b>
<b>Good Site Management</b>		
<input type="checkbox"/>	<input type="checkbox"/>	Limit construction access routes and stabilize designated access points.
<input type="checkbox"/>	<input type="checkbox"/>	Avoid tracking dirt or other materials off-site; clean off-site paved areas and sidewalks using dry sweeping methods.
<input type="checkbox"/>	<input type="checkbox"/>	Avoid cleaning, fueling, or maintaining vehicles on-site, except in a designated area where washwater is contained and treated.
<input type="checkbox"/>	<input type="checkbox"/>	Store, handle, and dispose of construction materials and wastes properly, so as to prevent their contact with stormwater.
<input type="checkbox"/>	<input type="checkbox"/>	Limit and time applications of pesticides and fertilizers to prevent polluted runoff.
<input type="checkbox"/>	<input type="checkbox"/>	Provide construction stormwater management educational materials to site operators/developers, as appropriate.
<input type="checkbox"/>	<input type="checkbox"/>	The Contractor shall train and provide instruction to all employees and subcontractors regarding construction BMPs.
<b>Non-Stormwater Management</b>		
<input type="checkbox"/>	<input type="checkbox"/>	Control and prevent the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, washwater or sediments, and non-stormwater discharges to storm drains and watercourses.

**8.2 Is the project a C.3 Regulated Project? (Review Item 2.5.)**

- YES. Continue to Item 10.
- NO. You are finished completing this form. Do not complete Items 10 and 11.

**9. Include stormwater treatment measures (applies to C.3 Regulated Projects).**

In the table below, municipal staff will indicate in the "Required" and "Not Required" columns which information is required regarding the type(s) of stormwater treatment measures that are used. The "Information Shown" column will be checked during plan review, to indicate that the required, corresponding information is included in project plants.

9.1 Are appropriate stormwater treatment measures included? -- MRP Provisions C.3.c.(2)(b); C.3.d.i; C.3.e.ii

Is Info Applicable / Required?		Have Plans been Reviewed and Accepted?			Information that may be required															
Yes	No	Yes	No	NA																
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Results of <b>LID feasibility/infesibility analysis</b> <sup>8</sup> . Stormwater treatment of the C.3.d amount of runoff using infiltration, evapotranspiration and rainwater harvesting and use is (check one): <input type="checkbox"/> feasible <input type="checkbox"/> infesible Plans reviewed by _____ Date Reviewed _____															
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If project is a " <b>Special Project</b> ," attach evidence it meets Special Project Criteria <sup>9</sup> for LID treatment reduction. Plans reviewed by _____ Date Reviewed _____															
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>If project is a "<b>Special Project</b>," plans show non-LID measures hydraulically sized to treat C.3.d amount of runoff. Indicate the number of non-LID measures by type, the hydraulic sizing method<sup>10</sup>, and percentage of project treated:</p> <table border="0"> <thead> <tr> <th><u>Non-LID Treatment</u></th> <th><u>No. of units</u></th> <th><u>Hydraulic sizing method<sup>10</sup></u></th> <th><u>% of project treated</u></th> </tr> </thead> <tbody> <tr> <td>Media filter</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Tree well filter</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Plans reviewed by _____ Date Reviewed _____</p>	<u>Non-LID Treatment</u>	<u>No. of units</u>	<u>Hydraulic sizing method<sup>10</sup></u>	<u>% of project treated</u>	Media filter				Tree well filter						
<u>Non-LID Treatment</u>	<u>No. of units</u>	<u>Hydraulic sizing method<sup>10</sup></u>	<u>% of project treated</u>																	
Media filter																				
Tree well filter																				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>If <b>infesibility</b> is demonstrated above, plans show biotreatment measures hydraulically sized to treat C.3.d amount of runoff from entire project. Indicate the number of biotreatment measures by type, and the hydraulic sizing method:</p> <table border="0"> <thead> <tr> <th><u>Biotreatment Measures</u></th> <th><u>No. of units</u></th> <th><u>Hydraulic sizing method<sup>10</sup></u></th> </tr> </thead> <tbody> <tr> <td>Bioretention area</td> <td></td> <td></td> </tr> <tr> <td>Flow-through planter</td> <td></td> <td></td> </tr> <tr> <td>Vegetated buffer strip</td> <td></td> <td></td> </tr> </tbody> </table> <p>Other (specify): _____</p> <p>Plans reviewed by _____ Date Reviewed _____</p>	<u>Biotreatment Measures</u>	<u>No. of units</u>	<u>Hydraulic sizing method<sup>10</sup></u>	Bioretention area			Flow-through planter			Vegetated buffer strip					
<u>Biotreatment Measures</u>	<u>No. of units</u>	<u>Hydraulic sizing method<sup>10</sup></u>																		
Bioretention area																				
Flow-through planter																				
Vegetated buffer strip																				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>If <b>feasibility</b> is demonstrated, plans show non-biotreatment LID measures hydraulically sized to treat C.3.d amount of runoff from entire project. Indicate the number of LID measures by type, and the hydraulic sizing method:</p> <table border="0"> <thead> <tr> <th><u>Non-Biotreatment LID</u></th> <th><u>No. of units</u></th> <th><u>Hydraulic sizing method<sup>10</sup></u></th> </tr> </thead> <tbody> <tr> <td>Rainwater harvesting</td> <td></td> <td></td> </tr> <tr> <td>Bioinfiltration</td> <td></td> <td></td> </tr> <tr> <td>Infiltration trench</td> <td></td> <td></td> </tr> <tr> <td>Dry well</td> <td></td> <td></td> </tr> </tbody> </table> <p>Other (specify): _____</p> <p>Plans reviewed by _____ Date Reviewed _____</p>	<u>Non-Biotreatment LID</u>	<u>No. of units</u>	<u>Hydraulic sizing method<sup>10</sup></u>	Rainwater harvesting			Bioinfiltration			Infiltration trench			Dry well		
<u>Non-Biotreatment LID</u>	<u>No. of units</u>	<u>Hydraulic sizing method<sup>10</sup></u>																		
Rainwater harvesting																				
Bioinfiltration																				
Infiltration trench																				
Dry well																				

