

5.0 Construction Component

5.1 Introduction

The objective of this program is to minimize the impacts of construction activity on receiving waters within the City of Carlsbad (City). In accordance with Section D.2. of Order R9-2007-0001, this section describes the City's stormwater protection and urban runoff management program as it relates to construction activity and its potential associated runoff and pollutants.

5.2 Source Characterization

Construction sites include any site where an activity such as grading, excavation, clearing, structure and road construction, or demolition results in a disturbance of soil. Sources identified by the City of Carlsbad include: City-issued Construction Permits, and Capital Improvement Program (CIP) Projects.

A watershed-based inventory of construction sites is updated monthly as required by Order R9-2007-0001 Section D.2.b. The Construction Management and Inspection Division (CM&I) of the Engineering Department maintains the inventory of construction sites throughout Carlsbad. The database is maintained in Permits Plus software. At a minimum the inventory includes the following information for each project:

- Location Information (APN, Address, WMA and HA);
- Permit Information (Grading Permit, Planning Case Number);
- Project Information (Name, Type, Area, Start Date);
- Priority;
- Percent Complete;
- Site Contact (Name & Number);
- 24-Hour Contact Number;
- State General Construction Permit Information (NOI, SWPPP, WDID), and;
- Developer/Engineer/Contractor Contact Information.

A copy of the current construction activity inventory is included as Appendix 5.

5.2.1 Threat to Water Quality Prioritization

For the purposes of determining the frequencies of inspection during the wet season (October 1st through April 30th) the following rationale and methodology are used. One of three inspection frequency priorities is assigned to projects: high; medium, or; low. Based on the inspection frequency priority, minimum inspection frequencies are assigned to projects. The inspection frequency priority is determined by City staff at time of permit issuance and entered into the permit database. The database is used to automatically generate inspection request based upon the assigned inspection frequency priority. The database is also used to track and report out inspection histories including enforcement actions and follow-up inspections. See section 5.5 for more details on project inspection frequencies and procedures.

The application for a construction permit (grading, building or right-of-way) includes submittal of a completed Construction Threat Assessment Worksheet for Determination of Threat to Storm Water Quality included as Appendix C to Section 3 (Construction

SWPPP Standards and Requirements) of the City's Storm Water Standards Manual found in Appendix 4-A of this JURMP.

At a minimum, the following project types will be considered high priority for the purposes of inspection frequency as described in Section 5.5:

- All sites 50 acres or more in size and grading will occur during the wet season, or
- All sites 1 acre or more, and tributary to a CWA section 303(d) water body segment impaired for sediment or within or directly adjacent to or discharging directly to a receiving water within an ESA.
- Other projects may qualify as high priority for the purposes of inspection frequency based on the following criteria:
 1. Project Size
 2. Planned Period of Grading
 3. Vicinity of the Project to Environmentally Sensitive Water Bodies
 4. Project Type
 5. Past Record of Compliance by the Operators of the Construction Site
 6. Presence of Significant Erodible Slopes
 7. Potential to Produce Significant Non-Stormwater Discharge or Pollutants

At a minimum, the following project type will be considered medium priority for the purposes of inspection frequency as described in Section 5.5:

- All sites with one acre or more of soil disturbance not meeting the criteria specified above for high priority construction sites

At a minimum, the following project type will be considered low priority for the purposes of inspection frequency as described in Section 5.5:

- Tier 1 projects

The evaluation of the above criteria is described in more detail in the Construction SWPPP Standards and Requirements Section of the Storm Water Standards Manual found in Appendix 4-A of this JURMP.

5.2.2 Inventory Updates

Updates to the construction site inventory are managed by CM&I Division as described below:

The Engineering Department Development Services Division updates the inventory of new grading, building and right-of-way construction permits in Permits Plus at permit issuance including entry of appropriate construction inspection frequency priority. The CM&I Division inspection staff access the Permits Plus program to generate inspection requests, update inspection records and record any enforcement actions and follow-up inspection work. The CM&I Division staff are responsible for updating and maintaining the inventory from permit issuance throughout project completion. The CM&I Division verifies all updates to the inventory on a monthly basis.

The construction managers in the CM&I Division maintain an inventory of CIP projects that are in construction using the Permits Plus program. The CM&I Division maintains an electronic inventory that contains the most current information including when a site was last inspected, the current construction status and inspection frequency priorities. This electronic record is updated through weekly reports from the CM&I Division administration staff and the information is routinely transferred into a reporting spreadsheet.

