

**U.S. Environmental Protection Agency  
Region IX**

**California Regional Water Quality Control Board  
Los Angeles Region**

**Development Construction Program Review Report:  
Los Angeles County Municipal Storm Water  
NPDES Permit**

**August 2006**

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**Development Planning Program Review Report:**  
**Los Angeles County Municipal Storm Water NPDES Permit**  
**(NPDES Permit No. CAS004001)**

**EXECUTIVE SUMMARY**

The California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Regional Water Board), with assistance from Tetra Tech, Inc., on contract from the United States Environmental Protection Agency (USEPA) conducted a program review of five development construction programs implemented under the Los Angeles County Municipal Storm Water Permit (NPDES Permit No. CAS004001, Board Order No. 01-182) (LA County MS4 Permit). This review was conducted June 15-16, 2004 and included the cities of Calabasas, Carson, Glendora, Pomona, and Santa Clarita. The primary goal of the review was to determine implementation and compliance with terms and requirements contained in the LA County MS4 permit for the development and construction of both public and private projects. Secondary goals included the collection of program implementation information that could be used by the Los Angeles Regional Water Quality Control Board to compile a model or “recommended” Development Construction program, to identify key issues for improving the implementation of the Development Construction program for all co-permittees and the acquisition of data to be used in MS4 permit re-issuance and a review of program effectiveness.

This report builds on a review of Development Planning programs in Los Angeles County conducted by the Los Angeles Regional Water Board in 2003 (report available at: [http://www.waterboards.ca.gov/losangeles/html/programs/stormwater/susmp/LA\\_SUSMP\\_Nov03\\_%20Report\\_PDF.pdf](http://www.waterboards.ca.gov/losangeles/html/programs/stormwater/susmp/LA_SUSMP_Nov03_%20Report_PDF.pdf)). These reports are intended to educate all permittees under the Los Angeles municipal storm water permit program, to put them on notice for baseline compliance expectations, and to improve implementation in these targeted program areas.

This report comprises four sections. Section 1 provides an introduction and an overview of the review process. Section 2 provides case studies summarizing how each of the five permittee’s implement their construction development program. Section 3 describes key issues for improving implementation of Development Construction programs. Section 4 provides an outline of the Los Angeles Regional Water Board’s baseline Development Construction program with a listing of basic BMPs in Appendix A. Attached as Appendix B is a response to permittee comments.

Because the intent of this review was to determine the general implementation status of each permittee’s Development Construction program, the review team did not conduct formal permit compliance activities. However, the Los Angeles Regional Water Quality Control Board does intend to conduct formal compliance audit activities in the near future and for that reason has included key issues for improved implementation and a recommended development construction program in this report to serve as an example for future evaluations and/or audits.

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## **1.0 INTRODUCTION**

### **1.1 Program Review Purpose**

The goal of the review was to determine the implementation status of the development construction requirements by each of five copermitees. Secondary goals included the following:

- Identifying key issues for permittees to implement in improving the effectiveness of the Development Construction program.
- Collecting information to be used to develop a “recommended” Development Construction program.
- Verifying and documenting the review process.
- Acquiring data to be used in the MS4 permit re-issuance.

40 CFR 122.41(h) and 122.41(i) provide the authority to conduct the program review.

### **1.2 Permit History**

The municipal separate storm sewer system (MS4) permit was issued on December 13, 2001, and is scheduled to expire on December 12, 2006. The current third term permit, issued to the permittees, requires that each permittee implement the Los Angeles Countywide Storm Water Quality Management Program (SQMP) that includes a Development Construction program. The permittees were given the opportunity to develop and submit for approval an alternative SQMP but to date, no permittee has utilized that option. The Development Construction program requirements are specified in Part 4.E of the permit.

### **1.3 Municipal Programs Reviewed**

The Development Construction programs of five permittees were reviewed for this report. These permittees were:

- City of Calabasas
- City of Carson
- City of Glendora
- City of Pomona
- City of Santa Clarita

### **1.4 Logistics and Program Review Preparation**

Before initiating the on-site program review, the Los Angeles Regional Water Quality Control Board requested, in an April 9, 2004 letter, that each City submit prior to the review a summary of their development construction program. This summary was to include a description of their project review process and a list of construction projects and grading permits issued. The Los Angeles Regional Water Quality Control Board and Tetra Tech, Inc. staff reviewed that information and the following materials prior to the review:

- NPDES Permit No. CAS004001, Order No. 01-182;
- Countywide SQMP for Development Construction Program , County of Los Angeles, 2002;
- LA County MS4 Permittee Annual Program Reports 2002-2003;
- Summary of Development Construction program submitted by each permittee prior to the review; and
- Individual Permittee Web sites.

On June 15-16, 2004, the Los Angeles Regional Water Board staff, with assistance from Tetra Tech, Inc. personnel on contract to the USEPA, conducted the program review. The review schedule was as follows:

<b>Tuesday, June 15</b>	<b>Wednesday, June 16</b>	<b>Thursday, June 17</b>
<ul style="list-style-type: none"> <li>• Program review kickoff meeting</li> <li>• Office evaluation</li> <li>• Detailed review of approved construction plans</li> </ul>	<ul style="list-style-type: none"> <li>• Field review</li> <li>• Follow up on review of construction plans</li> </ul>	<ul style="list-style-type: none"> <li>• Exit interview</li> </ul>

Upon completion of the review, the review team held an exit interview via conference call with the permittees to discuss the preliminary findings. The review team presented a summary of each city’s review and general findings on development construction program implementation. During the exit interview, the attendees were encouraged to ask questions and discuss the findings and to provide additional information or answer questions.

**1.5 Development Construction Requirements**

The Development Construction program requirements appear in Part 4.E of the LA County MS4 permit. The Development Construction requirements address five major components (summarized below):

*Minimum Requirements for all construction sites (Part 4.E.1)*

Each permittee must ensure that the following requirements are implemented at all construction sites, regardless of size:

- Sediments are retained on-site
- Construction-related materials, waste, spills or residues are retained on-site
- Runoff from equipment and vehicle washing are retained on-site
- Control erosion from slopes and channels

*Require preparation of a Local SWPPP or State SWPPP and inspect sites (Part 4.E.2)*

Prior to issuing a grading permit, require either a Local SWPPP or a State SWPPP. The Local SWPPP must contain controls and BMPs at least equivalent to the State SWPPP. The Local SWPPP must include signed certification statements from the landowner and engineer.

All construction sites are to be inspected a minimum of once during the wet season. Non-compliant sites are to be re-inspected within two weeks.

*Verify and track NOIs (Part 4.E.3)*

Prior to issuing a grading permit, require proof that the project has prepared a SWPPP and submitted an NOI for coverage under the General Construction Activity Storm Water Permit (GCASP). For projects with a change in ownership, require proof of NOI and SWPPP. Each permittee shall also track grading permits issued.

*GCASP Violation Referrals (Part 4.E.4)*

Refer violations of the municipal storm water permit or GCASP to the Los Angeles Regional Water Board.

*Employee Training (Part 4.E.5)*

Train employees in targeted positions at least annually regarding the requirements of the storm water program.

## 2.0 CASE STUDIES

The following table provides population and land area for each of the five permittees. The type of development activity with each permittee's jurisdiction also varies, with some permittee's construction activity consisting primarily of smaller in-fill redevelopment projects while other permittee's construction consists primarily of large-scale new development projects.