<sup>8</sup> Please refer to Feasibility/Infesibility Criteria for Rainwater Harvesting and Reuse, Infiltration and Evapotranspiration in Appendix I of the C.3 Technical Guidance.

<sup>9</sup> Please refer to the Special Projects Criteria in Appendix J of the C.3 Technical Guidance.

**9.2 Is the project an HM Project? (Review Item 5.5.)**

- YES. Continue to Item 11.
- NO. You are finished completing this form. Do not complete Item 11.

**10. Incorporate HM Controls (applies to HM Projects).**

**10.1 Is required HM Project information included? -- MRP Provision C.3.g and Attachment E**

Is Item Required?		Is Item in Plans?			Required HM Project Information
Yes	No	Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site plans with pre- and post-project impervious areas, surface flow directions of entire site, locations of flow duration controls and site design measures per HM site design requirement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Soils report or other site-specific document showing soil types at all parts of site
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If project uses the Bay Area Hydrology Model (BAHM), a list of model inputs.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If project uses custom modeling, a summary of the modeling calculations with corresponding graph showing curve matching (existing, post-project, and post-project with HM controls curves), goodness of fit, and (allowable) low flow rate.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If project uses the Impracticability Provision, a listing of all applicable costs and a brief description of the alternative HM project (name, location, date of start up, entity responsible for maintenance).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the project uses alternatives to the default BAHM approach or settings, a written description and rationale.

**11. Confirm Operations and Maintenance (O&M) Submittals**

- |   | Yes                      | No                       | NA                       |
|---|--------------------------|--------------------------|--------------------------|
| 11.1 Was maintenance plan submitted?                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11.2 Was maintenance plan approved?                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11.3 Was maintenance agreement submitted?<br>(Date executed: _____) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

11.4 Indicate the dates on which the Applicant submitted annual reports for project O&M: \_\_\_\_\_

**12. Comments (For municipal staff use only):**

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<sup>10</sup> Per Provision C.3.d.i, the required hydraulic sizing methods are: 1(a) Urban Runoff Quality Management volume-based approach, 1(b) 80% Capture volume-based approach (recommended for volume-based treatment measures); 2(a) Percentile Rainfall Intensity flow-based approach; 2(b) 0.2-Inch-per-Hour Intensity flow-based approach (recommended for flow-based treatment measures). If a combination flow and volume design basis was use, indicate which flow-based and volume-based criteria were used.

