

are being implemented, unless the pollutant generating activity does not occur.

Table 7. BMPs at Nurseries, Landscape Bulk Material Yards, and Nursery Centers

Pollutant-Generating Activity	BMP Narrative Description	2003¹⁰ California Stormwater BMP Handbook Industrial and Commercial BMP Identification No.
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges	SC-10
Outdoor Loading/Unloading	Implementation of effective outdoor loading/unloading practices	SC-30
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage source controls and practices	SC-31
Outdoor Equipment Operations	Implementation of effective outdoor equipment source control devices and practices	SC-32
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices	SC-33
Building and Grounds Maintenance	Implementation of effective facility maintenance practices	SC-41

(f) Ensure Compliance of Critical Sources

- (1) BMP Implementation: Facilities shall implement applicable source control BMPs in Appendix D, California Stormwater Industrial and Commercial BMP Handbook (2003¹¹). In the event that a Co-Permittee determines that a BMP is infeasible at any site, the Co-Permittee shall require implementation of similar BMPs that will achieve the equivalent reduction of pollutants in the storm water discharges. Likewise, for those BMPs that are not adequate to achieve WQS, Co-Permittees shall require additional site-specific controls.
- (2) Impaired Waters: For critical sources that discharge to CWA section 303(d) listed impaired water bodies, the Co-Permittees shall require operators of facilities identified by the Co-Permittees

¹⁰ Including future updates and revisions.

¹¹ Including future updates and revisions.

or Regional Water Board staff to implement additional controls as needed to reduce pollutants in storm water runoff that may be causing or contributing to exceedances of WQS.

- (3) Progressive Enforcement: Each Co-Permittee shall implement a progressive enforcement policy to ensure that facilities are brought into compliance with all storm water requirements within a reasonable time period as specified below.
 - (A) In the event that a Co-Permittee determines, based on an inspection, that an operator has failed to adequately implement all necessary BMPs, that Co-Permittee shall take progressive enforcement actions which, at a minimum, shall include a follow-up inspection within four weeks from the date of the initial inspection.
 - (B) In the event that a Co-Permittee determines that an operator has failed to adequately implement BMPs after a follow-up inspection, that Co-Permittee shall take further enforcement action as established through authority in its municipal code and ordinances or through the judicial system.
 - (C) Each Co-Permittee shall maintain records and make them available on request to the Regional Water Board, including inspection reports, warning letters, notices of violations, and other enforcement records, demonstrating a good faith effort to bring facilities into compliance.

4. Interagency Coordination

- (a) A Co-Permittee may refer a violation(s) of municipal storm water ordinances and the Water Code resulting from discharges of storm water or non-storm water into the MS4 by industrial and commercial facilities to the Regional Water Board provided that that Co-Permittee has made a good faith effort of progressive enforcement. At a minimum, a Co-Permittee's good faith effort must be documented with:
 - (1) Two follow-up inspections; and
 - (2) Two warning letters, correction notices or notices of violation.
- (b) Referral of violations of the Industrial General Permit, including requirements to file a notice of intent or no exposure certification: For those facilities in violation of the municipal storm water ordinance and subject to the Industrial General Permit, Co-Permittees may escalate referral of such violations to the Regional Water Board after one inspection and one written notice (copied to the Regional Water Board) to the operator regarding the violation. In making such referrals, Co-Permittees shall include, at a minimum, the following documentation:
 - (1) Name of the facility;
 - (2) Operator of the facility;
 - (3) Owner of the facility;

- (4) WDID Number (if available);
 - (5) Industrial activity being conducted at the facility that is subject to the Industrial General Permit;
 - (6) Records of communication with the facility operator regarding the violation and any inspection reports; and
 - (7) The written notice of the violation copied to the Regional Water Board.
- (c) Investigation of Complaints Regarding Facilities Not Covered Under the Industrial General Permit – Transmitted by the Regional Water Board Staff to the Co-Permittees: Each Co-Permittee shall initiate, within two business days, investigation of complaints regarding industrial/commercial facilities within its jurisdiction. The initial investigation shall include, at a minimum, a limited inspection of the site/facility to determine if the site/facility is effectively complying with the municipal storm water ordinances, and to oversee corrective action.
- (d) Assistance with Regional Water Board Enforcement Actions: As directed by the Regional Water Board Executive Officer, Co-Permittees shall assist Regional Water Board enforcement actions by: helping in identification of current owners, operators, and lessees of facilities; providing staff, when available, for joint inspections with Regional Water Board inspectors; appearing as witnesses in Regional Water Board enforcement hearings, if applicable; and providing copies of inspection reports and other progressive enforcement documentation.
- (e) Participation in a Task Force: The Co-Permittees are strongly encouraged to participate with the Regional Water Board and other public agencies in the Sonoma County Environmental Crimes Task Force, to communicate concerns regarding special cases of storm water violations by industrial and commercial facilities and to develop a coordinated approach to enforcement action.

PART 4 – Planning and Land Development Program

1. The requirements in Part 4 – Planning and Land Development Program apply to both public and private projects.
2. The requirements in Parts 4, 5, and 6 shall be implemented to the fullest extent possible with the Co-Permittees' existing authority and the Standard Urban Stormwater Mitigation Plan (SUSMP) until the Co-Permittees' authority and manuals are updated as required by this Order.
3. The Co-Permittees shall implement a Planning and Land Development Program with a goal to:
 - (a) Minimize the adverse impacts from storm water runoff on water quality, the biological integrity of receiving waters, and the beneficial uses of

water bodies in accordance with requirements under CEQA (Cal. Pub. Resources Code § 21100), and local government ordinances.

- (b) Minimize the percentage of impervious surfaces on land development projects and implement mitigation measures to mimic the pre-development water balance through infiltration, evapotranspiration, and capture and reuse of storm water. Pre-development water balance determinations shall include assessments of runoff stored on the surface in natural depressions, runoff captured by topsoil and debris layers and runoff evapotranspiration by vegetation.
- (c) Minimize pollutant loadings from impervious surfaces such as roof-tops, parking lots, and roadways through the use of properly designed, technically appropriate BMPs (including source control BMPs such as trash enclosures, good housekeeping practices), Low Impact Development strategies, and treatment control BMPs.
- (d) Properly select, design and maintain treatment control BMPs and hydromodification control BMPs to address pollutants that are likely to be generated by land development, minimize post-development surface flows and velocities, assure long-term functionality of the BMPs, and avoid the breeding of vectors.¹²
- (e) Prioritize the selection of post-development BMPs to remove storm water pollutants specific to the proposed development, minimize storm water runoff volume and velocity, and beneficially reuse storm water to support an integrated approach to protecting water quality and managing water resources. BMPs currently required in the existing SUSMP manual and subsequent updates of the SUSMP manual, shall be selected in the following order of preference:
 - (1) Low Impact Development strategies (see the following Special Provisions E. Part 5) including:
 - (A) Bioretention BMPs such as raingardens, green roofs, tree boxes (water quality treatment only), vegetated planters, and bioretention swales;
 - (B) Non-mechanical landscape/soil filtration based BMPs:
 - (i) Infiltration and dispersal BMPs (including porous pavement where no underdrain is installed);
 - (ii) BMPs that incorporate vegetation to remove pollutants and reduce storm water runoff volume; and
 - (iii) BMPs that store and reuse storm water runoff.
 - (C) Approved modular/proprietary treatment control BMPs that are based on bioretention or LID concepts and that meet pollution removal goals;

¹² Treatment BMPs when designed to drain within 72 hours of the end of rainfall minimize the potential for breeding of vectors.

- (D) Regional Water Board and Co-Permittee approved offset project; or
 - (E) Detention ponds (hydromodification control only).
4. Numeric Sizing Criteria: The Co-Permittees shall employ numeric sizing criteria for all structural treatment BMPs. The selected BMPs shall be designed to treat runoff from all impervious surfaces associated with the project (onsite and any associated offsite projects). The BMPs shall be installed in accordance with recognized design criteria in order to maximize pollutant removal. The BMPs shall be sized to treat runoff flows up to and including the following numeric sizing criteria:
- (a) Volume-based BMPs shall be designed to infiltrate or treat either:
 - (1) The volume of runoff produced from the 85th percentile of 24-hour storm event, as determined from the local historical rainfall record (approximately 0.92 inches in the Santa Rosa area); or
 - (2) The volume of runoff produced by the 85th percentile 24-hour rainfall event, determined using the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, p. 170-178 (1998); or
 - (3) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Storm Water Best Management Practices Handbook-Industrial/Commercial (1993); or
 - (b) Flow-based BMPs shall be designed to infiltrate or treat either:
 - (1) The flow rate of runoff produced by the 85th percentile mean annual 24-hour storm event hourly rainfall intensity, as determined from the local historical rainfall record; or
 - (2) The maximum flow rate of runoff, as determined from local historical rainfall records, that achieves approximately the same reduction in pollutant loads and flows as achieved by treatment of the 85th percentile hourly rainfall intensity; or
 - (3) Equivalent numeric sizing criteria. The Co-Permittees may develop or use any equivalent numeric sizing criteria or performance-based standard for post-construction structural treatment BMPs as part of these requirements. Such equivalent sizing criteria shall be authorized by Regional Water Board staff prior to use in place of the above criteria. In the absence of an equivalent numeric sizing criteria, the criteria contained above shall be implemented.
 - (c) When implementing these sizing criteria, the Co-Permittee's shall include a safety factor to ensure that treatment BMPs accommodate these minimum design storms at all times. The sizing of filtering

treatment devices shall recognize potential clogging and loss of capacity during operation and shall be sized to provide full treatment of the design storm at all times.

5. Entitlement Process

- (a) Each Co-Permittee shall incorporate into its entitlement process standard procedures that require consideration of potential storm water quality impacts early in the planning process of any project that meets the criteria of this Order (E. Standard Provisions, Part 4, section 6) for new development and redevelopment projects. The Co-Permittees shall clearly demonstrate the developer and Co-Permittee considered storm water quality site issues before the facilities/projects reached final design. The Co-Permittees must demonstrate involvement in the conceptual design of storm water quality protection at either of two different points in the project planning and permitting process:
- (1) During the discretionary approval process of a proposed project, when the Co-Permittee must exercise judgment or deliberation in order to approve or disapprove a development or significant redevelopment project; or
 - (2) During the ministerial approval process of issuing a grading, building, demolition, or similar "construction" permits in which only fixed standards or objective measures are applied.