5.3 Ordinance Updates

5.3.1 Grading Ordinance Update

The City's Grading Ordinance, Municipal Code Chapter 15.16 Grading & Erosion Control, is being updated. The Grading Ordinance is also currently undergoing additional revisions resulting from other non-stormwater issues.

In general, the stormwater related revisions to this ordinance include addition of text to: (1) incorporate requirements of Order R9-2007-0001; (2) provide consistency between the Grading Ordinance and Storm Water Ordinance; and, (3) authorize the creation of and establishment of standards and fees for a three tiered Construction SWPPP process. The purpose of these revisions are threefold: (1) to ensure erosion control information contained in the grading ordinance is consistent with the Stormwater Ordinance which provides the detailed requirements for erosion control and all other required BMPs; (2) to ensure that project proponents will reference and use the City's Stormwater Ordinance for comprehensive site management and permit compliance; and (3) provide authority for the establishment of new fees for the proposed three tiered Construction SWPPP process. The revisions also provide authority for post-construction BMP inspection on private property and requires responsible parties to provide annual verification of effectiveness and maintenance of treatment control BMPs.

5.4 Best Management Practice Requirements

5.4.1 BMP Requirements

5.4.1.1 Pollution Prevention

The City's construction component emphasizes pollution prevention during both the preconstruction and the onsite construction phases of projects. All new construction projects are required to prepare and submit an appropriate Construction SWPPP in accordance with the City Storm Water Standards Manual as part of the construction plan check process. The Construction SWPPP is reviewed and approved by Engineering Development Services Division staff prior to issuance of construction permits for a project. The approved Construction SWPPP must comply with City Standard requirements and all applicable requirements of the General Construction Permit and the General Linear Utility Permit.

Any required preconstruction storm water requirements are expected to facilitate onsite pollution prevention once construction activity commences. Pollution prevention practices are required at all project sites during construction. In accordance with the City's Stormwater Ordinance (Municipal Code Chapter 15.16), project proponents, which

may include owners, developers and/or contractors, are required to implement a system of minimum best management practices (BMPs) onsite year-round. Erosion control practices must be implemented by contractors as the most important “first line of defense” BMPs. Supplemental to erosion control BMPs, the remaining BMP system components include sediment control and management of onsite practices, materials and potential pollutants. These requirements are applicable to capital improvement projects (CIPs), private development projects, and utility projects.

5.4.1.2 Construction BMPs

The City’s Storm Water Standards were revised and revamped to: (1) accommodate the requirements of the updated Municipal Permit; (2) consolidate construction BMP standards into one location; (3) clarify existing standards and incorporate the new standards; and, (4) incorporate the requirements of the General Construction Permit, the General Linear Utility Permit and the General Industrial Activity Permit. The new manual consolidates all storm water BMP standards for post construction, construction and business activity requirements into one comprehensive manual entitled the “City of Carlsbad Storm Water Standards Manual” hereinafter referred to as “Storm Water Standards Manual”.

The new Storm Water Standards Manual is comprised of four primary sections as follows;

1. Section 1 – Introduction
2. Section 2 – Storm Water Management Plan (SWMP) Standards includes standards and requirements for the preparation of permanent post construction BMPs including post construction inspection and inventory maintenance requirements. This section is based upon the Copermittees’ revised interim model SUSMP document.
3. Section 3 – Construction Storm Water Pollution Prevention Plan (SWPPP) Standards – includes standards and requirements for the preparation of a Construction SWPPP in accordance with the Municipal Permit, General Construction Permit and General Linear Utility Permit.
4. Section 4 – This Section is currently reserved for the Business Activity Storm Water Pollution Prevention Plan (SWPPP) Standards.

Section 3 of the Storm Water Standards Manual specifically addresses the need for temporary BMPs during construction activities to minimize the mobilization of pollutants such as sediment and to minimize the exposure of storm water to pollutants. The standards and requirements described in Section 3 were established to ensure construction compliance with City of Carlsbad Storm Water Ordinance, the Municipal Permit, the General Construction Permit and the General Linear Utility Permit. Owner/Developers must comply with all sections of the manual to ensure full compliance with both construction and post construction storm water requirements.