**13. NOTES:**

Section 1 Notes: \_\_\_\_\_

Section 2 Notes: \_\_\_\_\_

Section 3 Notes: \_\_\_\_\_

Section 4 Notes: \_\_\_\_\_

Section 5 Notes: \_\_\_\_\_

Section 6 Notes: \_\_\_\_\_

Section 7 Notes: \_\_\_\_\_

Section 8 Notes: \_\_\_\_\_

Section 9 Notes: \_\_\_\_\_

Section 10 Notes: \_\_\_\_\_

Section 11 Notes: \_\_\_\_\_

Section 12 Notes: \_\_\_\_\_

**14. Project Close-Out**

	<b>Yes</b>	<b>No</b>	<b>NA</b>
14.1 Were final Conditions of Approval met?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.2 Was initial inspection of the completed treatment/HM measure (s) conducted? (Date of inspection: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.3 Was maintenance plan submitted? (Date executed: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.4 Was project information provided to staff responsible for O&M maintenance verification inspections? (Date provided to inspection staff: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Name of staff confirming project is closed out: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name of O&M staff receiving information: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Appendices**

Appendix A: O&M Agreement

Appendix B: O&M Annual Report Form

**Appendix A**  
**OPERATION AND MAINTENANCE (O&M) AGREEMENT**

**MAINTENANCE AGREEMENT FOR STORMWATER TREATMENT  
MEASURES AND HYDROMODIFICATION MANAGEMENT CONTROLS**

(Updated June 15, 2010)

**RECITALS**

This Stormwater Treatment Measures Maintenance Agreement (“Agreement”) is entered into this [insert date] by and between the City of [insert name of City] (“City”) and [insert name of property owner] (“Property Owner”), a property owner of real property described in this Agreement.

**WHEREAS**, On October 14, 2009, the Regional Water Quality Control Board, San Francisco Bay Region, adopted Order R2-2009-0074, the Municipal Regional Stormwater Permit (MRP) (CAS612008); and

**WHEREAS**, Provision C.3.h. of this MRP, and as it may be amended or reissued, requires the permittee public agencies to provide minimum verification and access assurances that all treatment measures and hydromodification management (HM) controls (if any) shall be adequately operated and maintained by entities responsible for the stormwater treatment measures and HM controls; and

**WHEREAS**, the Property Owner, [insert name], is the owner of real property commonly known as [insert address]\_\_\_\_\_(the “Property”), and more particularly described in the attached legal description (Exhibit XX).

**WHEREAS**, attached hereto as Exhibit YY is a legible reduced-scale copy of the Site Plan or comparable document showing the stormwater treatment measures and HM controls (if any) that are to be located or to be constructed on the Property; and

**WHEREAS**, the City is the permittee public agency with jurisdiction over the Property.

**WHEREAS**, the Property Owner recognizes that the stormwater treatment measure(s) and HM controls(s) (if any) more particularly described and shown on Exhibit XX, of which full-scale plans and any amendments thereto are on file with the [Planning] Department of the City of XXX must be installed and maintained as indicated in this Agreement and as required by the MRP.

**WHEREAS**, the City and the Property Owner agree that the health, safety and welfare of the citizens of the City require that the stormwater treatment measure(s) and HM control(s) (if any) detailed in the Site Plan or comparable document be constructed and maintained on the Property; and

**WHEREAS**, the City’s Stormwater Management Ordinance, guidelines, criteria and other written directions require that the stormwater treatment measure(s) and HM control(s) (if any), as shown on the approved Site Plan or comparable document, be constructed and maintained by the Property Owner

**THEREFORE**, in consideration of the benefit received by the Property Owner as a result of the City’s approval of the Site Plan, the Property Owner hereby covenants and agrees with the City as follows:

**SECTION 1: CONSTRUCTION OF TREATMENT MEASURES AND HM CONTROLS**

The on-site stormwater treatment measure(s) and HM control(s) (if any) shown on the Site Plan or comparable document shall be constructed by the Property Owner in strict accordance with the approved plans and specifications identified for the development and any other requirements thereto which have been approved by the City in conformance with appropriate City ordinances, guidelines, criteria and other written direction.