**Table 1. Permittee Summary**

Permittee Name	Population	Area (square miles)
Calabasas	20,000	12.9
Carson	90,000	19
Glendora	53,000	19.7
Pomona	158,000	30
Santa Clarita	162,900	46.7

Sources: Information supplied by the permittees during the review.

The following case studies are organized into seven sections, which generally follow the model Development Construction program from the County of Los Angeles. The following case studies summarize how each permittee addresses the following components:

- Legal Authority
- Construction Site Inventory
- Construction Requirements and BMPs
- Plan Review Procedures
- Construction Inspections
- Enforcement
- Training

### 2.1 City of Calabasas

#### 2.1.1 Legal Authority

The City of Calabasas relies on Title 8 Health and Safety, Title 17 Land Use and Development, City Ordinance No. 97-117 and other enforcement sections of the Municipal Code to require permits and oversee their implementation for any proposed land use or development involving grading activities, or the construction of new structures or paving.

Chapters 17.52 Grading Permit Requirements and Chapter 8.28 Storm Water and Runoff Pollution Prevention Controls provides the City's legal authority to require implementation of the Development Construction, New Development and Redevelopment controls for private and public projects within the City boundaries. In addition the City has a number of Administrative Policies and Procedures issued by the Public Works Director/City Engineer also governing the implementation of storm water pollution prevention controls. The City is in the process of reviewing and amending, if necessary, the legal authority for the new thresholds for sites requiring coverage under the General Construction Activities Storm Water Permit (GCASP) and industrial/commercial development projects under SUSMP.

An overview of the City's entire development process is provided on the City's website (<http://www.cityofcalabasas.com/abc.html>).

### **2.1.2 Construction Site Inventory**

The City tracks electronically all construction projects disturbing greater than one acre that have grading plans and SWPPPs. The City maintains plan review and approval information in a series of active hardcopy project folders. The folders contain basic site information, WDID permit number, grading permit issuance date, the site's plan review status, and SUSMP applicability with the appropriate post-construction BMPs noted. This information is updated on a regular/continuous basis and the City provided a print out of an MS Excel spreadsheet that contained an inventory of projects active since July 1, 2003. The City staff mentioned that they have plans to integrate storm water construction and new development/redevelopment activities tracking procedures in the future with the existing municipal databases, but that is conditioned by the availability of funds to upgrade the existing citywide database system.

Prior to March 2003, the grading permits were issued and tracked manually. All grading permits were kept in annual files with a handwritten log of issued permits stapled to the inside cover. In March 2003, the grading permit forms were added to the Community Development Department's electronic permitting system.

### **2.1.3 Construction Requirements and BMPs**

The certification statement required by the City on SWPPPs is similar, but not identical, to that required by the permit. Beginning on March 10, 2003, the City has required sites disturbing one acre or greater of land to furnish proof of GCASP coverage via copy of NOI or providing the WDID number and proof that a SWPPP has been prepared.

Projects that do not require a SWPPP are still required to use minimum BMPs to control the quality of the storm water runoff. For CIP projects less than one acre, the City does not aggregate these to determine if they are above one acre of disturbance and therefore part of a larger common plan of development.

The City's process for BMP selection generally coincides with the 4 standard elements of the model program guidance (sediment control, erosion control, site management, and materials and waste management). The City relies on the State of California Storm Water BMP Handbook for the list of BMPs proposed for construction sites. City engineering staff compares if the proposed selection of BMPs meets at least the minimum requirements.

Maintenance covenants are required for SUSMP BMPs to help ensure that post-construction BMPs remain effective in the long term.

### **2.1.4 Plan Review Procedures**

The City uses a tiered approach to condition projects as Exempt, General Construction Permit or Local SWPPP/WWECP. Minimum Storm Water Pollution Controls are required for all development construction projects regardless of size. Projects identified as falling in their respective mandatory categories are required to comply with Local SWPPP/WWECP or GCASP SWPPP conditions prior to issuance of a grading permit. The City requires all projects in or adjacent to an environmentally sensitive area, located in a hillside area and soil disturbance will occur on site during the rainy season, and projects that include concrete, gunite or plaster construction activities to submit a Local SWPPP/WWECP for review and approval prior to issuance of a grading or building permit. The City, prior to the start of construction activities, must also approve the grading plans. The City provides applicants with user-friendly checklists to guide them through the process and development construction requirements are communicated to applicants in advance. The City accepts the GCASP SWPPP in lieu of the Local SWPPP/WWECP for sites with activities resulting in soil disturbance of one acre and above.

Grading permits can only be issued for sites disturbing one acre and greater if applicants demonstrate evidence of permit coverage, which can be accomplished by showing an NOI documenting coverage under the state GCASWP or providing a WDID number assigned by the state, depending on the timing of the application, and a SWPPP.

Public projects go through the same process of review, conditioning, approval and enforcement as the private projects. Large Public projects, such as the future City Hall construction, also utilize the DRC process to ensure that all department needs are identified early in the process.

The City applies standard conditions, which incorporate erosion and sediment control requirements, into its plan review process by reviewing grading plans, drainage plans, and SWPPPs. City engineering staff (and their consultant) conducts plan check (reviews) using the California Storm Water BMP Manual to ensure that standard practices have been identified and specified on plans.

### **2.1.5 Construction Inspections**

The City address all phases of construction in its inspection process by using a combination of the Public Works (PW) Inspector for all sites requiring State SWPPP and a Building Inspector for sites requiring a SWPPP that have active building permit. In addition, the PW inspector conducts compliance site visits at sites requiring a Local SWPPP/WWECP that are within the Public ROW. The Environmental Service Manager (ESM) also conducts compliance inspections at all sites not covered by other inspectors, including follow-up enforcement from referrals from the other inspectors. The Code Enforcement Officer also can support enforcement activities, if necessary.

The City inspects all construction sites for storm water quality requirements at least once during the wet season, defined as October to May. Given the relatively light pace of construction activity, the City actually inspects active sites on a much more frequent basis.

Once building permits are issued, the building inspectors enforce the SWPPP requirements at required building inspection milestones. The building inspectors also have various other responsibilities. When they arrive to conduct a requested building inspection, they note any SWPPP violations and will delay construction until the site is brought into compliance. Typically, one verbal notice that something needs remedy prior to providing the required inspection is all that it takes because the contractor cannot proceed to the next construction step without the requested inspection approval. If a building inspector has a problem site, they request support from the ESM to bring the site into compliance.

### **2.1.6 Enforcement**

Typical enforcement actions used by the City include verbal warnings, written Non-Compliance notices, or Notice of Pollution Violation followed by issuance of stop work orders if the problem is not resolved. The only written documentation of the verbal warnings is the PW inspector's logbook.

### **2.1.7 Training**

City staff participates in joint training sessions related to storm water requirements implementation as scheduled by the Malibu Creek and Rural Areas Watershed Management Committee. The ESM constantly trains the other inspectors. Retraining/updates occur at least annually.

The City is not presently providing either education or training to developers and contractors on the development construction program requirements, however it coordinates these activities with the Malibu Watershed Committee.

## 2.2 City of Carson

### 2.2.1 Legal Authority

The City has adopted by reference the Building Code of the County of Los Angeles. Section 106.4.3 of the County's Building Code require plans for a building or grading permit to "show all mitigation measures required under the National Pollutant Discharge Elimination System (NPDES) permit issued to the County of Los Angeles." Appendix Chapter 33 of the Code, Section 3319, describes the NPDES requirements in more detail. This includes the development of a SWPPP for all projects requiring a grading permit, and a wet weather erosion control plan (WWECP) when grading will occur after November 1.