6. New Development and Redevelopment Projects: for purposes of this Order, impervious surface is defined as an area that has been modified in such a way as to reduce storm water runoff capture, treatment and percolation into underlying soils. For example, such surfaces include rooftops, walkways, plastic liners and parking areas. Permeable pavements shall be considered impervious for this section if they have subdrains. For purposes of this Order, structural areas that are covered under a green or eco-roof shall not be considered impervious surface.

- (a) New development and redevelopment projects that are required to implement post-construction treatment controls to mitigate all project-related storm water pollution include:
- (1) All development and redevelopment projects creating or replacing a combined total of 1.0 acre or more of impervious surface;
 - (2) Streets, roads, highways, and freeway construction or reconstruction creating or replacing a combined total of 10,000 ft² or more of impervious surface¹³;
 - (3) All development and redevelopment projects that include four or more houses;

¹³ See exception in Part 4 – 6(b)(3).

- (4) Industrial parks creating or replacing a combined total of 10,000 ft² or more of impervious surface;
 - (5) Commercial strip malls creating or replacing a combined total of 10,000 ft² or more of impervious surface;
 - (6) Retail gasoline outlets creating or replacing a combined total of 10,000 ft² or more of impervious surface;
 - (7) Restaurants (SIC 5812) creating or replacing a combined total of 10,000 ft² or more of impervious surface;
 - (8) Parking lots (if not included as part of a project type listed above) creating or replacing a combined total of 10,000 ft² or more of impervious surface, or with 25 or more parking spaces; and
 - (9) Automotive service facilities (SIC 5013, 5014, 5541, 7532-7534 and 7536-7539) creating or replacing a combined total of 10,000 ft² or more of impervious surface.
- (b) Redevelopment projects that are not required to implement post-construction treatment controls include:
- (1) Routine maintenance activities¹⁴ that are conducted to maintain original line and grade, hydraulic capacity, and original purpose of facility (ex. resurfacing existing roads and parking lots);
 - (2) Emergency redevelopment activities required to protect public health and safety¹⁵;
 - (3) Projects undertaken solely to install or reinstall public utilities (ex. sewer or water lines) and do not include any additional street or road development or redevelopment activities;
 - (4) Reconstruction projects, undertaken by a public agency, of streets or roads remaining within the original footprint and less than 48 feet wide¹⁶; and
 - (5) Stand alone pedestrian pathways, trails, and off-street bicycle lanes.
7. Effective Date: The updated New Development and Redevelopment sizing requirements referenced above shall apply to projects or project phases that have not received tentative tract map, use permit or other permit prior to June 1, 2010.

¹⁴ Impervious surface replacement, such as the reconstruction of parking lots or excavation to roadway subgrades, is not a routine maintenance activity.

¹⁵ The Regional Water Board must agree that the activities are needed to protect public health and safety to qualify for this exception.

¹⁶ Measured from face-of-curb to face-of-curb.

PART 5 – New Development/Redevelopment Integrated Water Quality/Resource Plan

1. The requirements in Part 5 – New Development/Redevelopment Integrated Water Quality/Resource Plan apply to both public and private projects.
2. The Co-Permittees shall develop a new development and redevelopment integrated water quality and water resource plan, for Executive Officer approval, which includes an LID manual, post-construction treatment BMP choice criteria, and a hydromodification control and mitigation plan. The integrated water quality/resource plan shall be included in an updated SUSMP manual, and shall include the following:
 - (a) Low Impact Development Measures
 - (1) All new development and redevelopment projects identified in Special Provisions E Part 4 shall integrate LID principles into project design. LID is a storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect predevelopment hydrologic functions.
 - (2) The Co-Permittees shall initiate SUSMP guidance intended to formally prioritize LID treatment BMPs consistent with Part 5 - 2(b)(2) for new development and redevelopment projects (both public and private) by January 1, 2010. The Co-Permittees can comply with this requirement by adopting a resolution or issuing a guidance letter.
 - (3) The Co-Permittees shall develop and/or adopt, and implement a comprehensive LID technical guidance manual approved by the Regional Water Board Executive Officer no later than October 1, 2011, for use by land planners, engineers and developers for both public and private development and redevelopment projects. The LID guidance manual shall include objectives and specifications for integration of LID strategies into:
 - (A) Site assessment;
 - (B) Site planning and layout;
 - (C) Vegetative protection, revegetation, and maintenance;
 - (D) On-site soil protection with the goals of reducing soil compaction, retaining topsoil and facilitating runoff capture;
 - (E) Retention of natural runoff infiltration, storage and evapotranspiration rates;
 - (F) Techniques to minimize land disturbance;
 - (G) Techniques to implement LID measures;
 - (H) LID BMP design guidance;

- (I) LID BMP maintenance guidance;
 - (J) Integrated water resources management practices;
 - (K) LID design and flow modeling guidance;
 - (L) Hydrologic analysis; and
 - (M) LID offset credits.
- (4) The Co-Permittees shall provide Regional Water Board staff quarterly or more frequently if needed, verbal updates on the progress of the LID technical guidance manual and invite Regional Water Board staff to all meetings held to develop the LID technical guidance manual.
- (5) The Co-Permittees shall facilitate implementation of LID by providing key industry, regulatory, and other stakeholders with information regarding LID objectives and specifications contained in the LID technical guidance manual (Part 5) through an LID training program. The LID training program shall begin by April 1, 2012, and include the following:
- (A) LID targeted sessions and materials for builders, design professionals, regulators, resource agencies, and stakeholders that describe LID techniques;
 - (B) Information, data, materials, and case studies regarding national efforts and local experience gained through LID pilot projects and demonstration projects;
 - (C) Guidance on how to integrate LID requirements into the local regulatory program(s) and requirements;
 - (D) Guidance on how to integrate LID measures at various project scales; and
 - (E) Guidance on the relationship among LID strategies, source control BMPs, treatment control BMPs, and hydromodification control requirements.
- (b) Post-Construction BMP Choice Methodology
- (1) The Co-Permittees shall ensure that all storm water runoff from projects that meet the new development and redevelopment criteria in Part 4 and/or the hydromodification criteria in Part 5 - 2(c), below, is treated using LID design and landscape-based BMPs. For purposes of this section, LID priority projects identified in Part 5 - 2(b)2(A) and (B) below shall be designed to treat the design storm volume as specified in Part 4 - 4(a) and shall be designed so as to not exceed the pre-development water balance for flows up to the design storm volume.
- (2) The priority for approval of post-construction BMPs by the Co-Permittees shall be given in the following order:
- (A) Bioretention BMPs that do not utilize underdrains, such as raingardens, green roofs, tree boxes (water quality treatment only), vegetated planters, and bioretention swales;

- (B) Other Low Impact Development strategies that do not utilize underdrains and are based on the following concepts:
 - (i) Non-mechanical landscape/soil filtration based BMPs;
 - (ii) Infiltration and dispersal BMPs (including pervious pavements where no underdrain is installed);
 - (iii) BMPs that incorporate vegetation to remove pollutants and reduce storm water runoff volume; and
 - (iv) BMPs that store and reuse storm water runoff.
 - (C) Approved modular/proprietary treatment control BMPs that are based on bioretention or LID concepts and that meet pollution removal goals;
 - (D) Other BMPs that do not achieve LID goals (required to be used in combination with LID BMPs or an offset project) such as structural modular/proprietary separator BMP units, trash excluders, and non-LID filter systems;
 - (E) Executive Officer and Co-Permittee approved offset project; or
 - (F) Detention ponds (hydromodification control only).
- (3) If it is technically infeasible for a project to comply with Part 5 - 2(b)(2)(A) or (B) above (bioretention BMPs or LID BMPs) for the specified design storm, in order to comply with this Order's LID requirements, the Co-Permittees shall obtain Regional Water Board Executive Officer approval prior to approving BMPs included in Part 5 - 2(b)(2)(C), (D), (E), or (F) above (modular/proprietary BMPs, offset project, or detention pond). A combination of on-site and off-site BMPs may be included in a proposal for Executive Officer approval. An infeasibility determination shall be based on an analysis of site-specific circumstances pursuant to Feasibility Criteria developed by the Co-Permittees. These Feasibility Criteria shall be submitted to the Executive Officer for review and approval and public review in the updated SUSMP manual¹⁷ as part of the selection and prioritization of LID BMPs (see Part 5 - 2(a)(2), and Part 6 - 5(a)(4)). When approval for the use of BMPs included in Part 5 - 2(b)(2)(C), (D), (E), or (F) is sought, the Co-Permittees shall submit adequate documentation and justification to the Executive Officer to facilitate review and approval. The Executive Officer may find during the term of this Order that the Co-Permittees have developed an adequate program to require BMPs in compliance with Part 5 - 2(b)(2)(A) and (B) and the Executive Officer may

¹⁷ Or equivalent document.

waive this requirement for advance approval. If such a waiver is granted, the Co-Permittees shall document in their Annual Reports any approvals of projects using BMPs included in Part 5 – 2(b)(C), (D), (E), or (F).