## **SECTION 2: OPERATION & MAINTENANCE RESPONSIBILITY**

This agreement shall serve as the signed statement by the Property Owner accepting responsibility for operation and maintenance of stormwater treatment measures and HM controls (if any) as set forth in this Agreement until the responsibility is legally transferred to another person or entity. Before the Property is legally transferred to another person or entity, the Property Owner shall provide to the City at least one of the following:

1) A signed statement from the public entity assuming post-construction responsibility for treatment measure and HM control maintenance and that the treatment measures and HM controls (if any) meet all local agency design standards; or

2) Written conditions in the sales or lease agreement requiring the buyer or lessee to assume responsibility for operation and maintenance (O&M) consistent with this provision, which conditions, in the case of purchase and sale agreements, shall be written to survive beyond the close of escrow; or

3) Written text in project conditions, covenants and restrictions (CCRs) for residential properties assigning O&M responsibilities to the home owners association for O&M of the treatment measures and HM controls (if any); or

4) Any other legally enforceable agreement or mechanism that assigns responsibility for the maintenance of treatment measures and HM controls (if any).

## **SECTION 3: MAINTENANCE OF TREATMENT MEASURES AND HM CONTROLS**

The Property Owner shall not destroy or remove the stormwater treatment measures and HM controls (if any) from the Property nor modify the stormwater treatment system and HM controls (if any) in a manner that lessens their effectiveness, and shall, at Property Owner's sole expense, adequately maintain the stormwater treatment measure(s) and HM control(s) (if any) in good working order acceptable to the City and in accordance with the maintenance plan agreed hereto and attached as Exhibit XX. This includes all pipes, channels or other conveyances built to convey stormwater to the treatment measure(s) and HM control(s) (if any), as well as all structures, improvements, and vegetation provided to control the quantity and quality of the stormwater. Adequate maintenance is herein defined as maintaining the described facilities in good working condition so that these facilities continue to operate as originally designed and approved. The maintenance plan shall include a detailed description of and schedule for long-term maintenance activities.

## **SECTION 4: SEDIMENT MANAGEMENT**

Sediment accumulation resulting from the normal operation of the stormwater treatment measure(s) and HM control(s), if any, will be managed appropriately by the Property Owner. The Property Owner will provide for the removal and disposal of accumulated sediments. Disposal of accumulated sediments shall not occur on the Property, unless provided for in the maintenance plan. Any disposal or removal of accumulated sediments or debris shall be in compliance with all federal, state and local law and regulations.

## **SECTION 5: NECESSARY CHANGES AND MODIFICATIONS**

At its sole expense, the Property Owner shall make changes or modifications to the stormwater treatment measure(s) and HM control(s), if any, and/or the long-term maintenance plan (Exhibit XX) as may be determined as reasonably necessary by the City to ensure that treatment measures and HM controls (if any) are properly maintained and continue to operate as originally designed and approved.

## **SECTION 6: ACCESS TO THE PROPERTY**

The Property Owner hereby grants permission to the City; the San Francisco Bay Regional Water Quality Control Board (Regional Board); the San Mateo County Mosquito Abatement District (Mosquito Abatement District); and their authorized agents and employees to enter upon the Property at reasonable times and in a reasonable manner to inspect, assess or observe the stormwater treatment measure(s) and HM control(s), if any, in order to ensure that treatment measures and HM controls (if any) are being properly maintained and are continuing to perform in an adequate manner to protect water quality and the public health and safety. This includes the right to enter upon the Property whenever there is a reasonable basis to believe that a violation of this Agreement, the City's stormwater management ordinance, guidelines, criteria, other written direction, or the MRP, and any amendments or reissuances of this permit, is occurring, has occurred or threatens to occur. The above listed agencies also have a right to enter the Property when necessary for abatement of a public nuisance or correction of a violation of the ordinance guideline, criteria or other written direction. The City, Regional Board, or the Mosquito Abatement District shall provide reasonable (as may be appropriate for the particular circumstances) notice to the Property Owner before entering the property.