### 2.2.2 Construction Site Inventory

The County has developed a database to track the plan review process. Information such as location, size, owner and permit application date is tracked for each permit issued in the City. The database does not currently track inspection information, which is kept by the inspector in paper files.

### 2.2.3 Construction Requirements and BMPs

For projects disturbing greater than one acre and subject to the GCASP, the City requires the development of a local SWPPP and verifies that a State SWPPP has been developed. The City also verifies GCASP coverage via a copy of the NOI or WDID number. For projects disturbing less than one acre, the City requires a local SWPPP if a grading permit is issued.

For CIP projects less than one acre, the City does not aggregate these to determine if they are above one acre of disturbance and therefore part of a larger common plan of development.

### 2.2.4 Plan Review Procedures

The City of Carson contracts with the County of Los Angeles Department of Public Works, Building and Safety Division and Land Development Division to review storm water plans (Carson is one of 17 cities that contracts with the County to provide plan review and/or inspection services). The County uses a "Local Storm Water Pollution Prevention Plans (Local SWPPP) and Wet Weather Erosion Control Plans (WWECP) Correction Sheet" as a checklist during each review. The County requires a Local SWPPP, which is reviewed, but does not review the State SWPPP (if a separate plan is submitted).

This correction sheet describes in detail the plan requirements and BMPs required on the plans. This includes:

- *Site plan requirements*, including the identification of drainage structures and slopes
- *General site management BMPs*, including areas for vehicle fueling and site entrance locations with BMPs to control tracking
- *Construction materials and waste management BMPs*, which require spill prevention and control and the location of concrete truck washouts, waste collection areas and material storage areas
- *Erosion and sediment control BMPs*, including erosion control details and BMPs to prevent off-site discharges
- *General Notes*, which describe typical maintenance and management practices.

The correction sheet also contains a certification statement for the owner to sign and self-inspections requirements and a checklist.

### **2.2.5 Construction Inspections**

A County Senior Building Inspector, under contract to the City, conducts all storm water inspections at construction sites. The City has approximately 10-15 construction sites larger than one acre; therefore the inspector visits these sites more frequently than the permit requirement of once during the wet season.

The Senior Building Inspector routinely inspects projects greater than one acre weekly, and conducts wet weather inspections after rain events.

### **2.2.6 Enforcement**

The primary mechanism to ensure compliance at construction sites is a verbal notice. The verbal notices have not been recorded in writing in the past; however the City acknowledged the need to document these verbal notices for reporting purposes. After a verbal notice a written warning is issued. The threat of a stop work order is used to gain compliance, but stop work orders are rarely issued.

If necessary, significant, continuing non-compliance would be referred to the Los Angeles Regional Water Quality Control Board.

### **2.2.7 Training**

The City holds annual training for staff conducted by its consultant, and also periodically participates in regional training sponsored by the County or others. The City conducts one-on-one training with contractors and their subcontractors of capital improvement projects within the City.

The County has developed a brochure titled "Water Quality Regulations for Home Improvement and Construction Projects" that describes NPDES and BMP requirements for construction sites. This brochure is available at the City and distributed to permit applicants. Recognizing the need for proper BMP installation and maintenance, the City plans to conduct one-on-one training with developers similar to the training it provides CIP contractors.

## **2.3 City of Glendora**

### **2.3.1 Legal Authority**

The City's legal authority consists of Ordinance #1722, which amends the Glendora Municipal Code and was last updated on August 17, 2000 and adopted on October 24, 2000. Since March 10, 2003, grading permits can only be issued for sites disturbing one acre and greater if applicants document issuance of a Waste Discharge Identification (WDID) number assigned by the state.

The City of Glendora relies on Chapter 33 of the California Building Code to require permits for excavation and grading at sites where 50 or more cubic yards of material is moved. Grading and drainage plans for sites disturbing less than one acre can be required based on site-specific conditions and construction activities. Relevant basic information is also provided on plot plans per Chapter 19.02 of the Uniform Building Code.

### **2.3.2 Construction Site Inventory**

The City manually tracks all construction projects disturbing greater than and less than one acre that have grading plans and SWPPPs and maintains plan review and approval information in a series of active project notebooks. The notebooks contain basic site information, WDID permit number, grading permit issuance date, the site's plan review status, and SUSMP applicability with the appropriate post-construction BMPs noted. This information is manually updated on a regular/continuous basis and the City provided a print out of an MS Word file developed from the notebooks to create an inventory that contained projects of all sizes active since July 1, 2003. In order to provide this information, City engineering staff had to go through an exercise similar to what they do when putting together the information used in preparing their MS4 annual report. The City mentioned that they have plans to automate construction activity tracking procedures in the future with a web-based database system.

The City indicated that in the future it hopes to use the same web-based system in conjunction with hand-held field units to track inspections and enforcement actions. Currently, however, the City also uses a manual system to track construction activity inspections. The Public Works (PW) inspector maintains a log of his "Inspector's Daily Report" sheets, which are filled out throughout the workday by the inspector.

### **2.3.3 Construction Requirements and BMPs**

Implementation of minimum BMPs is required on all sites and SWPPPs are required to be prepared and submitted to the City for review for sites that require grading and/or drainage plan. The minimum BMPs typically include properly installed perimeter controls such as sand bag barriers or silt fence, catch basin inlet protection, stabilized construction entrances, covered trash receptacles, and proper storage and management of significant materials to prevent contact with runoff. Development construction requirements are communicated to applicants before grading permit applications are issued.

The certification statement required by the City on SWPPPs is similar, but not identical, to that required by the permit. Beginning on March 10, 2003, the City has required sites disturbing one acre or greater of land to furnish proof of GCASWP coverage via copy of NOI or providing the WDID number and proof that a SWPPP has been prepared.

The City stated that they do not have CIP projects that, when aggregated, result in one acre or greater of disturbance as part of a larger common plan of development although they said that they recognize that this could happen and if it did they then would need to be permitted.

Projects that do not require a SWPPP are still required to use minimum BMPs, although these are determined at the discretion of the City engineering staff based on their judgment of site conditions and site-specific activities.

The City's process for BMP selection generally coincides with the 4 standard elements of the model program guidance (sediment control, erosion control, site management, and materials and waste management). The City appears to rely strongly on the State of California Storm Water BMP Handbook for assessing the BMPs proposed for construction sites. City engineering staff evaluate the design and selection of nonstructural and structural construction BMPs for the 4 categories identified above.

#### **2.3.4 Plan Review Procedures**

The City applies standard conditions, which incorporate erosion and sediment control requirements, into its plan review process by reviewing grading plans, drainage plans, and SWPPPs. City engineering staff (and their consultant) conducts plan check (reviews) using the California Storm Water BMP Manual to ensure that standard practices have been identified and specified on plans.

The only difference in the plan review process for public projects is that city engineering staff determines the appropriate minimum BMPs for linear projects disturbing less than one acre that are applicable to the Municipal Agency Program.

#### **2.3.5 Construction Inspections**

The permit requires the City to inspect construction sites at least once during the wet season, but because of the relatively low level of construction activity the Public Works inspector typically tries to visit each of the active and not-yet stabilized construction projects on a daily basis. This is primarily how continuity is maintained between required action items noted in the inspector's daily report and appropriate follow up action by the construction site operator. If the PW inspector determines that a significant or recurring problem exists, he can issue a stop work order at the construction site. The PW inspector has a large variety of responsibilities in addition to inspecting construction sites.