- (c) Hydromodification (Flow/Volume/Duration) Control Criteria
- (1) Each Co-Permittee shall require all new development and redevelopment projects identified in Special Provisions E Part 4 to consider hydrologic control measures, to prevent accelerated downstream erosion, minimize flooding and public nuisance conditions, to recharge ground water and to protect stream habitat in receiving waters. The purpose of the hydrologic controls is to minimize changes in post-development hydrologic storm water runoff discharge rates, velocities, and duration where such discharges would adversely impact receiving waters. This shall be achieved by maintaining the project's pre-development storm water runoff flow rates, and duration. Pre-development hydrology shall be based on an analysis of natural infiltration, soils storage and evapotranspiration rates. The Co-Permittees shall also ensure that total storm water runoff volumes remain the same or lower as the pre-development volumes, when possible.
- (A) All new development or redevelopment projects (both public and private) with 1.0 acre or more of impervious surface shall consider potential hydromodification impacts to receiving water.
- (B) Hydromodification control may include one, or a combination of on-site, regional or subregional hydromodification control BMPs, LID strategies, or stream restoration measures, with preference given to LID strategies and on-site hydromodification control BMPs. Any in-stream restoration measures that are proposed in conjunction with hydromodification BMPs, shall not adversely affect the beneficial uses of the receiving waters and appropriate permits shall be obtained prior to starting any restoration projects.
- (C) The Co-Permittees shall develop and implement a Hydromodification Control Plan approved by the Regional Water Board Executive Officer with input from local stakeholders no later than October 1, 2013,¹⁸ to address hydromodification based on accepted practices. The plan

¹⁸ The Executive Officer may administratively extend this deadline if the Executive Officer determines that an extension will result in a superior plan, adequate progress has been made in developing a plan, and the interim requirements being used by the Co-Permittees are adequate.

shall be consistent with the requirements of this Order and shall include one or more of the following:

- (i) A simplified method using LID BMPs with accepted sizing criteria to provide hydromodification control;
 - (ii) A numerical model to predict the hydrological changes resulting from new development and provide mitigation; or
 - (iii) A numerical model to identify effective end of pipe or flow duration control mitigation strategies.
- (D) The Hydromodification Control Plan shall:
- (i) Minimize reduction of ground water recharge rates based on natural site conditions;
 - (ii) Describe authorized hydromodification management control BMPs;
 - (iii) Describe hydromodification management control BMP design criteria;
 - (iv) Describe the range of flows controllable with flow duration control methods;
 - (v) Describe the approved hydromodification method or model;
 - (vi) Describe any alternate hydromodification management model and design;
 - (vii) Describe stream restoration measures design criteria;
 - (viii) Allow a developer an exception to the hydromodification requirements if it can be adequately demonstrated to the Regional Water Board Executive Officer that the project runoff flows will have a positive impact on receiving waters (such as for sediment transport); and
 - (ix) Include a monitoring and effectiveness assessment.
- (E) The Co-Permittees shall provide Regional Water Board staff quarterly or more frequently if needed, verbal updates on the progress of the Hydromodification Control Plan and invite Regional Water Board staff to all meetings held to develop the Hydromodification Plan.
- (F) Interim Hydromodification Control Requirements
- (i) The Interim Hydromodification Control Requirements to protect receiving waters until Co-Permittees complete a Hydromodification Control Plan shall be provided to the Regional Water Board by July 1, 2010, and may include: the use

of hydrograph modification methods for post-construction BMPs found in other storm water management plans or BMP manuals, such as the Marin LID manual, the Contra Costa County sizing factor approach, the State Water Board stream erosion identification tool for hydromodification planning (Bowles), or TR-55 model. BMPs shall be sized for the two-year 24-hr rain event that keeps post-construction peak discharge, peak velocity, and peak duration at or below those respective pre-construction levels. The Co-Permittees shall also ensure that pre-construction storm water runoff volume is the same as the post-construction storm water runoff volume for flows up to the 85th percentile 24-hour storm and larger storms where adverse impacts to receiving waters are possible.

PART 6 – Implementation of New Development/Redevelopment Post-Construction BMPs

1. Maintenance Agreement and Transfer
 - (a) Each Co-Permittee shall require that all new development and redevelopment projects subject to post-construction BMP requirements provide verification of maintenance provisions for LID BMPs, treatment control BMPs, and hydromodification control BMPs by way of final map conditions, legal agreements, covenants, conditions or restrictions, CEQA mitigation requirements, conditional use permits, and/or other legally binding maintenance agreements. The BMP maintenance shall ensure that the BMPs implemented will remain fully functional and that all areas identified for treatment will discharge to the treatment BMP system.
 - (1) Verification at a minimum shall include the developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred; and either
 - (A) A signed statement from the public entity assuming responsibility for all structural BMP, treatment control BMP, and hydromodification control BMP maintenance; or
 - (B) Written conditions in the sales or lease agreement in enough detail to be easily understood by the owner or tenant, which require the property owner or tenant to assume responsibility for BMP maintenance and conduct a maintenance inspection at least once a year; or

- (C) Written text in project covenants, conditions, and restrictions (CCRs) in enough detail to be easily understood by the owner or tenant, for residential properties assigning BMP maintenance responsibilities to the Home Owners Association (HOA); or
 - (D) Any other legally enforceable agreement or mechanism that assigns responsibility for the maintenance of BMPs.

- 2. Tracking, Inspection, and Enforcement of Post-Construction BMPs
 - (a) Each Co-Permittee shall implement a tracking system, and an inspection and enforcement program for new development and redevelopment post-construction storm water BMPs no later than October 1, 2010.
 - (1) Implement a GIS or other electronic system for tracking projects that have been conditioned to include construction/post-construction BMPs. The electronic system, at a minimum, should contain the following information:
 - (A) Municipal project identifying information;
 - (B) State WDID No., if applicable;
 - (C) Project acreage;
 - (D) BMP type and description;
 - (E) BMP location (coordinates recommended);
 - (F) Date of acceptance;
 - (G) Date of O&M certification;
 - (H) Maintenance records;
 - (I) Inspection date and summary;
 - (J) Corrective action;
 - (K) Date certificate of occupancy issued; and
 - (L) Replacement or repair date.
 - (b) Each Co-Permittee shall inspect all development sites upon completion of construction and prior to the issuance of occupancy certificates to ensure proper installation of LID measures, structural BMPs, treatment control BMPs and hydromodification control BMPs. The inspection may be combined with other inspections provided it is conducted by personnel trained and qualified to inspect LID measures and BMPs.
 - (c) Each Co-Permittee shall verify proper maintenance and operation of post-construction BMPs previously approved by the Co-Permittee for new development and redevelopment, if the BMPs are legally accessible. The post-construction BMP maintenance inspection program shall incorporate the following elements:
 - (1) Post-construction BMP maintenance inspection checklist;
 - (2) Inspection at least once every 2 years, beginning October 1, 2010, of post-construction BMPs to assess operation conditions with particular attention to: hydraulic function, failure, invasive

- vegetation, vector risk, trash and debris, sediment clogging, improper modifications, solids removal, pump-out, blockage and drawdown drainage; and
- (3) Criteria and procedures for post-construction treatment control and hydromodification control BMP repair, replacement, or re-vegetation.
 - (d) Each Co-Permittee may submit a plan for Executive Officer approval by October 1, 2010, to require annual reporting by other parties demonstrating proper maintenance and operation of post-construction BMPs. The approved plan would satisfy the requirements for verification of proper operation and maintenance and reduce the frequency of inspections to once in the five-year Order term.
 - (e) Each Co-Permittee shall undertake necessary enforcement based on the results of the inspection.
3. Post-Construction BMP Implementation and Enforcement
- (a) The Co-Permittees shall initiate enforcement actions to rectify failure to implement and maintain Co-Permittee approved post-construction BMPs. If an inspection conducted by a Co-Permittee, response to a complaint, or referral from another agency identifies a failure to construct and/or maintain adequate, effective post-construction BMPs (ineffective BMPs include those that are undersized, poorly maintained or are not draining properly), the Co-Permittee shall commence progressive enforcement against the owner or operator and notify the Regional Water Board.
4. Alternative Post-Construction Storm Water Mitigation Programs
- (a) A Co-Permittee may apply to the Regional Water Board for approval of a regional or sub-regional storm water mitigation program to substitute in part or wholly for on-site post-construction requirements.
 - (b) Upon review and a determination by the Regional Water Board Executive Officer that the proposal is technically valid and appropriate, the Regional Water Board may consider for approval such a program if its implementation will:
 - (1) Implement LID or provide justification of why it cannot;
 - (2) Result in equivalent or improved storm water quality;
 - (3) Protect stream habitat;
 - (4) Be fiscally sustainable and have secure funding;
 - (5) Promote cooperative problem solving by diverse interests; and
 - (6) Be completed in four years or less, including the construction and start-up of treatment facilities.
 - (c) Nothing in these provisions shall be construed as to delay the implementation of post-construction control requirements, as approved in this Order.

- (d) Mitigation Funding
 - (1) A Co-Permittee may create a management framework, for Executive Officer approval, to fund regional or subregional solutions to storm water pollution, if:
 - (A) A waiver for impracticability is granted by the Regional Water Board Executive Officer or by a Co-Permittee based on criteria approved by the Executive Officer;
 - (B) Funds become available;
 - (C) Off-site mitigation is required because of loss of environmental habitat;
 - (D) An approved watershed management plan, or an integrated water resources management plan, or a regional storm water mitigation plan, or a wetlands recovery plan exists that incorporates an equivalent or improved strategy for storm water pollution mitigation; and
 - (E) Mitigation projects are funded and implemented prior to the impact from the development project.

- 5. Standard Urban Stormwater Mitigation Plan (SUSMP)
 - (a) The Co-Permittees shall update their SUSMP¹⁹ or incorporate appendices or references by April 1, 2011,²⁰ and thereafter as needed, for Executive Officer approval, to include, at a minimum, the following:
 - (1) Conditions to require compliance with Parts 4, 5 and 6 of this Order;
 - (2) The New Development and Redevelopment Integrated Water Quality and Water Resource Plan (Part 5);
 - (3) Expected BMP pollutant removal performance including effluent quality and removal efficiency ranges (ASCE/U.S. EPA International BMP Database, CASQA New Development BMP Handbook, technical reports, local data on BMP performance, and the scientific literature appropriate for northern California geography and climate);
 - (4) Selection and prioritization of appropriate BMPs for storm water pollutants of concern and in accordance with the New Development and Redevelopment Integrated Water Quality and Water Resource Plan (Part 5);
 - (5) Data on observed local effectiveness and performance of implemented BMPs;
 - (6) BMP maintenance information;

¹⁹ Or equivalent document.

²⁰ Unless otherwise specified in this Order.

- (7) Criteria to facilitate integrated water resources planning and management in the selection of BMPs, including consideration of water conservation, groundwater recharge, public recreation, multipurpose parks, open space preservation, and redevelopment retrofits;
 - (8) Updated analysis of the local design storm criteria; and
 - (9) Other requirements to be consistent with this Order.
6. Project Coordination
- (a) Each Co-Permittee shall facilitate a process for effective approval of post-construction storm water control measures. The process shall include:
 - (1) Detailed BMP review including BMP sizing calculations, BMP pollutant removal performance, and municipal approval; and
 - (2) An established structure for communication and delineated authority between and among municipal departments that have jurisdiction over project review, plan approval, and project construction.