#### **SECTION 7: FAILURE TO MAINTAIN TREATMENT MEASURES AND HM CONTROLS**

In the event the Property Owner fails to maintain the stormwater treatment measure(s) and HM control(s) (if any) as shown on the approved Site Plan or comparable document in good working order acceptable to the City and in accordance with the maintenance plan incorporated in the Agreement, the City, and its authorized agents and employees with reasonable notice, may enter the Property and take whatever steps it deems necessary and appropriate to return the treatment measure(s) and HM control(s) (if any) to good working order. Such notice will not be necessary if emergency conditions require immediate remedial action. This provision shall not be construed to allow the City to erect any structure of a permanent nature on the Property. It is expressly understood and agreed that the City is under no obligation to maintain or repair the treatment measure(s) and HM control(s) (if any) and in no event shall this Agreement be construed to impose any such obligation on the City.

#### **SECTION 8: REIMBURSEMENT OF CITY EXPENDITURES**

In the event the City, pursuant to this Agreement, performs work of any nature (direct or indirect), including any reinspections or any actions it deems necessary or appropriate to return the treatment measure(s) and HM control(s) (if any) in good working order as indicated in Section 8, or expends any funds in the performance of said work for labor, use of equipment, supplies, materials, and the like, the Property Owner shall reimburse the City, or shall forfeit any required bond upon demand within thirty (30) days of receipt thereof for the costs incurred by the City hereunder. If these costs are not paid within the prescribed time period, the City may assess the Property Owner the cost of the work, both direct and indirect, and applicable penalties. Said assessment shall be a lien against the Property or may be placed on the property tax bill and collected as ordinary taxes by the City. The actions described in this section are in addition to and not in lieu of any and all legal remedies as provided by law, available to the City as a result of the Property Owner's failure to maintain the treatment measure(s) and HM control(s) (if any).

#### **SECTION 9: INDEMNIFICATION**

The Property Owner shall indemnify, hold harmless and defend the City and its authorized agents, officers, officials and employees from and against any and all claims, demands, suits, damages, liabilities, losses, accidents, casualties, occurrences, claims and payments, including attorney fees claimed or which might arise or be asserted against the City that are alleged or proven to result or arise from the construction, presence, existence or maintenance of the treatment measure(s) and HM control(s) (if any) by the Property Owner or the City. In the event a claim is asserted against the City, its authorized agents, officers, officials or employees, the City shall promptly notify the Property Owner and the Property Owner shall defend at its own

expense any suit based on such claim. If any judgment or claims against the City, its authorized agents, officers, officials or employees shall be allowed, the Property Owner shall pay for all costs and expenses in connection herewith. This section shall not apply to any claims, demands, suits, damages, liabilities, losses, accidents, casualties, occurrences, claims and payments, including attorney fees claimed which arise due solely to the negligence or willful misconduct of the City.

#### **SECTION 10: NO ADDITIONAL LIABILITY**

It is the intent of this agreement to insure the proper maintenance of the treatment measure(s) and HM control(s) (if any) by the Property Owner; provided, however, that this Agreement shall not be deemed to create or effect any additional liability not otherwise provided by law of any party for damage alleged to result from or caused by storm water runoff.

#### **SECTION 11: PERFORMANCE FINANCIAL ASSURANCE**

The City may request the Property Owner to provide a performance bond, security or other appropriate financial assurance providing for the maintenance of the stormwater treatment measure(s) and HM control(s) (if any) pursuant to the City's ordinances, guidelines, criteria or written direction..

#### **SECTION 12: TRANSFER OF PROPERTY**

This Agreement shall run with the title to the land and any portion thereof. The Property Owner further agrees whenever the Property or any portion thereof is held, sold, conveyed or otherwise transferred, it shall be subject to this Agreement which shall apply to, bind and be obligatory to all present and subsequent owners of the Property or any portion thereof.

#### **SECTION 13: SEVERABILITY**

The provisions of this Agreement shall be severable and if any phrase, clause, section, subsection, paragraph, subdivision, sentence or provision is adjudged invalid or unconstitutional by a court of competent jurisdiction, or the applicability to any Property Owner is held invalid, this shall not affect or invalidate the remainder of any phrase, clause, section, subsection, paragraph, subdivision, sentence or provision of this Agreement.