The PW inspector typically does not visit the site on a daily basis once the mass-grading phase of the project is complete (but before the site is stabilized). Responsibility for the day-to-day construction storm water program inspections then rests with one of two building inspectors employed by the City. The building inspectors also have the authority to issue stop work orders for reasons related to the construction storm water program but obviously are charged with various other responsibilities.

#### **2.3.6 Enforcement**

The City refers construction general permit non-filers to the Los Angeles Regional Water Quality Control Board and periodically "threatens" repeat offenders (i.e., violators) by indicating that the state will be inspecting/enforcing the permit. Generally, the City handles its violations internally via stop work orders.

Typical enforcement actions used by the City include verbal warnings followed by issuance of stop work orders if the problem is not resolved. The only written documentation of the verbal warnings is the PW inspector's daily report.

The City can and does charge "reinspection fees" in the range of \$40 to \$80 rather than fines. Such fees are usually assessed after repeated verbal warnings have been issued to correct a problem and after a "drive by" reinspection, and perhaps in conjunction with a stop work order. The City indicated that they issue about one stop work order per quarter. As described above, verbal warnings are not well documented beyond the inspector's daily report, so the history of such actions is difficult to track.

### **2.3.7 Training**

City Engineering Department and Planning Department staff received a full day's training on SUSMP and SWPPP compliance/requirements from the City's consultant on March 11, 2004. The Engineering Department's lead plan check reviewer subsequently trained the building inspectors and other Building Division staff during March (half day). The same individual trained Public Works staff, including the PW inspector and another PW plan checker in April (half day). Retraining/updates occur annually.

The City is presently providing fact sheets at the counter on the development construction program requirements.

## **2.4 City of Pomona**

### **2.4.1 Legal Authority**

The City's legal authority for municipal storm water and erosion control exist in Chapter 35 "Storm Water Management and Discharge Control" of the Pomona City Code, and was adopted on September 30, 1994. Section 35-1 (Authorization and title) of the City Code references Order No. 90-079, which is an outdated permit for the County of Los Angeles and the incorporated Cities therein. Section 35-5 (Construction and Application) does not explicitly require coverage of construction sites disturbing one to five acres.

### **2.4.2 Construction Site Inventory**

The City tracks all public and private construction projects disturbing one acre and greater in an excel database. The private construction database is updated monthly and tracks site location, owner/developer, acreage, type of construction, city permits issued for the activity, the associated WDID number, and project completion date. The database does not track inspections, enforcement actions, and post-construction BMPs, and associated organizations responsible for the maintenance of these BMPs.

The public construction sites are also tracked in an excel database and are updated on a regular basis. The database includes fields such as the project number, project title, whether an NOI was required, SWPPPs for sites one acre or greater, total acreage, maintenance agreement needed, Notice of Completion, and other pertinent information.

The City indicates that they have not considered grouping public construction sites less than one acre as part of a greater general plan, and obtain coverage under the General Permit for construction activities.

### **2.4.3 Construction Requirements and BMPs**

The City of Pomona requires the minimum requirements, as stated in E.1 of the municipal storm water permit, for all construction sites. Implementation of the minimum BMPs are required on all sites and SWPPPs are required to be submitted to the City for review and approval for sites that disturb one acre or greater. The minimum required BMPs typically include perimeter controls, erosion control, storm drain inlet protection, stabilized construction entrances, dust control, waste management, and proper material storage. Prior to any groundbreaking activities, the City requires a pre-construction meeting with the developer/contractor. The pre-construction meetings address the minimum set of BMPs required and approved by the City, enforcement issues, inspection scheduling, and maintenance of post-construction BMPs.

The City requires all developers disturbing one acre or greater to develop a SWPPP that must be approved prior to issuance of grading permit for construction sites. The environmental coordinator and other public works staff review the SWPPPs. Currently, the City does not require a Local SWPPP as discussed in Section E.2. (a) of the Municipal Permit. Construction site developers are required to submit a SWPPP for approval prior to grading activities.

Projects that do not require a SWPPP are still required to submit an erosion control plan, which is commonly included as part of the design drawings. Although the City requires developers to include erosion control plans, design and development of BMPs are at the discretion of the developer. The City refers developers to the California Storm Water Quality Association (CASQA) construction handbook for BMP design guidance.

#### **2.4.4 Plan Review Procedures**

The City indicated that all projects, regardless of public or private, go through the same plan check process and requirements. All new development and significant redevelopment projects go through the Environmental Services Division to assess storm water compliance with local and state requirements. The Environmental Services Division issues an “environmental compliance review letter,” which includes standards language requiring the developer/contractor to implement the minimum requirements. Each of these review letters are kept in a hard copy project file located in the Public Works Department.

The public works environmental coordinator and consultants review grading plans prior to approval and issuance of the grading permit. The environmental coordinator and consultant review the plans using their experience and training, but do not have a guidance document or checklist to provide consistent reviews. However, during the review process the environmental coordinator has the authority to require additional BMPs depending on the characteristics of the site. According to the environmental coordinator, public capital improvement projects (CIP) go through the same review process.

#### **2.4.5 Construction Inspections**

The City inspects all construction sites for storm water quality requirements at a minimum of once during the wet season. The City has three public works inspectors who inspect CIP projects for erosion, sediment, tracking, and non-storm water controls. The City also has two grading inspectors from building/safety who inspect grading activities to ensure erosion and sediment controls are in place. The environmental coordinator and a hired consultant inspect all private construction sites for storm water compliance issues. Currently, the City has approximately 30 private construction sites one acre or greater. All inspectors are equipped with construction sites checklist and have legal authority to enforce local and state regulations. To follow up on non-compliant sites, the City has the authority to issue notice of violation letters, which are tracked and followed-up.

Public construction sites are inspected on a daily basis. The three public works construction inspectors are each assigned designated sites. The public works construction inspectors keep a daily log, making note of daily activities and routine BMPs maintenance. The private construction inspectors have checklists that address the preserving of existing vegetation, temporary soil stabilization, temporary linear sediment barriers, storm drain inlet, desilting basins, stockpiles management, concentrated flows, tracking controls, wind erosion control, dewatering operations, vehicle and equipment maintenance, waste management erosion control, temporary water crossings, sediment control, discharge points, SWPPP compliance, and storm water monitoring. During on-site construction visits the inspector indicated that tracking controls, erosion controls, sediment controls and waste management are of primary concern and are addressed first.

#### **2.4.6 Enforcement**

The City’s typical approach to enforcement includes a written correction notice that is issued at the end of a construction inspection. If the corrections are not implemented prior to the follow-up inspection, the City will issue a “notice of violation and order to comply” letter, which notes the violations identified, the associated city code citations, and the specified time to correct the violations. Correction notices and notices of violations are kept in a hard copy project file in the public works department. The City maintains that most violations have been corrected within the time specified.

The City will refer violations to the Los Angeles Regional Water Quality Control Board if compliance has not been achieved after two follow-up inspections within 3 months and two warning letters or notices of violation have been issued to the construction site.

### **2.4.7 Training**

The City's Environmental Services Division offers an in-house training to all public works staff annually. The annual trainings typically discuss general storm water issues such as updates on new requirements, current BMPs used in the field, and other storm water issues. The trainings also include familiarity with the City's obligations towards the municipal permit. Those divisions involved in the annual training, at a minimum, include the Street Division, Parks and Recreation, and Code Enforcement (Building/Safety is not currently included in the storm water trainings). The City will tailor the trainings to fit the characteristics of each division involved. In some cases, the environmental coordinator will offer a presentation to municipal staff at the staff meeting regarding storm water compliance and related issues. All trainings are tracked with a sign-in sheet and reported in the storm water annual report. The lead environmental coordinator as well as the supporting consultant also attends out-of-office workshops. The out-of-office workshops/trainings usually include those offered by the Los Angeles Regional Water Quality Control Board, CASQA, and occasional conferences.