Pursuant to Titles 11, 15 and 18 of the Carlsbad Municipal Code, all construction activities within the City whether permitted or not are subject to the standards and requirements of the Storm Water Standards Manual. Construction activities that meet one

of the following criteria are additionally subject to the requirements of the General Construction Permit.

Construction activities that:

- 1) Disturb one or more acres of land area;
- 2) Form part of a larger common plan of development that encompasses one or more acres of soil disturbance; or
- 3) Have the potential for significant water quality impairment.

Construction of linear utility facilities that are not subject to the General Construction Permit are subject to the requirements of the General Linear Utility Permit. This includes but is not limited to construction of any conveyance pipe for transportation of gaseous, liquid, liquescent or slurry material; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications; and, associated ancillary facilities. Developers/owners/contractors are directed to confirm with the SDRWQCB staff whether or not a particular underground or overhead utility construction project is subject to the General Linear Utility Permit.

Every construction activity within the City that has the potential to negatively affect water quality must prepare a construction Storm Water Pollution Prevention Plan (Construction SWPPP). To maintain compliance with the various State and Regional permitting regulations, the City established a three tiered system for the preparation of a Construction SWPPP. The tiers range from most potential for storm water impacts (Tier 3) to the least potential for storm water impact (Tier 1) as described in more detail in Section 5.5.2.1 below.

The Storm Water Standards provides a listing of the minimum BMPs for general site management, erosion, and sediment controls, as required in Order R9-2007-0001 section D.2.a(2).

It is the responsibility of the project proponent to select, install and maintain appropriate BMPs. BMPs must be installed in accordance with an industry recommended standard (for example: Caltrans or California Stormwater BMP handbooks) or in accordance with the State's General Permit for Construction Activities.

The City requires that at a minimum, BMPs from each subcategory below are installed and maintained for all grading and building projects. The responsible parties must implement an effective combination of BMPs to prevent minimize onsite erosion to the MEP and to prevent sediment from leaving the project site. Depending on project scope and potential associated discharges, additional BMPs may be needed. If the project proponent proposes to use a BMP not listed below, approval from the City is required prior to installation.

- Erosion Control
- Perimeter Protection
- Sediment Control

If a BMP is selected and implemented, but fails in actual use causing sediment or other pollutants to be discharged from the site, applicable regulations will have been violated. Similarly, the ability to deploy standby BMPs within 48 hours does not substitute for actual protection of slopes during storm events. Excessive erosion and sediment discharges are prohibited even if they result from a dry season storm that arrives with less than 48 hours notice.

5.4.2 Additional Controls for Construction Sites

For project sites that are tributary to 303(d) water body segments that are impaired for sediment, the following BMPs must be implemented at all times:

- Maintain vegetative cover as much as possible by developing the project in a phased approach to reduce the amount of exposed soil at any one time.
- Limit the areas of active construction to five acres at any one time, where applicable.
- Provide 100 percent soil cover for all areas of inactive construction throughout the entire time of construction, on a year-round basis.
- Provide appropriate perimeter control at all appropriate locations along the site perimeter and at all inlets to the storm drain system at all times during the rainy season.
- Provide vegetated buffer strips between the active construction area and any water bodies.
- Provide stabilized construction entrances and limit all vehicle and foot traffic to those entrances.

5.4.3 Maximum Disturbed Area for Erosion Controls

The active disturbed soil area of any project site shall be not more than 50 acres for an individual grading permit or a combination of grading permits under an associated Tentative or Final Map. The City may approve, on a case-by-case basis, expansions of the active disturbed soil area limit if adequate site protection is demonstrated. At all times, sufficient soil stabilization and sediment control materials shall be maintained on site to provide adequate site protection.

Disturbed soil areas shall be considered active whenever the soil disturbing activities have occurred, continues to occur or will occur during the ensuing 10 days. Non-active areas shall be protected within 10 days of cessation of soil disturbing activities or prior to the onset of precipitation, whichever occurs first.

5.4.4 Advanced Treatment Methods

Advanced Treatment is defined in Order R9-2007-0001 as the use “of mechanical or chemical means to flocculate and remove suspended sediment from runoff from construction sites prior to discharge.”

If a project meets all of the following criteria, advanced treatment will be required:

1. All or part of the site is within 200 feet of waters named on the CWA Section 303(d) list of Water Quality Limited Segments as impaired for sedimentation and/or turbidity;
2. The disturbance area is greater than five acres, including all phases of the development;
3. The disturbed slopes are steeper than 4:1 with at least 10 feet of relief, and drain toward a Section 303(d) listed receiving water for sedimentation or turbidity;
4. The site contains a predominance of soils with USDA-NRCS Erosion factors k_f greater than or equal to 0.4.