#### **SECTION 14: RECORDATION**

This Agreement shall be recorded by the Property Owner within [insert number of days]\_\_\_\_ days after the execution date of this Agreement in the County Recorder's Office of the County of San Mateo, California at the Property Owner's expense. The City reserves the option to record this Agreement.

#### **SECTION 15: RELEASE OF AGREEMENT**

In the event that the City determines that the stormwater treatment measures and HM control(s) (if any) located on the Property are no longer required, then the City, at the request of the Property Owner shall execute a release of this Maintenance Agreement, which the Property Owner shall record in the County Recorder's Office at the Property Owner's expense. The City reserves the option to record such release of this Maintenance Agreement. The stormwater treatment measure(s) and HM control(s) (if any) shall not be removed from the Property unless such a release is so executed and recorded.

#### **SECTION 16: EFFECTIVE DATE AND MODIFICATION**

This Agreement is effective upon the date of execution as stated at the beginning of this Agreement. This Agreement shall not be modified except by written instrument executed by the City and the Property -Owner at the time of modification. Such modifications shall be effective upon the date of execution and shall be recorded.

\_\_\_\_\_  
Signature for the City

\_\_\_\_\_  
Date

\_\_\_\_\_  
Type or print name and title

\_\_\_\_\_  
Property Owner Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Type or print Property Owner name and address

**Appendix B**  
**O&M Annual Report Form**

**Stormwater Treatment Measure Operation and Maintenance  
Inspection Report to the [[== Insert Name of Municipality==]], California**

This report and attached Inspection and Maintenance Checklists document the inspection and maintenance conducted for the identified stormwater treatment measure(s) subject to the Maintenance Agreement between the City and the property owner during the annual reporting period indicated below.

**I. Property Information:**

Property Address or APN: \_\_\_\_\_

Property Owner: \_\_\_\_\_

**II. Contact Information:**

Name of person to contact regarding this report: \_\_\_\_\_

Phone number of contact person: \_\_\_\_\_ Email: \_\_\_\_\_

Address to which correspondence regarding this report should be directed:  
\_\_\_\_\_  
\_\_\_\_\_

**III. Reporting Period:**

This report, with the attached completed inspection checklists, documents the inspections and maintenance of the identified treatment measures during the time period from \_\_\_\_\_ to \_\_\_\_\_.

**IV. Stormwater Treatment Measure Information:**

The following stormwater treatment measures (identified treatment measures) are located on the property identified above and are subject to the Maintenance Agreement:

Identifying Number of Treatment Measure	Type of Treatment Measure	Location of Treatment Measure on the Property

**V. Summary of Inspections and Maintenance:**

Summarize the following information using the attached Inspection and Maintenance Checklists:

Identifying Number of Treatment Measure	Date of Inspection	Operation and Maintenance Activities Performed and Date(s) Conducted	Additional Comments

**VI. Sediment Removal:**

Total amount of accumulated sediment removed from the stormwater treatment measure(s) during the reporting period: \_\_\_\_\_ cubic yards.

How was sediment disposed?

- landfill
- other location on-site as described in and allowed by the maintenance plan
- other, explain \_\_\_\_\_

**VII. Inspector Information:**

The inspections documented in the attached Inspection and Maintenance Checklists were conducted by the following inspector(s):

Inspector Name and Title	Inspector's Employer and Address

**VIII. Certification:**

I hereby certify, under penalty of perjury, that the information presented in this report and attachments is true and complete:

\_\_\_\_\_  
Signature of Property Owner or Other Responsible Party                      Date

\_\_\_\_\_  
Type or Print Name

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Address

Phone number: \_\_\_\_\_ Email: \_\_\_\_\_

September 19, 2008

**TO:** Jim Scanlin  
Kathy Cote

**FROM:** Gary J. Grimm

**RE: Local Special Districts  
Compliance with ACCWP Municipal Stormwater NPDES Permit**

Various questions have arisen with respect to the responsibility of ACCWP Permittees to assure that local special districts take appropriate actions to implement stormwater discharge measures related to provisions of NPDES Permit Order R2-2003-0021 issued to the Alameda Countywide Clean Water Program ("ACCWP"), especially as relates to Provision C.3 for new development and redevelopment. The Planning Level Subcommittee ("PLS") asked that I seek guidance on this issue from the Regional Water Board.