PART 7 – State Statute Conformity

1. CEQA Document Update
- (a) Each Co-Permittee shall incorporate into its CEQA process no later than October 1, 2010, those additional procedures necessary for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents.
 - (1) The procedures shall require consideration of the following:
 - (A) Potential impact of project construction on storm water runoff;
 - (B) Potential impact to water quality of project post-construction storm water runoff;
 - (C) Potential for discharge of storm water from areas with material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas;
 - (D) Potential for discharge of storm water to impair the beneficial uses of the receiving waters;
 - (E) Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and water bodies;
 - (F) Potential for significant changes in the flow velocity or volume of storm water runoff to cause harm to or impair the beneficial uses of natural drainage systems;

- (G) Potential for significant increases in erosion from storm water flows at the project site or surrounding areas; and
 - (H) Potential to cause or contribute to an exceedance of WQS.
2. General Plan Update
- (a) Each Co-Permittee shall amend, revise or update its General Plan to include watershed and storm water quality and quantity management considerations and policies as needed to remain consistent with this Order when any of the following General Plan elements are updated or amended:
 - (1) Land use;
 - (2) Housing;
 - (3) Conservation; and/or
 - (4) Open space.
 - (b) Each Co-Permittee shall provide the Regional Water Board with the draft amendment or revision when a listed General Plan element or General Plan is noticed for comment in accordance with Government Code section 65350 et seq.

PART 8 – Development Construction Program

- 1. The requirements in Part 8 – Development Construction Program apply to both public and private construction projects.
- 2. Grading Restrictions
 - (a) Each Co-Permittee shall implement a program to control storm water discharges from construction activity at all construction sites within its jurisdiction. The program shall ensure that controls are adequate for full protection of water quality. During the wet season (November 1st – April 30th), the program shall ensure that the following requirements are effectively implemented at construction sites as listed below:
 - (1) No grading shall occur during the wet season for construction projects on hillsides with slopes 20%²¹ or steeper unless the project is granted an exception by a Co-Permittee as described in Part 8 – 2(c).
 - (2) If grading operations in these areas are not completed before the onset of the wet season and no exception is granted, grading shall be halted and effective erosion control measures shall be put in place to minimize erosion. Grading shall not resume until after April 30th. Depending on the project area, the developer/contractor/Co-Permittee shall implement the Erosion and Sediment Control BMPs listed in the following Tables 8 and 9.

²¹ Steepness is measured prior to land disturbance.

- (3) A Grading Restriction Exception may be granted by a Co-Permittee where the project proponent can demonstrate through plan review, inspections, monitoring and use of an iterative BMP process that the proposed BMP measures can be reasonably expected to meet the following goals:
 - (A) Keep storm water from causing or contributing to degradation of water quality or impairing beneficial uses;
 - (B) Ensure that the storm event daily average Total Suspended Solids discharged from the site is 100 mg/L or less; and
 - (C) Ensure that the storm event daily average turbidity of the discharge from the site is 50 NTU or less.
- (4) If an exception is granted by a Co-Permittee, a monitoring program must also be required to ensure BMP effectiveness and compliance with the above goals.

3. Construction Sites Less than 1 Acre

- (a) Each Co-Permittee shall require the implementation of a minimum set of BMPs in combination at all construction sites (see Table 8 BMPs at Construction Sites Less than 1 Acre) to prevent erosion and sediment loss, and the discharge of construction wastes.²² Erosion Control BMPs for erosion avoidance shall be the highest priority. If the site soils, hydrology, and geography are such that the BMPs in Table 8 are not adequate to meet WQS, additional (treatment train, redundant, and/or advanced) BMPs shall be deployed.

Table 8. BMPs at Construction Sites Less than 1 Acre

Minimum Set of BMPs for All Construction Sites	CASQA Handbook	Caltrans Handbook ²³
Erosion Control		
Scheduling	EC-1	SS-1
Preservation of Existing Vegetation	EC-2	SS-2
Sediment Controls		
Silt Fence	SE-1	SC-1
Sand Bag Barrier	SE-8	SC-8
Stabilized Construction Site Entrance/Exit	TR-1	TC-1
Non-Storm Water Management		
Water Conservation Practices	NS-1	NS-1

²² The BMPs are taken from the *California BMP Handbook, Construction, January 2003* and the *Caltrans Stormwater Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual, March 2003*, and addenda.

²³ And updates.

Minimum Set of BMPs for All Construction Sites	CASQA Handbook	Caltrans Handbook ²³
Dewatering Operations (Groundwater dewatering to surface water only under NPDES Permit No. R1-2009-0045) ²⁴	NS-2	NS-2
Waste Management		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-3
Spill Prevention and Control	WM-4	WM-4
Solid Waste Management	WM-5	WM-5
Concrete Waste Management	WM-8	WM-8
Sanitary/Septic Waste Management	WM-9	WM-9

4. Construction Sites Greater than 1 Acre
- (a) Each Co-Permittee shall require the implementation of the BMPs in Table 9 (BMPs at Construction Sites Greater than 1 Acre) at all construction sites greater than 1 acre as needed to prevent erosion and sediment loss, and the discharge of construction wastes. If the site soils, hydrology, and geography are such that the BMPs in Table 9 are not adequate to meet WQS, additional BMPs (treatment train, redundant, and/or advanced) shall be deployed.

Table 9. BMPs at Construction Sites Greater than 1 Acre

BMPs	CASQA Handbook	Caltrans Handbook
Erosion Control		
Scheduling	EC-1	SS-1
Preservation of Existing Vegetation	EC-2	SS-2
Hydraulic Mulch	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Straw Mulch	EC-6	SS-6
Geotextiles and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8
Sediment Controls		
Fiber Rolls	SE-5	SC-5
Gravel Bag Berm	SE-6	SC-6
Street Sweeping and/or Vacuum	SE-7	SC-7
Storm Drain Inlet Protection	SE-10	SC-10
Sediment Basin	SE-2	SC-2
Check Dam	SE-4	SC-4
Silt Fence	SE-1	SC-1

²⁴ Or as updated or renewed.

BMPs	CASQA Handbook	Caltrans Handbook
Sand Bag Barrier	SE-8	SC-8
Tracking Control BMPs		
Stabilized Construction Entrance/Exit	TR-1	TC-1
Entrance/Exit Tire Wash	TC-3	TC-3
Additional Controls		
Wind Erosion Controls	WE-1	WE-1
Stabilized Construction Roadway	TC-2	TC-2
Non-Storm Water Management		
Water Conservation Practices	NS-1	NS-1
Dewatering Operations (Groundwater dewatering to surface water only under NPDES Permit No. R1-2009-0045) ²⁵	NS-2	NS-2
Vehicle and Equipment Washing	NS-8	NS-8
Vehicle and Equipment Fueling	NS-9	NS-9
Vehicle and Equipment Maintenance	NS-10	NS-10
Waste Management		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-3
Solid Waste Management	WM-5	WM-5
Spill Prevention and Control	WM-4	WM-4
Concrete Waste Management	WM-8	WM-8
Sanitary/Septic Waste Management	WM-9	WM-9

5. Local Agency Requirements

- (a) Each Co-Permittee shall require for all public and private construction sites 5 acres or greater, compliance with all conditions identified previously in this section, Special Provisions Part 8, and the following requirements:
 - (1) Erosion Control Plan
 - (A) Each Co-Permittee shall require the preparation and submittal of an Erosion Control Plan for the Co-Permittee's review and approval prior to issuance of a grading permit. If the Erosion Control Plan is revised, the Co-Permittee shall review and approve those revisions.
 - (i) The Co-Permittee shall not approve any Erosion Control Plan unless it contains appropriate construction site BMPs, identifies specific locations where the BMPs will be installed, and maintenance schedules.
 - (ii) The Erosion Control Plan shall include a statement describing the location of BMPs and rationale for BMP

²⁵ Or as updated or renewed.

selection, as well as a statement confirming that the owner and contractor are aware that the selected BMPs must be installed, monitored, and maintained to ensure their effectiveness and meet compliance with local codes and ordinances.

6. Electronic Site Tracking System

- (a) Each Co-Permittee shall use an electronic system to track grading permits, encroachment permits, demolition permits, building permits, or construction permits (and any other municipal authorization to move soil) issued by each Co-Permittee. To satisfy this requirement, the use of a database or GIS system is encouraged, but not required.

7. Inspections

- (a) Each Co-Permittee shall inspect all construction sites an acre or more for the implementation of storm water quality controls and effective pollutant reduction a minimum of once before the wet season to ensure that BMPs are fully installed prior to any forecasted rain event. Each Co-Permittee shall inspect each site once during the wet season to document that appropriate BMPs are installed according to the approved Erosion Control Plan and that the site runoff is protective of water quality. Concurrently, each Co-Permittee shall ensure that:
 - (1) The Erosion Control Plan is reviewed for compliance with local codes, ordinances, and permits; and
 - (2) A follow-up inspection takes place within two weeks for inspected sites that have not adequately implemented their Erosion Control Plan.
- (b) Each Co-Permittee shall take additional enforcement actions to achieve compliance as specified in municipal codes, if compliance with municipal codes, ordinances, or permits has not been attained.
- (c) Each Co-Permittee shall refer sites to the Regional Water Board if site inspectors observe a violation or suspected violation of the Construction Activities Storm Water General Permit (Construction General Permit) or Small Linear Underground/Overhead Construction Projects General Permit (small LUPs).
- (d) Each Co-Permittee can refer sites to the Regional Water Board for further joint enforcement actions for violations of the CWA or Water Code and municipal storm water ordinances after conducting a minimum of two site inspections and issuing a minimum of two written notices to the operator regarding the violation. In making such referrals, Co-Permittees shall include, at a minimum, the following documentation:
 - (1) Name of the site;
 - (2) WDID number (if applicable);