The City is not presently providing a formal training for contractors and developers. However, the City conducts one-on-one trainings with the developers and contractors during the pre-construction meetings. These one-on-one meeting have been successful in the overall implementation of the minimum required BMPs.

## 2.5 City of Santa Clarita

### 2.5.1 Legal Authority

The City of Santa Clarita's Storm Water and Urban Runoff Pollution Control Ordinance (Municipal Code Chapter 10.04.070) requires compliance with the State Construction Activity Storm Water Permit (GCASP) before grading and building permits may be issued. Satisfactory proof of NOI filing (NOI form and canceled check) and preparation of a SWPPP is required. In addition, this ordinance states that it will be a violation of Chapter 10.04.070 if the project does not comply with state permits.

For projects that are not covered under the state construction general permit, the ordinance requires a grading and construction activity runoff control program outlining BMPs be implemented that:

- Retain on-site the sediments generated or brought on-site;
- Retain construction materials and wastes, spills and residues on-site;
- Contain non-storm water runoff from equipment and vehicle washing
- Control erosion from slopes and channels.

The City's ordinance simply references the "State General Construction Activity Storm Water Permit (GCASP)" therefore a change to the ordinance was not necessary when the threshold changed from 5 acres to 1 acre in March 2003.

According to Chapter 17.03.100 of the Municipal Code, grading permits are required for all grading which cuts or fills 20 cubic yards or greater (among other exceptions found at Ch. 17.21.010). All grading projects involving more than 1,000 cubic yards must post a bond or other form of security according to Chapter 17.24.010. Additional plan review and permitting requirements for hillside developments are regulated and outlined in the City's Ridgeline Preservation and Hillside Development Ordinance (Chapter 17.80).

The City is in the process of amending several portions of the Code (Chapter 12.60) that will allow for a fine schedule for administrative citations as well. These citations will apply to all portions of the Municipal Code. In addition, the City is adding 'nuisance regulations' (Chapter 23.30.040 B.) which will incorporate "any land, the topography, geology, or configuration of which, whether in a natural state or as a result of grading operations, excavations, fill or other alteration, interferes with the established drainage pattern over the property or from adjoining or other properties which does or may result in erosion, subsidence, or surface water drainage problems of such a magnitude as to be injurious to public health, safety, welfare or to neighboring properties." Chapter 10.04 will be amended to allow a \$250.00 fine for Storm Water and Urban Runoff Pollution Control violations with not more than \$500.00 for the second violation within the same year and not more than \$750 for the third or subsequent violation with the same year. The combination of both Code changes will give City inspectors the authority to fine non-complying construction projects on-site for violations of the City's Municipal Code.

### 2.5.2 Construction Site Inventory

The Santa Clarita Environmental Services Division oversees the NPDES program administration within the City. The Division has a database for all projects over one acre and access to another database for 'open grading permits.' The City of Santa Clarita uses various departments to perform inspections on active construction sites. Transportation & Engineering Services performs two inspections to certify rough grade and final grade certifications only. This information is entered into the master project file.

Building & Safety (B&S) performs all regular storm water inspections on projects once building has begun. These inspections are tracked using a database to which the Environmental Services Division has access.

The B&S NPDES inspection database is part of a comprehensive work flow system (trade name Tidemark) planned for the Building & Safety, Environmental Services, Public Works, Planning, Engineering, Parks and Recreation departments. Currently, it is only 'live' for a couple of departments, including B&S. The B&S database documents inspection date, location, violations noted, condition of BMPs, corrections required and necessary follow-up.

Environmental Services (ICID inspectors) currently uses a database to track restaurant and construction inspections. ICID inspectors only inspect construction projects that have been deemed non-compliant by the B&S inspectors. These inspections are tracked in the storm water ICID Database and information is documented in the field using handheld computers. The Environmental Services Department is planning to provide laptops to ICID inspectors in the future so that information will be more easily entered and violation notices can be literally printed in the field using mobile printers. The ICID database is not a Tidemark system, but is very detailed and allows the inspectors to track all inspections by date and/or location. In addition, the system provides reinsertion reminders to inspectors so that they can follow up on non-compliance and correction notices.

While not on-line yet, the Environmental Services Tidemark inspection database is being designed and will incorporate all the data components required for annual reporting to the Los Angeles Regional Water Quality Control Board. In addition, it will 'talk' to the other Tidemark databases around the City including Planning, Building & Safety and Engineering, which will allow for more consistent tracking and reporting of NPDES activity within the City.

In addition to the databases used by the various City departments, the City also maintains hard-copy files of all submittals, plans, plan review comments, correspondence and conditions. There is no central repository of all inspection checklists and notices however, as they are undertaken by three different departments.

### **2.5.3 Construction Requirements and BMPs**

The City of Santa Clarita does not require a separate Local SWPPP. The Municipal Code requires submittal and compliance with a State SWPPP and a Wet Weather Erosion Control Plan if necessary (wet season is October 1<sup>st</sup> – April 15<sup>th</sup>). The erosion and sediment control plan that is required as part of the State SWPPP also serves as the City's erosion control planning requirement for receipt of a grading permit. The Environmental Services Division has a professional engineer on staff to review all SWPPPs, SUSMPs and grading plans for NPDES compliance. The engineer deems the plans as "accepted" not "approved" so that they may be considered subject to change based on conditions in the field.

The City requires that all projects of one acre or larger submit proof of NOI submittal (NOI application form and canceled check for permit fee) prior to receiving a grading permit. The City does not require submittal of the WDID number prior to issuance of the grading permit as it may take some time to receive the number from the Los Angeles Regional Water Quality Control Board.

All projects required to obtain a grading permit also are required to comply with the minimum BMP requirements.

The City of Santa Clarita provides each person that seeks to develop within the City a packet of information about planning requirements. A Storm Water Minimum Requirements guidance document (June 2000) is included in the packet. This document provides a BMP Selection Matrix (Table B8-1), general selection guidance and information on how to obtain fact sheets about each BMP. The City encourages developers to use the California Storm Water Best Management Handbooks when researching BMPs.

The City does not require any specific BMPs for construction projects; however, a certified professional engineer is on staff and works with developers to develop SWPPPs that will provide maximum erosion and sediment control for projects within the City. In addition, City inspectors (B&S and IDDE) regularly work with the engineer to improve conditions in the field if planned BMPs are not functioning properly or adequately during the project.

#### **2.5.4 Plan Review Procedures**

The development review process is essentially the same for private and CIP projects. A Project Manager (PM) manages public projects (Capitol Improvement Projects). The City engineers design the project plans and the PM submits the plans to the same Development Review Committee (DRC) as review all private projects. The DRC is comprised of representatives of Building & Safety, Engineering, Traffic Engineering, Environmental Services, Parks & Recreation, Transit, Urban Forestry and the Fire Department.

Environmental Services staff review and comment on all plans. Comments are made by the DRC are addressed prior to approval. Private and public projects are required to submit a SWPPP, SUSMP and grading plan for all applicable projects. Environmental Services engineers review and 'accept' all plans for CIP and private projects. The review is completed using the State general permit and SWPPP requirements document and not a checklist. Environmental Services applies storm water related conditions of approval to the final plans as well.

Performance bonds are determined and applied by the Engineering Department for all grading activity moving over 1,000 cubic yards.