I have communicated by telephone and email with legal counsel to the Regional Water Board, Dorothy Dickey, and with legal counsel for the State Water Board. Unfortunately these communications have not produced conclusive answers, but have at given me more direction in order that I can provide better guidance to the Permittees on this issue. Most of the information provided by Ms. Dickey was in the context of school districts. Many different types of local special districts (including school districts) have been created by state law, each with differing authority and responsibilities. Thus, due to the differing enabling legislation and the varying circumstances of municipal charters, it is very difficult to be specific in with regard to compliance conclusions. Consequently, this memo is intended as general guidance to ACCWP Permittees on this subject. Final decisions must be made by each Permittee according to the facts and circumstances in each case.

Stormwater conveyance systems or storm water discharges are controlled by or relate to many types of local special districts that are created pursuant to State law and that may have jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes.

These entities are referred to as “Small MS4s.”<sup>1</sup> Small MS4s include systems similar to separate storm sewer systems in municipalities, systems at military bases, hospital or prison complexes, and highways and thoroughfares, but usually do not include separate storm sewers in very discrete areas, such as individual buildings. Stormwater discharges via these conveyances from local special districts (Small MS4s) would fall into this category.

### **ACCWP NPDES Permit**

The ACCWP NPDES Permit, a State of California permit issued pursuant to federal and state law, contains regulatory requirements and performance standards for Permittee compliance regarding the discharge of pollutants (primarily stormwater) in the MS4 system. One of these performance standards is Provision C.3 that relates to new development and redevelopment. The ACCWP Permittees must comply with provision C.3 by application and implementation of control measures and best management practices (“BMPs”) to reduce pollutants in stormwater discharges to the maximum extent practicable (“MEP”). The California Constitution, Article XI, Section 7, confers on cities and counties the power to make and enforce, within their respective limits, all local police, sanitary and other regulations not in conflict with the general law of the state. The furnishing and installation of sewers, including municipal storm sewers and drains, is generally a function of municipal and county government.

Consequently, it is incumbent upon ACCWP Permittees to implement appropriate stormwater pollutant control measures for new development and redevelopment within their jurisdictions. These implementation measures would apply to facilities and/or discharges from local special districts as well as to other public and private projects.<sup>2</sup> However, Finding #5 of the Permit contains a statement that Permittees will not be held responsible for facilities and/or discharges from certain federal, state or regional entities within the Permittees’ boundaries over which they lack jurisdiction. The jurisdictional determinations should be made on a case-by-case basis, with the local special district entity bearing the burden of proving that the Permittee lacks jurisdiction over their facilities and/or discharges pursuant to this Permit finding. The Permittees have the ultimate responsibility for Provision C.3 compliance within their storm drain system.

### **Public School Districts**

As many Permittee questions relate to public school districts, I will make more specific comments about these districts. The California Government and Education Codes contain various provisions relating to the relationship between municipalities and school districts. For example, a school district, when acting under the State Contract Act, need

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<sup>1</sup> An “MS4” is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that are (i) designed or used for collecting or conveying storm water; (ii) which is not a combined sewer; and (iii) which is not part of a POTW. See 40 CFR §122.26(b)(16).

<sup>2</sup> It should be noted that the Alameda County Flood Control and Water Conservation District and Zone 7 of the Alameda County Flood Control and Water Conservation District are already named as Permittees in the ACCWP NPDES Permit.

not comply with local building ordinances of a city or county.<sup>3</sup> Moreover, school districts may by special vote render city or county zoning ordinances inapplicable to classroom facilities or classroom activities.<sup>4</sup> However, this provision does not relate to nonclassroom facilities such as warehouses, administrative buildings, cafeterias, automotive storage and repair buildings, parking lots and waste storage areas.