- (3) Site developer or owner and contact information;
 - (4) Site contractor or operator and contact information;
 - (5) Records of communication with the site operator regarding the violation(s), which shall include at least an inspection report; and
 - (6) Written notice of the violation(s).
- (e) Prior to approving and/or signing off for occupancy and issuing the Certificate of Occupancy for all construction projects subject to post-construction controls, each Co-Permittee shall require the design engineer to inspect the constructed site design, source control and treatment control BMPs to provide written verification that they have been constructed in compliance with all specifications, plans, permits, ordinances, and this Order.
8. State Conformity Requirements
- (a) Each Co-Permittee shall inform all project applicants that a state Construction General Permit is required for all construction projects of one acre or more and provide them with information on how to enroll in the Construction General Permit.
 - (b) Each Co-Permittee shall verify that each construction project of one acre or more in size has filed an NOI to enroll under the Construction General Permit during the pre-construction meeting and notify the Regional Water Board of any known non-filers.
9. Interagency Coordination
- (a) Investigation of complaints regarding facilities transmitted to the Co-Permittees by Regional Water Board staff:
 - (1) Each Co-Permittee shall initiate, within one business day,²⁶ an initial investigation of complaint(s) on the construction site(s) within its jurisdiction.
 - (A) The initial investigation shall include, at a minimum, an inspection on the facility and its perimeter to confirm the complaint and to determine if the site operator is effectively complying with the municipal storm water ordinances, and to oversee corrective action.
 - (b) Support of Regional Water Board enforcement actions:
 - (1) Each Co-Permittee shall support Regional Water Board enforcement actions by:
 - (A) Assisting in identification of current owners, operators, and lessees of properties and sites;

²⁶ Co-Permittees may comply with the Order by taking initial steps (such as logging, prioritizing, and tasking) to "initiate" the investigation within that one business day. However, the Regional Water Board would expect that the initial investigation, including a site visit, to occur within two business days.

- (B) Providing staff, when available, for joint inspections with Regional Water Board inspectors;
- (C) Appearing to testify as witnesses in Regional Water Board enforcement hearings, when necessary; and
- (D) Providing copies of inspection reports and other progressive enforcement documentation.

PART 9 – Public Agency Activities Program

1. Each Co-Permittee shall implement a Public Agency Activities Program to minimize storm water pollution impacts from public agency activities. The Public Agency Activities Program shall include:
 - (a) Public construction activities management;
 - (b) Vehicle maintenance/material storage facilities/corporation yards management/municipal operations;
 - (c) Landscape and recreational facilities management;
 - (d) Storm drain operation and management;
 - (e) Streets and roads maintenance;
 - (f) Infrastructure maintenance;
 - (g) Public industrial activities management;
 - (h) Emergency procedures; and
 - (i) Employee training.

2. Vehicle Maintenance/Material Storage Facilities/Corporation Yards Management/Long Term Maintenance Programs
 - (a) Each Co-Permittee shall implement the following BMPs²⁷ as needed at all Co-Permittee owned or leased facilities and job sites, including but not limited to vehicle/equipment maintenance facilities, material storage facilities, and corporation yards, and at any area that includes the activities as described in the following Table. Additionally, for any activity or area described in the footnote below,²⁸ each Co-Permittee shall also implement as needed the BMPs in the Caltrans Storm Water Quality Handbook Maintenance Staff Guide described as B-4 in Table 10 (BMPs at Vehicle Maintenance/Material Storage Facilities/Corporation Yards) or other industry-accepted BMP manuals such as Fishnet 4-C or CASQA.

²⁷ These BMPs are identified in Appendix B of the *Caltrans Storm Water Quality Handbook Maintenance Staff Guide, May 2003*, and its addenda.

²⁸ Scheduling and Planning; Spill Prevention and Control; Sanitary/Septic Waste Management; Material Use; Safer Alternative Products; Vehicle/Equipment Cleaning, Fueling, and Maintenance; Illicit Connections Detection, Reporting and Removal; Illegal Spill/Discharge Control and Maintenance Facility Housekeeping Practices.

Table 10. BMPs at Vehicle Maintenance/Material Storage Facilities/Corporation Yards
From the Caltrans Storm Water Quality Handbook Maintenance Staff Guide
Appendix B (May 2003²⁹)

Activity Specific BMPs	Page
General BMPs	B-4
Flexible Pavement	B-9
Asphalt Cement Crack and Joint Grinding/Sealing	B-9
Asphalt Paving	B-10
Structural Pavement Failure (Digouts) Pavement Grinding and Paving	B-11
Emergency Pothole Repairs	B-13
Sealing Operations	B-14
Rigid Pavement	B-15
Portland Cement Crack and Joint Sealing	B-15
Mudjacking and Drilling	B-16
Concrete Slab and Spall Repair	B-17
Slope/Drains/Vegetation	B-19
Shoulder Grading	B-19
Non-landscaped Chemical Vegetation Control	B-21
Non-landscaped Mechanical Vegetation Control/Mowing	B-23
Non-landscaped Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal	B-24
Fence Repair	B-25
Drainage Ditch and Channel Maintenance	B-26
Drain and Culvert Maintenance	B-28
Curb and Sidewalk Repair	B-30
Litter/Debris/Graffiti	B-32
Sweeping Operations	B-32
Litter and Debris Removal	B-33
Emergency Response and Cleanup Practices	B-34
Graffiti Removal	B-36
Landscaping	B-37
Chemical Vegetation Control	B-37
Manual Vegetation Control	B-39
Landscaped Mechanical Vegetation Control/Mowing	B-40
Landscaped Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal	B-41
Irrigation Line Repairs	B-42
Irrigation (Watering), Potable and Nonpotable	B-43
Environmental	B-44

²⁹ Including future updates and revisions.

Activity Specific BMPs	Page
Storm Drain Stenciling	B-44
Roadside Slope Inspection	B-45
Roadside Stabilization	B-46
Storm Water Treatment Devices	B-48
Public Facilities	B-50
Bridges	B-52
Welding and Grinding	B-52
Sandblasting, Wet Blast with Sand Injection and Hydroblasting	B-54
Painting	B-56
Bridge Repairs	B-57
Other Structures	B-59
Pump Station Cleaning	B-59
Tow Truck Operations	B-63
Electrical	B-65
Sawcutting for Loop Installation	B-65
Traffic Guidance	B-67
Thermoplastic Striping and Marking	B-67
Paint Striping and Marking	B-68
Raised/Recessed Pavement Marker Application and Removal	B-70
Sign Repair and Maintenance	B-71
Median Barrier and Guard Rail Repair	B-73
Emergency Vehicle Energy Attenuation Repair	B-75
Snow and Ice Control	B-76
Snow Removal	B-76
Ice Control	B-77
Storm Maintenance	B-78
Minor Slides and Slipouts Cleanup/Repair	B-78
Management and Support	B-80
Building and Grounds Maintenance	B-80
Storage of Hazardous Materials (Working Stock)	B-82
Material Storage Control (Hazardous Waste)	B-84
Outdoor Storage of Raw Materials	B-85
Vehicle and Equipment Fueling	B-86
Vehicle and Equipment Cleaning	B-87
Vehicle and Equipment Maintenance and Repair	B-88
Aboveground and Underground Tank Leak and Spill Control	B-90

- (b) Each Co-Permittee shall obtain coverage under the Construction General Permit no later than April 1, 2010 for long-term maintenance projects, including maintenance or replacement of streets, sidewalks, roads, and any other project that a Co-Permittee undertakes including

all Capital Improvement Projects (CIP) if either one or more acres of land are disturbed by grading, clearing or excavation activities.

3. The Co-Permittees shall implement the Fishnet 4-C or an equivalent manual for road maintenance projects as well as the BMPs described below.
4. Roadway Paving or Repaving Operations (For Private or Public Projects)
 - (a) Each Co-Permittee shall require that for any project that includes roadbed or street paving, repaving, patching, digouts, or resurfacing roadbed surfaces, that the following BMPs be implemented for each project:
 - (1) Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions;
 - (2) Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat;
 - (3) Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or watercourses;
 - (4) Minimize non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt;
 - (5) Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly;
 - (6) Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly;
 - (7) Collect solid waste by shoveling and vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly;
 - (8) Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm;
 - (9) Cover loads with tarp before haul-off to a storage site, ensuring that trucks are not overloaded;
 - (10) Minimize airborne dust by using water spray during grinding; and
 - (11) Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or watercourses.
5. Streets and Roads
 - (a) Maintenance
 - (1) Each Co-Permittee shall perform street sweeping of curbed streets areas subject to high trash generation six times per year.

- (2) Each Co-Permittee shall perform street sweeping of curbed streets in residential and commercial areas identified in their SWMP at least four times per year.
 - (b) Road Construction and Reconstruction
 - (1) Each Co-Permittee shall implement the following BMPs for road reconstruction:
 - (A) Storm drain inlet protection from sediments;
 - (B) Dewatering of below grade construction areas;
 - (C) Secondary containment for cold mix;
 - (D) Sheeting underneath and covering cold mix (during storage) to prevent discharge of spray release; and
 - (E) If concrete will be used on site, Co-Permittees shall provide a vehicle wash off area that is isolated from the MS4.
 - (c) Post-Construction Controls
 - (1) Municipal activities involving pothole repairs and square cut patching will not trigger post construction controls.
- 6. Each Co-Permittee shall protect debris and material stockpiles from rain or wind erosion with a cover or sediment barriers.
- 7. Vehicle and Equipment Wash Areas
 - (a) Each Co-Permittee shall eliminate discharges of untreated wash waters from the washing of vehicles and equipment no later than October 1, 2011, by implementing any of the following measures at existing facilities with vehicle or equipment wash areas:
 - (1) Infiltrate on-site;
 - (2) Self-contain, and haul off for disposal;
 - (3) Equip with a clarifier;
 - (4) Equip with an alternative pre-treatment device; or
 - (5) Plumb to the sanitary sewer with permission from the sewerage agency.
 - (b) Each Co-Permittee shall ensure that any municipal facilities constructed, redeveloped, or replaced have all vehicle and equipment wash areas routed to a vegetated or gravel area for infiltration, plumbed to the sanitary sewer, or hauled away for legal disposal.
- 8. Landscape, Park, and Recreational Facilities Management
 - (a) Integrated Pest Management (IPM)
 - (1) IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Each Co-Permittee shall implement a jurisdiction-wide IPM program incorporating the following principles:

- (A) Pesticides are used only if evaluation indicates they are needed and are applied according to established guidelines;
 - (B) Treatments are made with the goal of removing only the target organism;
 - (C) Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial, non-target organisms, and the environment;
 - (D) The use of pesticides, including Organo-phosphates and Pyrethroids does not threaten water quality;
 - (E) Partnerships with other agencies and organizations to encourage the use of IPM;
 - (F) Adoption and verification of implementation policies, procedures, and/or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) in the Co-Permittees' overall operations and on municipal property;
 - (G) Policies, procedures, and ordinances shall include commitments and timelines to reduce the use of pesticides that cause impairment of surface waters by implementing the following procedures:
 - (i) Quantify pesticide use by its staff and hired contractors;
 - (ii) Prepare and annually update an inventory of pesticides used by all internal departments, divisions, and other operational units
 - (iii) Continue programs to reduce pesticide use to MEP; and
 - (iv) Demonstrate reductions in pesticide use.
- (b) Each Co-Permittee shall implement the following requirements no later than January 1, 2010:
- (1) Use a standardized protocol for the routine and non-routine application of pesticides (including pre-emergents), and fertilizers;
 - (2) Ensure pesticides or fertilizers are not applied to an area immediately prior to, during, or immediately after a rain event, or when water is flowing off the area;
 - (3) Ensure that no banned or unregistered pesticides are stored or applied;
 - (4) Ensure that all staff applying pesticides are certified in the appropriate category by the California Department of Pesticide Regulation, or are under the direct supervision of a pesticide applicator certified in the appropriate category;
 - (5) Implement procedures to encourage the retention and planting of native vegetation to reduce water, pesticide and fertilizer needs;

- (6) Store pesticides and fertilizers indoors or under cover on paved surfaces or use secondary containment, and:
 - (A) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills; and
 - (B) Regularly inspect storage areas.

- 9. Storm Drain Operation and Management and Trash Management
 - (a) Catch Basin³⁰ Cleaning
 - (1) Each Co-Permittee shall designate catch basin inlets within its jurisdiction as one of the following:
 - (A) Priority A: Catch basins that are designated as consistently generating the highest volumes of trash and/or debris;
 - (B) Priority B: Catch basins that are designated as consistently generating moderate volumes of trash and/or debris; or
 - (C) Priority C: Catch basins that are designated as generating low volumes of trash and/or debris.
 - (2) Each Co-Permittee shall submit a catch basin cleanout plan that describes the criteria used to categorize catch basins in the priority system described above, including number of catch basins included in each priority level for Executive Officer approval by October 1, 2010.
 - (3) Each Co-Permittee shall inspect and clean catch basins as necessary, but at least consistent with the following schedule:
 - (A) Priority A: A minimum of 2 times during the wet season and once during the dry season every year;
 - (B) Priority B: A minimum of once per year; and
 - (C) Priority C: As needed, but not less than a minimum of once per permit term.
 - (4) In addition to the preceding schedule, Co-Permittees shall ensure that any catch basin that is at least 25% full of trash and/or debris shall be cleaned out.
 - (b) Trash Management at Public Events
 - (1) Each Co-Permittee shall require for any public event, permitted private event or wherever it is foreseeable that substantial quantities of trash and litter may be generated, that the following measures are implemented:
 - (A) Conditions be placed on any special use permit issued for such event to control and clean up trash; and
 - (B) Require the proper management of trash and litter generated; and
 - (C) Arrange for temporary screens to be placed on storm drain inlets; or

³⁰ Catch basins are storm drain inlets that include a sump to trap debris.

- (D) Clean out storm drain inlets, trash receptacles, and grounds as needed in the event area in a timely manner.
- (c) Trash Receptacles
 - (1) Each Co-Permittee shall install trash receptacles in areas subject to high trash generation (such as transit stops and schools) within its jurisdiction no later than October 1, 2011; and
 - (2) Each Co-Permittee shall ensure that trash receptacles are cleaned out and maintained as necessary to prevent trash overflow.
- (d) Storm Drain Inlet Labels
 - (1) Each Co-Permittee shall inspect 20% of the storm drain inlets on an annual basis for the legibility of the stencil or label nearest each inlet when performing storm drain inspections and maintenance.
 - (2) Each Co-Permittee shall record and re-stencil or re-label within 15 days of inspection, storm drain inlets with illegible stencils.
- (e) Trash Excluders
 - (1) The Co-Permittees shall consider installing trash excluders, or equivalent devices on storm drain inlets or outlets to prevent the discharge of trash to the storm drain system or from the storm drain system if a grant or other funding source becomes available.
- (f) Storm Drain Maintenance
 - (1) Each Co-Permittee shall implement a program for storm drain maintenance no later than October 1, 2010 that includes the following:
 - (A) Visual monitoring of prioritized Co-Permittee-owned open channels and other drainage structures for debris at least annually;
 - (B) Remove trash, debris and sediment as needed from open channels and roadside ditches in priority areas a minimum of once per year before the storm season;
 - (C) Use adequate BMPs to eliminate the discharge of contaminants during MS4 maintenance and clean outs; and
 - (D) Quantify the amount of materials removed using best estimates and ensure the materials are properly disposed of.
- (g) Spill Response Plan
 - (1) Each Co-Permittee shall implement a response plan for spills to the MS4 within their respective jurisdiction. The response plan shall clearly identify agencies required to respond, telephone numbers and e-mail addresses for contact and shall contain at a minimum the following:
 - (A) Initiation of investigation of all complaints received within one (1) business day or 24 hours, if there is an immediate threat to public health or beneficial uses, of the incident report;

- (B) Response within 2 hours upon notification of spills; and
 - (C) Immediate notification of spills to appropriate sewer and public health agencies, Sonoma County Department of Emergency Services (DES) and the California Emergency Management Agency (CalEMA).
- (h) Co-Permittee Owned Treatment Control BMPs
- (1) Each Co-Permittee shall implement an inspection and maintenance program for all Co-Permittee owned treatment control BMPs, including post-construction treatment control BMPs.
 - (2) Each Co-Permittee shall ensure proper operation of all treatment control BMPs and maintain them as necessary for proper operation, including all post-construction treatment control BMPs.
 - (3) Any residual water not internal to the BMP performance within a treatment control BMP when being maintained shall be:
 - (A) Hauled away and legally disposed of;
 - (B) Discharged to the sanitary sewer system (with permits or authorization); or
 - (C) Treated or filtered to remove sediments and oil and grease, and meet the limitations set in Table 11 (Discharge Limitations for Dewatering Treatment BMPs) prior to discharge to the MS4.

Table 11. Effluent Discharge Limitations for Dewatering Storm Water Treatment BMPs³¹

Parameter	Units	Limitation
Total Suspended Solids	mg/L	100
Turbidity	NTU	50
Oil and Grease	mg/L	10

10. Emergency Procedures
- (a) Each Co-Permittee may conduct repairs of essential public service systems and infrastructure in emergency situations with a self-waiver of the provisions of this Order.
 - (1) Where the self-waiver has been invoked, the Co-Permittee shall submit to the Regional Water Board Executive Officer a statement of the occurrence of the emergency, an explanation of the circumstances, and the measures that were implemented to reduce the threat to water quality, no later than 10 business days after the situation of emergency has passed.

³¹ Technology based effluent limits.

11. Municipal Employee and Contracted Municipal Employee Training
 - (a) Co-Permittees are required to either perform the training required by this section or obtain written verification of equivalent training from any contractors that manage facilities, perform tasks, or provide services to the Co-Permittees that may affect storm water quality.
 - (b) Each Co-Permittee shall, no later than October 1, 2010 and annually thereafter, train all of their employees in targeted positions (whose interactions, jobs and activities may affect storm water quality) on the requirements of the storm water program to:
 - (1) Promote a clear understanding of the potential for activities to pollute storm water; and
 - (2) Identify opportunities to require, implement, and maintain appropriate BMPs in their line of work.
 - (c) Each Co-Permittee shall, no later than October 1, 2010 and annually thereafter, train all of their employees who use or have the potential to use pesticides or fertilizers; training programs shall address:
 - (1) The potential for pesticide-related surface water toxicity;
 - (2) Proper use, handling, storage, and disposal of pesticides;
 - (3) Least toxic methods of pest prevention and control, including IPM; and
 - (4) Reduction of pesticide use.
 - (d) Each Co-Permittee shall, no later October 1, 2010 and annually thereafter, train all of their employees who are responsible for investigating illicit connections and illicit/illegal discharges. The training program shall address:
 - (1) Identification;
 - (2) Investigation;
 - (3) Termination;
 - (4) Cleanup;
 - (5) Reporting of incidents; and
 - (6) Documentation of incidents.

PART 10 – Illicit Connections and Illicit Discharges Elimination Program

1. Each Co-Permittee shall implement a program to eliminate all illicit connections and illicit discharges (IC/ID) to the storm drain system, and shall document, track, and report all such cases in accordance with the elements and performance measures specified in the following subsections.
2. General Program Implementation
 - (a) Each Co-Permittee shall implement an IC/ID program. The IC/ID procedures shall be documented and made available for public review.
 - (b) Tracking

- (1) All Co-Permittees shall, no later than October 1, 2013, map or document all³² permitted connections to their storm drain system and include this in their next submitted annual report.
 - (2) All Co-Permittees shall maintain a database for recording information related to IC/ID and, to the extent possible, use mapping to assist in evaluating the data. Co-Permittees shall use this information to identify priority areas for further investigation and elimination of IC/ID.
 - (c) Co-Permittees shall include a summary of inspections, complaint response, investigation, enforcement and result of IC/ID activities in each annual report.
3. Public Reporting
 - (a) Co-Permittees shall establish and maintain a phone hotline and internet site to receive all reports of IC/ID complaints within their jurisdictions. If a Co-Permittee receives a complaint in another jurisdiction, the Co-Permittee shall transmit the complaint to the appropriate entity.
 - (b) Co-Permittees shall document the location of the reported IC/ID and the actions undertaken in response to all IC/ID complaints.
4. Illicit Connections and Discharges
 - (a) Screening for Illicit Connections and Non-Storm Water Flows
 - (1) Co-Permittees shall conduct field screening of their storm drain outfalls that have not already been screened by October 1, 2014 for illicit connections and discharges including:
 - (A) All storm drain outfall pipes 36 inches in diameter or greater;
 - (B) Areas identified during the visual flow monitoring in Monitoring and Reporting Program R1-2009-0050; and
 - (C) All portions of storm drain systems 50 years or older in age.
 - (2) Each Co-Permittee shall maintain a list containing all connections under investigation and their status.
 - (3) The results of the field screening shall be submitted in the Annual Reports as the activities are completed.
 - (b) Response to Illicit Connections
 - (1) Investigation
 - (A) Each Co-Permittee, upon discovery or upon receiving a report of a suspected illicit connection, shall complete an investigation within 21 days, to determine the following:
 - (i) Source of the connection;
 - (ii) Nature and volume of discharge through the connection; and
 - (iii) Responsible party for the connection.