#### **2.5.5 Construction Inspections**

All construction sites are inspected numerous times during the project, regardless of season. Engineering inspectors do at least two inspections of grading to determine rough and final certifications. B&S inspectors inspect each project for NPDES considerations each time they are on site. These inspectors are trained in basic NPDES knowledge and implementation of BMPs by ICID staff; however, do not review SWPPPs while they are on-site. If there are non-compliance issues, the B&S inspectors will issue a Notice to Comply. If, when reinspected, the site has not complied with the corrective actions, the B&S inspector notifies the ICID inspectors. In addition, Public Works inspectors have been trained regarding erosion and sediment control BMPs and notify the ICID inspectors if there is a problem.

ICID inspectors only inspect sites that are noncompliant and are reported by other City inspectors or residents. ICID inspectors do a full NPDES inspection and review the SWPPP in detail. ICID staff also visits sites prior to wet weather to ensure wet weather BMPs are implemented.

#### **2.5.6 Enforcement**

City staff indicated that they have referred problem projects to the Los Angeles Regional Water Quality Control Board for assistance, but are generally able to obtain compliance using Notices to Comply and stop work orders.

The City has generally relied on verbal warnings or written notices to ensure compliance. All inspectors have the authority to issue notices to comply. If compliance is not achieved within 48 hours, the City can issue a 'stop work order.' Only in rare circumstances are more formalized violation notices required (13 times noted in the last annual report).

Compliance requirements and correction notices are documented in the inspectors' respective checklists and databases.

### **2.5.7 Training**

The City hired a contractor to provide one-on-one training to all plan review staff. ICID inspectors were trained by the contractor and then trained the other department inspectors. The City continues to provide training annually on general BMP and SWPPP requirements.

The City provides no formal training to developers or contractors. Pamphlets and general storm water information is provided directing them to other guidance documents. On-site education is done between the ICID inspectors also provide developers/contractors with on-site education as part of the inspection process.

### 3.0 KEY ISSUES FOR IMPROVING IMPLEMENTATION OF DEVELOPMENT CONSTRUCTION PROGRAMS

The following are some key issues that were identified during this review that can help improve the implementation of each permittee's development construction program.

#### *Legal Authority*

- Ensure that local ordinances reflect new thresholds for GCASP coverage and proper SUSMP categories (i.e. Industrial/Commercial Facility threshold is 1 acre or 43,560 sq. ft. *not* 100,000 sq. ft.).
- Train inspection staff on the city's legal authority, including prohibitions on non-storm water discharges, BMP requirements, construction site entry and inspection authority, and options for enforcement, including internal referrals from Building and Safety or the Planning Department to the environmental or storm water coordinator for enforcement follow-up.

#### *Construction Site Inventory*

- Ensure that projects between one and five acres that began before March 10, 2003 have submitted an NOI and prepared and implemented a SWPPP.
- Track plan review, inspections, post construction BMPs and post construction maintenance information in a single database. This will assure that as various departments review the project the storm water conditions are not overlooked during construction and after construction is completed.
- Develop a system to ensure that partially developed lots of a common plan of development obtain GCASP coverage when they are sold. This is especially important when individual lots may be less than one acre, but the entire common plan of development is one acre or greater.
- Track post construction controls including those for SUSMP compliance in a database and verify proper installation, operation and maintenance of these controls through inspections, enforcement and other means.

#### *Construction Requirements and BMPs*

- Communicate BMP requirements clearly to developers, inspectors and plan review staff so all are working with a common set of requirements.
- Require a detailed, site-specific written plan, either a Local SWPPP or State SWPPP, for each construction project disturbing one acre or greater.

#### *Ensuring that coverage under the General Construction Activity Storm Water Permit (GCASP) is obtained*

- Demolition activities are subject to the GCASP, but may not currently require a grading permit in some cities. Ensure that projects which do not require a grading permit but are still subject to the GCASP obtain coverage and develop and implement a LSWPPP.
- Discharges of groundwater, project dewatering, and hydrostatic test water from construction sites into surface waters are required to be covered under separate General NPDES Permits issued by the Los Angeles Regional Water Board. Ensure that project proponents, if required, are aware of and obtain coverage under these permits prior to discharge to the MS4.
- Cover public capital improvement projects approved as a single project, such as sidewalk improvements, under the GCASP if the aggregate area of land disturbed is one acre or above. File one NOI for all CIP projects and file a change of information form with the Board when projects are added or completed. No municipality is exempt from separate NPDES permit coverage for storm water discharges from construction activity and industrial facilities.
- Ensure that developers include an estimate of land disturbance on grading or building permit applications to help assess whether the project must have GCASP coverage.

- Review and approve the LSWPPP when allowing developers to substitute a LSWPPP in place of the State SWPPP.

#### *Plan Review Procedures*

- Do not approve LSWPPPs that are templates without specifically tailored BMPs for that project.
- Use a checklist or other mechanism to document the review of LSWPPPs and grading plans.
- Ensure that Local SWPPPs include a schedule for BMP implementation. Some BMPs are appropriate year-round, however, others should only be installed during specific stages of a project or during specific times of the year.
- Ensure that BMPs are specifically identified on the site plan and not just described in the general notes or drawings accompanying the site plan. For example, a general drawing of sand bags is not adequate unless the site plan also clearly identifies the location of the sand bags.
- Ensure that off-site BMPs are included on site plans (especially inlet protection BMPs for storm drain inlets receiving a discharge from the construction project).
- For public projects, use the same staff reviewing private project LSWPPPs to review the public project LSWPPPs.
- Ensure that any project dewatering or other discharges requiring an NPDES permit are referred to the Los Angeles Regional Water Board for permits prior to the beginning of any discharge.

#### *Construction Inspections*

- Cities are conducting significantly more inspections than the permit requirement of once per wet season. Document the number and frequency of these inspections for reporting.
- Ensure that inspectors review the LSWPPPs on-site and check the plans for conformance with the BMPs, schedules and activities at the site.
- Ensure that review of the LSWPPPs also includes review of the construction operator's inspection and maintenance records.
- Inspect inactive sites as well as active sites. This is especially important for cities relying on building or grading inspectors, who would not be called out to an inactive site.
- Record the results of inspection activities and ensure that these records are easily accessed. An electronic tracking system is highly recommended.
- Ensure good housekeeping BMPs are in place and do not simply focus on erosion and sediment control BMPs.
- Verify the proper installation, as designed, of post construction BMPs before the Certificate of Occupancy is issued.

#### *Enforcement*

- Record the results of enforcement actions and ensure that these records are easily accessed. An electronic tracking system is highly recommended.
- Document verbal warnings issued by inspectors in writing so that another inspector visiting the site knows a warning was issued for cause, there's documentation that the inspector followed up to ensure the warning was corrected, and there's documentation to ensure the site is not repeatedly warned about the same violations without any further actions being taken.

#### *Training*

- Use training to strengthen the cross training, interaction and coordination between inspectors of various departments (for example, grading, building, public works). Ensure that the project meets the same level of scrutiny on all its phases for planning, implementation and compliance.
- Train inspectors and plan review staff, at least annually, on the proper selection, installation, and maintenance of storm water BMPs.