California law provides that school districts must specifically comply with county and local ordinances with regard to drainage, road improvements, grading, etc.<sup>5</sup> Thus, it is Ms. Dickey's conclusion that the Board would expect the Permittees to take whatever action they are authorized by law to take to ensure that school districts comply with the MS4 permit. She believes this may mean that the district must comply with the drainage statutory requirements to the extent that they are embodied in an ordinance. She states that an attorney in a city attorney's office or county counsel that specializes in land use would be in the best position to answer the question of whether the Permittee may directly regulate a school district's drainage improvements and conditions.

Consequently, while Permittees may not have the usual mechanisms in place to assure school district implementation of Provision C.3 related measures, C.3 probably applies to school district stormwater discharges in the above manner, unless a district can clearly demonstrate legal authority that would exempt their particular activity from compliance. The Permittees, and not the districts, have the ultimate responsibility for NPDES permit compliance. In cases of dispute, an attorney in a city attorney or county counsel office probably should make the final jurisdictional determination.

### **Other Local Special Districts**

Ms. Dickey was not able to provide direction regarding whether the Permittees must assure that other types of local special districts implement measures regarding NPDES permit related provisions. This is a decision that must be made by each Permittee depending on the type of local district involved, the activity proposed, the specifics of the state enabling legislation and the type of measures that the Permittee is seeking to have the district implement.

### **Phase II Regulation for Small MS4s**

In lieu of the above-described regulation of local special districts, a few special districts may have individual NPDES permits that apply to their facilities/discharges, or at some point may be subject to Phase II regulation for Small MS4s. The State Water Board has issued an NPDES General Permit for Storm Water Discharges From Small MS4s in Water Quality Order No. 2003-0005-DWQ ("General Permit"). The General Permit applies to a number of Small MS4s designated in attachments to this General Permit: Attachment 1 MS4s are automatically designated by EPA (24 mostly cities and counties in the San Francisco Bay Region); Attachment 2 MS4s are specifically designated by the

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<sup>3</sup> Government Code section 53091(a)&(d).

<sup>4</sup> Government Code section 53094.

<sup>5</sup> Government Code section 53097.

State Water Board (only 4 in the San Francisco Bay Region); and Attachment 3 MS4s that have not yet be designated by the State Water Board or by Regional Boards (Over 125 specified in the San Francisco Bay region). The State Water Board indicates that they will be reviewing and revising the Small MS4 General Permit in the next year.

While the Phase II General Permit may already cover the Attachment 1 & 2 entities, almost all of the Attachment 3 entities have not yet been designated for coverage by the State Water Board or by the Regional Water Board. These Attachment 3 designation decisions are largely being left to the Regional Water Boards. I do not expect the Regional Water Board to consider further Attachment 3 designations anytime in the near future due to the administrative burden of these designations. Consequently, if there are local special districts on the Attachment 3 San Francisco Bay Region list that are not otherwise implementing ACCWP Permit related provisions or Provision C.3 related regulations for new development and redevelopment, Permittees may consider as an alternative requesting the Regional Water Board assistance in assuring district compliance with Permittee BMP and control measures, or to specifically request Regional Water Board designation of the district in question for Phase II regulation.

### **Summary & Conclusions**

In summary, while there does not seem to be a “bright line” answer to these questions, it can be generally stated that most local special districts (especially school districts) must implement BMPs and control measures related to applicable ACCWP NPDES Permit provisions. This would include Provision C.3 related requirements for new development and redevelopment (depending on the type of activity involved), unless the local special district can provide clear legal/regulatory authority in their specific situation showing that the Permittee lacks jurisdiction over their facilities and/or discharges.<sup>6</sup> Even though Permittees may not have the usual mechanisms in place for directly regulating these entities as they do with other private and public development projects, it is important for local special districts to be aware of the Provision C.3 performance standards and requirements and the local ordinances related thereto. Until such time as Phase II regulation applies to more entities, Regional Water Board assistance may also be available to assist with implementation in troublesome cases.

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<sup>6</sup> As a related note, if the Water Board were to bring enforcement action against a Permittee for failure to assure local special district/school district compliance with local stormwater regulations, Ms.Dickey indicated that the burden of proof would be on the Permittee to demonstrate that it lacks jurisdiction over the special district.