³² This means new connections and historic connections if documentation exists.

- (2) Termination
 - (A) Each Co-Permittee, upon confirmation of an illicit storm drain connection, shall ensure the following:
 - (i) Termination of the connection within 180 days of completion of the investigation, using formal enforcement authority to eliminate the illicit connection or submit information to the Regional Water Board justifying the status of non-compliance.
 - (3) Documentation
 - (A) Each Co-Permittee shall keep records of all illicit connection investigations and the enforcement actions taken to eliminate all illicit connections.
5. Illicit Discharges
- (a) Investigation
 - (1) Each Co-Permittee shall investigate illicit/illegal discharges during or immediately following containment and cleanup activities, and shall take appropriate enforcement action to eliminate the illegal discharge.
 - (b) Abatement and Cleanup
 - (1) Each Co-Permittee shall respond, within 1 business day of discovery or a report of a suspected illicit/illegal discharge, with actions to abate, contain, and clean up all illegal discharges, including hazardous waste or materials.
 - (c) Documentation
 - (1) Each Co-Permittee shall maintain records of all illicit/illegal discharge discoveries, reports of suspected illicit/illegal discharges, their response to the illicit/illegal discharges and suspected illicit/illegal discharges, and the enforcement actions taken to eliminate all illicit/illegal discharges and summarize these activities in the annual report.

PART 11 – Reporting Program

- 1. The Co-Permittees shall submit by December 15th of each year beginning the year of 2009, an Annual Report to the Regional Water Board Executive Officer in the form of one hard copy and one compact disk (CD) or an electronic equivalent.
 - (a) The Annual Report shall document the status of the storm water program, the results of monitoring conducted under Monitoring Program No. R1-2009-0050, progress on implementing measurable goals, and compliance with the SWMP and Order No. R1-2009-0050.

- (b) The Annual Report shall include the reports or tasks specified in this Order (including its attachments) and any Plans, Study Reports or Progress Reports developed by the Co-Permittees that would aid in assessing development of their storm water program and compliance with this Order.

Certification

I, Catherine Kuhlman, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on October 1, 2009.

Catherine Kuhlman
Executive Officer

California Regional Water Quality Control Board
North Coast Region

Monitoring and Reporting Program No. R1-2009-0050
NPDES No. CA0025054

For

The City of Santa Rosa, the County of Sonoma, and
the Sonoma County Water Agency

Storm Water and Non-Storm Water Discharges from Municipal Separate Storm Sewer
Systems

Sonoma County

Monitoring Program

1. The primary objectives of the Monitoring Program include, but are not limited to:
 - (a) Assessing the chemical, and biological impacts of storm water discharges on receiving waters resulting from urban storm water discharges;
 - (b) Assessing the overall health and evaluating long-term trends in receiving water quality;
 - (c) Assessing compliance with water quality standards;
 - (d) Characterization of the quality of storm water discharges;
 - (e) Identifying sources of pollutants; and
 - (f) Measuring and improving the effectiveness of requirements implemented under this Order and assessing the resultant reductions in pollutant loads.
2. The results of the monitoring requirements outlined below shall be used to refine BMPs for the reduction of pollutant loading and the protection and enhancement of the beneficial uses of the receiving waters in Sonoma County.
3. The Co-Permittees shall implement the Monitoring Program described below.

A. Chemical Monitoring

1. Outfall Mass Chemical Monitoring
 - (a) For each outfall, samples shall be collected in accordance with 40 CFR 122.21(g)(7).
 - (b) The Co-Permittees shall submit detection limits to the Regional Water Board for annual approval in the Annual Reports.
 - (c) Frequency: The Co-Permittees will be responsible for annually monitoring six outfalls within the Laguna de Santa Rosa watershed. Wet weather samples shall be flow weighted composites, collected during the first 24 hours or for the duration of the storm event if it is less than 24 hours. Samples shall be collected from an outfall discharge resulting from a storm event that is 0.25 inches or greater. The flow-weighted composite sample for a storm water discharge shall be taken with a continuous sampler, or it shall be taken as a combination of a minimum of 3 sample aliquots, taken in each hour of discharge for the first 24 hours of the discharge or for the entire discharge if the storm event is less than 24 hours, with each aliquot being separated by a minimum of 15 minutes

within each hour of discharge. The outfall locations shall be developed in consultation with Regional Water Board staff and shall be submitted to the Executive Officer for approval by January 1, 2010. The monitoring shall include four events per year (two events during the wet season and two events during the dry season) at each outfall. Flow may be estimated using U.S.EPA methods at sites where flow measurement devices are not feasible. Grab samples (or instantaneous automatic measurements) shall be taken only for pathogen indicators, hardness (as mg/L CaCO₃), pH, temperature, and DO.

(d) Outfall Chemical Monitoring Constituents:

Total Suspended Solids (TSS)	Total Phosphorus
pH	Orthophosphate
Temperature	13 Priority Pollutant Metals USEPA Method 200 ¹ or 6000/7000
Biological Oxygen Demand (BOD)	Fecal Coliform
Total Kjeldahl Nitrogen (TKN)	E. Coli
Nitrate as N	Enterococcus
Nitrite as N	Hardness as CaCO ₃
Ammonia	Dissolved Oxygen (DO)

2. Receiving Water Chemical Monitoring

- (a) The Co-Permittees shall submit detection limits to the Regional Water Board for annual approval in the Annual Reports.
- (b) Frequency: monthly grab samples on Santa Rosa Creek - one site upstream and one site downstream of the urban area of the City of Santa Rosa.
- (c) Receiving Water Monitoring Constituents:

TSS	Ammonia
pH	Total Phosphorus
Temperature	Orthophosphate
BOD	Fecal Coliform
TKN	E. Coli
Nitrate as N	Enterococcus
Nitrite as N	DO

B. Aquatic Toxicity Monitoring

- 1. The objective of aquatic toxicity monitoring is to evaluate if discharges from the MS4 are causing or contributing to aquatic life toxicity in receiving waters.
- 2. Chronic Bioassays
 - (a) Frequency: Twice per year during periods of storm runoff discharge, three locations in receiving waters (Santa Rosa Creek – two sites) and downstream from discharge outfalls (Colgan and Piner Creeks – one site

¹ Frequency is once during the term of this Order.

- per event). The storm events shall be separated by a minimum of seven days of dry weather.
- (b) Test species for chronic testing shall be a vertebrate, the fathead minnow, *Pimephales promelas* (larval survival and growth test), an invertebrate, the water flea, *Ceriodaphnia dubia* (survival and reproduction test), and a plant, the green alga, *Selenastrum capricornutum* (growth test).
3. Samples for toxicity can be taken as grab or flow-weighted composites samples during periods of urban storm runoff discharge influence on the receiving water, and can be collected manually or automatically.
 4. Sample storage (holding time) time shall not exceed 72 hours (from collection through lab processing).
 5. All constituents that caused toxicity or exceeded any applicable water quality objectives the previous year shall be listed in each Annual Storm Water Report.
 6. A summary of the years' aquatic toxicity monitoring results with corresponding sampling dates shall be included with the Annual Storm Water Report.

C. Bioassessment

1. The Co-Permittees shall perform a bioassessment on five creek reaches, once during the permit term following the procedures set out in the Surface Water Ambient Monitoring Protocol (SWAMP).

D. Special Studies

1. Temperature Monitoring
 - (a) Each year the Co-Permittees shall monitor ten sites on Santa Rosa, Brush, Colgan, and Paulin Creeks with remote data loggers during the low flow season.
2. Bacteria Monitoring
 - (a) The Co-Permittees shall use bacteria infrared aerial imagery over Santa Rosa Creek and tributaries upstream of the Prince Memorial Greenway to identify any potential sewage leaks or locations needing further investigation once during the permit term.
3. Visual Flow Monitoring
 - (a) Volunteers and Co-Permittees' staff shall visually monitor flows in streams and storm drain outfalls within the Co-Permittees' jurisdiction to detect summertime non-storm water flows or abnormal discharges. Data collected shall include photographs (if possible), estimates of flow rate, description of algae growth if found, and descriptions of color, odor, floatables, debris, etc. This data shall be used to investigate, as needed, the drainage area contributing to storm drain outfalls for non-storm water flows. This information will be summarized in Annual Reports.

4. Kelly Farm Nutrient Monitoring

- (a) The Co-Permittees shall monitor the Laguna Subregional Water Reclamation System's Kelly Farm for nutrient runoff during storm events. This program shall monitor surface water runoff from the Kelly Farm in Duer Creek. The Co-Permittees shall sample two runoff events per year for two years. Multiple samples per event must be collected from Duer Creek as it enters and leaves the Kelly Farm for ammonia, nitrate nitrogen, total nitrogen and phosphorus. The draft study plan shall be submitted to the Regional Water Board for Executive Officer approval. The study shall be completed and results submitted to the Regional Water Board as part of the Year 4 annual report.

5. BMP Effectiveness Special Study

- (a) The Co-Permittees are proposing to develop and implement a water quality based study to (1) provide storm drain outfall monitoring data, and (2) evaluate the effectiveness of specific BMPs through a controlled study. Storm water discharges will be collected and analyzed in response to rain events. BMPs will be installed and monitoring will be completed to quantify the effectiveness of the BMPs. The draft study proposal shall be submitted to the Regional Water Board for Executive Officer approval. Study results and findings and recommendations will be reported as part of the Year 4 annual report.

6. Volunteer Monitoring Programs

- (a) The Co-Permittees shall encourage or support the development and implementation of volunteer monitoring programs in watersheds within the permit boundary.