## 4.0 BASELINE DEVELOPMENT CONSTRUCTION PROGRAM

The elements below document a “baseline” Development Construction program for Los Angeles permittees to consider as they implement a program to control runoff from construction activity. Based largely on the Model Programs for Storm Water Management developed by the County of Los Angeles and the review of the five Development Construction programs summarized in this report, the elements below are considered to meet the requirements in the LA County MS4 permit, and constitute a program to reduce pollutants in storm water to the maximum extent practicable (the MEP standard). Appendix A is a basic list of BMPs for use at all construction sites 5 acres and less. A municipality may waive a particular BMP, if an alternative BMP that is equivalently effective is implemented with approval by the municipality or if the required BMP is not applicable because the underlying activity is not performed. Appendix A is comprised of BMPs referred to in Sections 4.3 and 4.4 of this Section.

### 4.1 Ordinance/Legal Authority

The permit requires permittees to control runoff from construction activity at all construction sites within their jurisdiction. The permittees must ensure that the following minimum requirements are implemented at all construction sites, regardless of size (permit provision E.1):

- Sediments generated on the project site shall be retained using adequate Treatment Control or Structural BMPs;
- Construction-related materials, wastes, spills, or residues shall be retained at the project site to avoid discharge to streets, drainage facilities, receiving waters, or adjacent properties by wind or runoff;
- Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site; and
- Erosion from slopes and channels shall be controlled by implementing an effective combination of BMPs (as approved in the Los Angeles Regional Water Board Resolution No. 99-03 and also described in the California Stormwater BMP Handbook - Construction), such as the limiting of grading scheduled during the wet season; inspecting graded areas during rain events; planting and maintenance of vegetation on slopes; and covering erosion susceptible slopes.

The permit also required permittees to amend ordinances by August 2002 to enforce all requirements of the permit. This includes the legal authority to prohibit non-storm water discharges to the MS4 including the discharge of “concrete or cement laden wash water from concrete trucks, pumps, tools, and equipment” (Part 3.g.1.i) and the dumping or disposal of materials into the MS4 such as “construction debris” (Part 3.g.1.j.1). The legal authority must be adequate to (Part 3.G.2)

- Require persons to comply with ordinances, permits, etc.
- Use enforcement mechanisms to require compliance with ordinances, permits, etc.
- Carry out all inspections necessary to determine compliance, and
- Require the use of BMPs.

Permittees must ensure that local ordinances and permits, especially grading permits, are consistent with the requirements described above. In addition, grading permits and local ordinances should be consistent with the State General Construction Permit threshold’s change to one acre.

### 4.2 Construction Site Inventory

The permit requires permittees to “use an effective system to track grading permits issued by each permittee” within its jurisdiction. The inventory must track information such as construction site location, owner, volume disturbed and acreage or square footage, WDID number, inspection results, and information on any enforcement actions taken. This inventory should be integrated with the permittee’s existing

databases, including databases to track grading permits. The permittee may also include information on SWPPP requirements or changes made to the SWPPP in the inventory.

The inventory must be updated regularly. Permittees with a significant number of construction projects may want to prioritize their construction site inventory for inspection purposes, assigning a “high, medium, or low” priority to sites.

### 4.3 Construction Requirements and BMPs

The permit conditions each permittee to require the preparation of a LSWPPP prior to issuance of a grading permit for sites one acre or greater. Minimum requirements for the LSWPPP are specified in the permit and include:

- Appropriate construction site BMPs and maintenance schedules
- Rationale used for selecting or rejecting BMPs
- Signed certification statement from the project architect, engineer or record, or qualified designee
- Signed certification statement from the landowner or the landowner’s agent

The LSWPPP may substitute for the State SWPPP if the LSWPPP is at least as inclusive in controls and BMPs as the State SWPPP. If a Permittee does not accept substitution of the LSWPPP for the State SWPPP, the Permittee may at its discretion also require submittal of the State SWPPP.

Permittees must notify construction operators of the minimum requirements and what they need to do to comply. An example of one City’s form explaining the requirements is available at (note that Packets A – D described in this document are not available on-line):

<http://www.santa-clarita.com/cityhall/tes/engineering/strmguid.pdf>

Permittees can also refer construction operators to state-wide guidance, such as the Construction BMP Handbook developed by the California Stormwater Quality Association:

<http://www.cabmphandbooks.com/Construction.asp>

### 4.4 Plan Review Procedures

Permit provision 4.E requires permittees to require proof of a Waste Discharger Identification (WDID) Number and certification that a SWPPP has been prepared under the GCASP prior to issuing a grading permit. This information can be found online at:

[http://www.waterboards.ca.gov/stormwtr/databases.html#const\\_db](http://www.waterboards.ca.gov/stormwtr/databases.html#const_db)

The proof is typically a copy of the letter from the State Water Resources Control Board to the developer with the WDID number for the project. The letter should be checked against the State database to ensure validity of the letter. When a transfer of ownership takes place, the permittee must require proof of an NOI and receive a copy of the SWPPP or Local SWPPP from the new construction operator and ensure that the proper BMPs are being implemented.

The permittee must have a documented review process for all development plans that considers at least the minimum requirements in section 4.1. The review process should be documented, either in a checklist, form, or review letter sent back to the construction operator. The permit requires review of a local SWPPP, but some permittees are also reviewing the State SWPPP. Some permittees choose to “accept” a SWPPP rather than “approve” a LSWPPP to allow for changes in the field as conditions warrant. The LSWPPP is not optional; it is a required regulatory document and must be approved individually by the municipality.

Plan reviewers should review plans to ensure adequate controls are identified not only for erosion and sediment control practices on-site, but also for other potential pollutant sources such as vehicle washing,

fueling, concrete washouts, construction material storage, and sanitary waste. In addition, plan reviewers may need to look beyond the identified project boundary to ensure that plans identify appropriate inlet control practices for downstream catch basins that will receive storm water discharges from the construction activity. Plan reviewers must look for the following types of controls in LSWPPPs:

- Practices to *manage the overall construction activity and implement the LSWPPP* (including phased grading, employee training, site inspections and maintenance procedures)
- Practices to *control erosion from slopes and channels* (this could include the use of hydroseeding, mulch, mats or geotextiles)
- Practices to *retain sediments on-site* (this could include perimeter sediment controls, stabilized construction entrances, street sweeping, inlet projection, and protection for stockpiles)
- Practices to *contain non-storm water runoff* such as vehicle and equipment cleaning
- Practices to *retain construction-related materials and wastes on-site* (this must include BMPs such as concrete washouts, material storage, sanitary waste management, or vehicle fueling, if these activities will be onsite.)

Public projects (e.g., capital improvement projects) should be subject to the same review process as a private project; however, permittees can use a separate group to review projects as long as the same type of review process is followed. For public projects, permittees should also apply the same review procedures to contracted projects (typically large CIP projects) as well as smaller projects that are typically completed “in-house” by the permittee’s own staff and equipment. If there is a question regarding adequacy, please contact a storm water staff person at the Los Angeles Regional Water Board for clarification.

#### **4.5 Construction Site Inspections**

Permittees should identify which inspectors have primary responsibility for inspecting erosion and sediment controls at construction sites (e.g., public works inspectors, building inspectors, dedicated erosion and sediment control inspectors, etc.). In some cases, permittees could use several different types of inspectors during the construction process to ensure adequate erosion and sediment control BMPs are implemented (e.g., grading inspectors during initial grading then building inspectors during the major construction portion of a project). Ideally, all inspectors for a permittee visiting construction sites will be trained on erosion and sediment control requirements, and BMPs. They will be knowledgeable enough to require corrective actions if necessary, and proficient enough to notice a problem and refer the matter immediately to the appropriate city inspector for enforcement.

Permit provision 4.E.2 requires permittees to inspect all construction sites one acre and greater a minimum of once during the wet season. Typically, inspectors are at these sites more frequently and sometimes daily for larger construction projects. Permittees should consider developing priorities for inspection and designating minimum inspection frequencies for each priority category.

Permittees should also target inspections before, during and immediately after wet weather events when possible. Inspections before an anticipated rain even allows inspectors to ensure that BMPs are installed and slopes protected prior to the rain event. Inspections during a rain event are often the best time to document violations and collect evidence of noncompliance (photographs or video) or violations. After a rain event, inspectors should inspect sites to determine if BMPs failed and if construction operators are maintaining BMPs adequately.

Permittees should develop, through training or guidance, inspection procedures to ensure that inspectors are consistently reviewing for erosion and sediment controls. Inspectors should walk construction sites to observe BMPs, discharge points, perimeter sediment controls, slope protection, and other priorities. Emphasis should be placed on ensuring that BMPs in the LSWPPP are being used in the field.

The permittee should document all violations, including verbal warnings, in writing to ensure that there is a paper trail and that violations are adequately addressed. These violations could be documented in a file, database or some other system used to track inspection results. If different inspectors visit the same site, each inspector should have access to all of the inspection results for that site.

Permittees often use different inspectors for public projects as for private projects. The public project inspectors should follow the same procedures and inspection frequencies as the private project inspectors, however, the enforcement actions taken may be different as described below. A violation that has occurred, is observed by the inspector, and quickly corrected by the site operator still constitutes a violation and should be noted as such.

#### **4.6 Enforcement/Referrals**

Permittees should develop written enforcement policies to ensure that inspectors are consistently applying enforcement procedures. Typical enforcement actions taken at construction sites include verbal warnings, written warnings, written notices of violation (NOVs), stop work orders, and monetary penalties. Where a verbal warning is given to a site, this warning should be documented so the inspector can verify that the correction was made during the next inspection.

Some cities have used reinspection fees as an incentive for developers to “get it right the first time.” Fees are also typically required during the plan review process with some permittees charging additional fees when LSWPPPs are not adequate and must be reviewed multiple times.

Provision 4.E.4 of the permit requires permittees to refer violations of the permit, local ordinances, and the GCASP non-filers to the Los Angeles Regional Water Quality Control Board. In order to refer violations of the MS4 permit or local ordinances to the Los Angeles Regional Water Quality Control Board, the permittee must have made a good faith effort of progressive enforcement. This includes documentation of at least two follow-up inspections within 3 months and two warning letters or notices of violation. For violations of the GCASP filing requirements, permittees should refer these non-filers to the Los Angeles Regional Water Quality Control Board within 15 days of making the determination that they are a non-filer.

#### **4.7 Training and Education**

The permit requires permittees to train staff in targeted positions annually. This typically includes training both plan review staff and inspection staff. Training should ideally include field training as well as classroom training, and permittees should look for opportunities to send staff to local training sponsored by others.

Permittees should also provide educational materials, and where practicable, training, to developers and construction staff on appropriate erosion and sediment control BMPs. This education and training will help ensure that the permittee receives better LSWPPPs which are more consistently implemented in the field.

#### **4.8 Program Evaluation**

Each permittee must conduct program evaluations to determine the effectiveness of its development construction program. These evaluations should look at both the effectiveness of the plan review process and the effectiveness of the inspection/enforcement process.

Permittees should implement evaluations of the Development Construction program at several levels to ensure the program is implemented to reduce pollutants in storm water discharges to the maximum extent practicable. Evaluations do not need to rely on water quality-based information (e.g., water quality

monitoring). They could be based on surveys, review of LSWPPPs, summaries of inspection and enforcement results, or other methods.

In order to conduct effectiveness evaluations, goals or performance standards against which the program can be evaluated should be set. These goals or performance standards should contain measurable targets for various Development Construction program activities.

## APPENDIX A

### BMPS FOR USE AT ALL CONSTRUCTION SITES 5 ACRES AND LESS

The following is a list of minimum BMPs for use at all construction sites 5 acres and less. Any City may waive use of specific BMPs if an alternative BMP or BMPs would be more effective or if the required BMP is not applicable. Appendix A is comprised of those BMPs referred to in Sections 4.3 and 4.4 of this report and other resources.<sup>1</sup>

BMP Description	CASQA Handbook Reference	Caltrans Handbook Reference
<b>For Erosion Control</b>		
Scheduling	EC-1	SS-1
Preservation of Existing Vegetation	EC-2	SS-2
<b>Sediment Controls</b>		
Silt Fence	SE-1	SC-1
Gravel Bag berm	SE-6	SC-6
Street Sweeping and/or Vacuum	SE-7	SC-7
Sand Bag Barrier	SE-8	SC-8
Storm Drain Inlet Protection	SE-10	SC-10
<b>Additional Controls</b>		
Wind Erosion Controls	WE-1	WE-1
Stabilized Construction Entrance/Exit	TC-1	TC-1
Stabilized Construction Roadway Entrance/Exit Tire Wash	TC-2	TC-2
	TC-3	TC-3
<b>Non-Storm Water Management</b>		
Water Conservation Practices	NS-1	NS-1
Dewatering Operations (Groundwater dewatering only under Board Order. Pondered storm water may be discharged under the CASGP if the discharge, after decanting or filtration, or alternative treatment contains 100mg/L or less of Total Suspended Solids (TSS). To facilitate this, the intake hose or pipe to any pump or separation device should be floating to intake cleaner storm water from the top of the water column and not from the muddy bottom of the water	NS-2	NS-2

<sup>1</sup>The BMPs are 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.

column.		
Vehicle and Equipment Washing	NS-8	NS-8
Vehicle and Equipment Fueling	NS-9	NS-9
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-2
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

- a) Sediments generated on the project site shall be retained using appropriate Treatment Control and/or Structural BMPs;
- b) Construction-related materials shall be controlled and retained at the project site to prevent discharge to streets, drainage facilities, receiving waters, or adjacent properties by wind or runoff;
- c) Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site; and
- d) Erosion from slopes and channels shall be controlled by implementing an effective combination of BMPs, such as the limiting of grading scheduled during the wet season; inspecting graded areas during rain events; planting and maintenance of vegetation on slopes; and protecting or covering erosion susceptible slopes.

## APPENDIX B

### RESPONSE TO COMMENTS

The draft Program Review Report for Development Construction was distributed to each of the five permittees for their review and comment.

Comments from each permittee are presented below with the CRWQCB, LA Region response.

#### City of Calabasas, CA

The City of Calabasas provided informational updates and corrections that were incorporated into the final document. No response to comments was applicable.

#### City of Carson, CA

The City of Carson commented that developer or contractor training is not a permit requirement. The City is required to make “outreach” materials available to contractors and developers, but not specifically required to provide training. The City commented that it does provide training to its capital improvement project contractors, and plans to provide similar training to developers to emphasize proper BMP installation and maintenance.

***[CRWQCB Response – The Regional Board agrees that training for developers or contractors is not a permit requirement. The program summary for the City has been revised to reflect that the City is providing brochures and conducting training of its CIP contractors.]***

#### City of Glendora, CA

The City of Glendora commented that developer or contractor training is not a permit requirement. The City is required to make “outreach” materials available to contractors and developers, but not specifically required to provide training.

***[CRWQCB Response – The Regional Board agrees that training for developers or contractors is not a permit requirement. The program summary for the City has been revised to reflect that the City is providing fact sheets on the development construction program requirements.]***

#### City of Pomona, CA

The City of Pomona provided informational updates and corrections that were incorporated into the final document. No response to comments was applicable.