E. Standard Monitoring and Reporting Provisions

1. All monitoring activities shall meet the following requirements:

- (a) Monitoring and Records [40 CFR 122.41(j)(1)]
(1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (b) Monitoring and Records [40 CFR 122.41(j)(2)] [Water Code §13383(a)]
(1) The Co-Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge (ROWD) and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Water Board or U.S. EPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge.
- (c) Monitoring and Records [40 CFR 122.21(j)(3)]
(1) Records of monitoring information shall include:
(A) The date, time and exact location of sampling or measurements, weather conditions, and rain fall amount;

- (B) The individual(s) who performed the sampling or measurements;
 - (C) The date(s) analyses were performed;
 - (D) The individual(s) who performed the analyses;
 - (E) The analytical techniques or methods used;
 - (F) The results of such analyses; and
 - (G) The data sheets showing toxicity test results.
- (d) Monitoring and Records [40 CFR 122.21(j)(4)]
- (1) All sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this Order. If a particular Minimum Level (ML) is not attainable in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure may be used instead.
- (e) Monitoring and Records [40 CFR 122.21(j)(5)]
- (1) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both.
- (f) All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by an appropriate governmental regulatory agency.
- (g) For priority toxic pollutants that are identified in the CTR (65 Fed. Reg. 31682), the MLs published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (SIP) shall be used for all analyses, unless otherwise specified.
- (h) The Monitoring Report shall specify the analytical method used, the Method Detection Level (MDL) and the ML for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported with one of the following methods, as appropriate:
- (1) An actual numerical value for sample results greater than or equal to the ML;
 - (2) Not-detected (ND) for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used; or
 - (3) Detected, but Not Quantified (DNQ) if results are greater than or equal to the laboratory's MDL but less than the ML. The estimated chemical concentration of the sample shall also be reported. This is the concentration that results from the confirmed detection of the substance by the analytical method below the ML value.
- (i) For priority toxic pollutants, if the Co-Permittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration

standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Co-Permittees must submit documentation from the laboratory to the Regional Water Board Executive Officer for approval prior to raising the ML for any constituent.

- (j) Monitoring Reports [40 CFR 122.41(l)(4)(ii)]
 - (1) If the Co-Permittees monitor any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Annual Monitoring Reports.
- (k) Monitoring Reports [40 CFR 122.41(l)(4)(iii)]
 - (1) Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.
- (l) The Regional Water Board Executive Officer or the Regional Water Board, consistent with 40 CFR 122.41, may approve changes to the Monitoring Program, after providing the opportunity for public comment, either:
 - (1) By petition of the Co-Permittees or by petition of interested parties after submittal of the Monitoring Report. Such petition shall be filed not later than 60 days after the Monitoring Report submittal date; or
 - (2) As deemed necessary by the Regional Water Board Executive Officer following notice to the Co-Permittees.

Certification

I, Catherine Kuhlman, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on October 1, 2009.

Catherine E. Kuhlman
Executive Officer

MS4 Storm Water Permit

**City of Santa Rosa
Sonoma County
and the
Sonoma County Water Agency**

Fact Sheet

STATE OF CALIFORNIA

California Regional Water Quality Control Board
North Coast Region

FACT SHEET

for
Order No. R1-2009-0050
NPDES No. CA0025054
WDID No. 1B96074SSON

Waste Discharge Requirements

For

The City of Santa Rosa, the County of Sonoma, and
the Sonoma County Water Agency

Storm Water and Non-Storm Water Discharges
from Municipal Separate Storm Sewer Systems

Sonoma County

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Background of Storm Water Regulations

The federal Clean Water Act (CWA) prohibits the "discharge of any pollutant," 33 U.S.C. § 1311(a), from a "point source" into the navigable waters of the United States. 33 U.S.C. § 1362(12)(A). An entity can, however, obtain a National Pollutant Discharge Elimination System (NPDES) permit that allows conditionally for the discharge of some pollutants. 33 U.S.C. § 1342(a)(1). The CWA defines point sources as "discernible, confined and discrete conveyances, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure" such as a pipe, ditch, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. 33 U.S.C. § 1362; 40 CFR 122.2.

In 1987, the U.S. Congress amended the Clean Water Act to specifically require storm water discharges, including those from municipalities with populations 100,000 or greater, conveyed by a separate storm sewer system, to be addressed as point sources of pollution under the NPDES permit program. These municipalities were required to reduce the discharge of storm water pollutants to the maximum extent practicable (commonly referred to as the MEP standard) and to require the effective prohibition of non-storm water discharges into storm sewers. The U.S. and California Courts have since interpreted federal statutes to give the permitting authority the discretion to also require compliance with water quality standards. In addition, conditions in NPDES permits must be consistent with the assumptions of Total Maximum Daily Loads (TMDLs) that have been adopted.

The CWA amendments require NPDES permits for storm water discharges from Municipal Separate Storm Sewer Systems (MS4s) to waters of the United States. The storm water discharge permits for MS4s:

- (a) May be issued on a system- or jurisdiction-wide basis;
- (b) Shall include a requirement to effectively prohibit unauthorized non-storm water discharges into the storm sewers; and
- (c) Shall require controls to reduce the discharge of pollutants from storm water to the maximum extent practicable, including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. (See CWA §402(p)(3)(B)).

On November 16, 1990, pursuant to CWA § 402(p), the United States Environmental Protection Agency (U.S.EPA) promulgated regulations at section 122.26 of title 40 of the Code of Federal Regulations which established requirements for storm water discharges under the NPDES program. U.S.EPA defines storm water at 40 CFR 122.26 (b)(13) as 'storm water runoff, snow melt runoff, and surface runoff and drainage' (related to storm events or snow melt) (See also 55 Fed. Reg. 47990, 47995). Non-storm water discharges to the MS4 are to be "effectively prohibited" by the MS4 operator. "Effective prohibition" meant that the MS4 permittee was to implement programs to eliminate "illicit discharges" to the storm drain system unless authorized under NPDES permits issued independent of the MS4 permit.¹ (55 Fed. Reg. 47995). The storm water regulations also intended to not hold MS4 permittees responsible for certain categories of non-storm water discharges such as uncontaminated ground water infiltration, natural springs, rising groundwater, and stream diversions from the MS4. Such discharges might need to be addressed under independent NPDES permits when specifically identified on a case-by-case basis by the MS4 permittees or the permitting authority.

U.S.EPA intended that storm water discharges from the MS4 be primarily addressed through the implementation of Best Management Practices (BMPs) on an iterative approach because of the intermittent and variable nature of storm flows and pollutant concentrations as well as insufficient available effluent and receiving water data rather than numerical effluent limitations (61 FR 43761). However, U.S.EPA's scheme for non-storm water discharges from the MS4 is to bring them under the existing framework of the NPDES program at 40 CFR 122.44(d). (55 Fed. Reg. 47995). In any case, if the permittee fails to implement adequate BMPs to prevent exceedance of receiving water objectives, the permitting authority "may have to consider other approaches to water

¹ While MS4 permits generally contain exceptions for some non-storm water discharges, these exceptions do not extend to non-storm water discharges identified as a source of pollutants. (State Water Resources Control Board WQO No. 2009-0008, p. 9-10.)

quality protection" (61 Fed. Reg. 43761; *Interim Permitting Approach*, Response #6, EPA 833-D-96-00, 1996).

Legal Authority

The following statutes, regulations, and Water Quality Control Plans provide the basis for the requirements of Order No. R1-2009-0050:

- (a) Clean Water Act (CWA);
- (b) California Water Code (Water Code);
- (c) 40 CFR Parts 122, 123, 124 (National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, Final Rule);
- (d) Part II of 40 CFR Parts 9, 122, 123, and 124 (National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges, Final Rule);
- (e) Water Quality Control Plan – Ocean Waters of California (California Ocean Plan);
- (f) Water Quality Control Plan for the North Coast Basin (Basin Plan); and
- (g) 40 CFR 131 Water Quality Standards, Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California Rule (California Toxics Rule), and the California Toxics Rule Implementation Plan.

The legal authority citations below generally apply to requirements in Order No. R1-2009-0050 (Order), and provide the North Coast Regional Water Quality Control Board (Regional Water Board) with ample underlying authority to require each of the requirements of this Order.

CWA 402(p)(3)(B)(ii) requires that permits for discharges from municipal storm sewers "shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers."

CWA 402(p)(3)(B)(iii) requires that permits for discharges from municipal storm sewers "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."

CWA 402 prohibits the discharge of any pollutant to waters of the United States from a point source, unless that discharge is authorized by a NPDES permit. Though storm water runoff comes from a diffuse source, it is discharged through MS4s, which are point sources under the CWA. Federal NPDES regulation 40 CFR 122.26(a) (iii) and (iv) provide that discharges from MS4s, which service medium or large populations greater than 100,000 or 250,000 respectively, and interconnected MS4s, shall be required to obtain an NPDES permit. Federal NPDES regulation 40 CFR 122.26(a)(v) also provides that a NPDES permit is required for "A [storm water] discharge which the Director, or in states with approved NPDES programs, either the Director or the

U.S.EPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States." Such sources are then designated into the program. The discharges from the Co-Permittees' MS4s as detailed in the Fact Sheet, contribute to violations of water quality standards and are a contributor of pollutants to the Laguna watershed.

40 CFR 122.26(d)(2)(i)(B,C,E, and F) provide that each permittee's permit application "shall consist of: adequate legal authority. A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to: prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer; control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water; require compliance with condition in ordinances, permits, contracts or orders; and carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition of illicit discharges to the municipal separate storm sewer."

40 CFR 122.26(d)(2)(iv) provides that the permittee shall develop and implement a proposed management program which "shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. Proposed programs may impose controls on a system wide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. Proposed management programs shall describe priorities for implementing controls."

40 CFR 122.26(d)(2)(iv)(A - D) requires municipalities to implement controls to reduce pollutants in storm water runoff from new development and significant redevelopment, construction, and commercial, residential, industrial, and municipal land uses or activities. Control of illicit discharges is also required.

Water Code section 13377 provides that "Notwithstanding any other provision of this division, the State Board or the regional boards shall, as required or authorized by the CWA, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitation necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance."

Federal NPDES regulation 40 CFR 122.44(d)(1) requires MS4 permits to include any requirements necessary to "achieve water quality standards established under CWA