Advanced treatment may be required on sites that do not meet all four of the criteria for exceptional threat to water quality listed above at the discretion of the City Engineer based on a record on non-compliance.

Treatment effluent water quality shall meet or exceed the water quality objectives for sediment, turbidity, pH, and toxicity as listed in the Water Quality Control Plan for the San Diego Basin (9) for inland surface waters and lagoons and estuaries for the appropriate hydrologic unit.

Prior to obtaining a grading permit, the applicant shall submit, to the satisfaction of the City Engineer, the following:

1. An operations and maintenance schedule for all advanced treatment methods.
2. A monitoring plan for all required BMPs and water quality for all proposed work deemed necessary to achieve project water quality goals.
3. A written training plan for certification and documentation of necessary training and refreshers of staff.

The discharger shall either deploy Advanced Treatment Methods or comply with source control procedures described below.

- Maintain vegetative cover as much as possible by developing the project in a phased approach to reduce the amount of exposed soil at any one time.
- Limit the areas of active construction to five acres at any one time.
- Provide 100 percent soil cover for all areas of inactive construction throughout the entire time of construction, on a year-round basis.
- Provide appropriate perimeter control at all appropriate locations along the site perimeter and at all inlets to the storm drain system at all times during the rainy season.
- Provide vegetated buffer strips between the active construction area and any water bodies.
- Provide stabilized construction entrances and limit all vehicle and foot traffic to those entrances.

5.5 Program Implementation

5.5.1 Construction and Grading Approval Process

Because most construction activities involve soil disturbances and/or potential non-storm water discharges, the City's project approval process has been modified to require project proponents to incorporate stormwater protection and urban runoff management into their projects, prior to, during, and following, construction activities. The City utilizes the following elements when processing and approving projects for construction related activities.

5.5.1.1 Stormwater Pollution Prevention Plan

City staff will use the stormwater management plans and/or erosion control plans to evaluate compliance with the City's Stormwater and Grading Ordinances. This process, as described in the Stormwater Standards Manual, will also provide City staff with the information necessary to determine: (1) if the project is exempt, (2) if the project requires additional permit coverage (e.g. State General Construction Permit); (3) if the project is subject to the City's Standard Urban Stormwater Mitigation Plan (SUSMP) requirements, and; (4) the project's inspection frequency priority rating.

The process requires project proponents to do the following:

- Implement a plan to manage stormwater and non-stormwater discharges from the site at all times;
- Minimize grading during the wet season and coincide grading with seasonal dry weather periods to the extent feasible. If grading does occur during the wet season, require project proponent to implement additional BMPs for any rain events that may occur;
- Emphasize erosion prevention as the most important measure for keeping sediment onsite during construction;
- Utilize sediment controls as a supplement to erosion prevention for keeping sediment onsite during construction, and never as the single or primary method;
- Minimize areas that are cleared and graded to only the portion of the site that is necessary for construction;
- Minimize exposure time of disturbed soil areas;
- Temporarily stabilize and/or re-seed disturbed soil areas as rapidly as possible;
- Permanently re-vegetate or landscape as early as feasible;
- Stabilize all slopes; and
- When applicable, provide evidence of existing coverage under the State's General NPDES Permits for Construction Activities and Liner Underground/Overhead Utility Construction.

Project proponents obtain information from the City's public permit counter, which includes submittal requirements for grading permits, building permits, and other applicable discretionary and ministerial permit information. Additionally, construction project proponents can obtain a copy of the Stormwater Standards Manual (See Appendix 4-A), which contains the following:

- Minimum required BMP checklist and plan submittal requirements;
- Certificate of Exemption;

- SUSMP submittal requirements;
- References to the State General Construction Permit application and information and SWRCB website information;
- References to the State General Linear Utility Permit application and information and SWRCB website information;
- Construction Stormwater Pollution Prevention Plan (SWPPP) Template; and

Every construction activity within the City that has the potential to negatively affect water quality must prepare a construction storm water pollution prevention plan (Construction SWPPP). To maintain compliance with the various State and Regional permitting regulations, the City established a three tiered system for the preparation of a Construction SWPPP. The tiers range from most potential for storm water impacts (Tier 3) to the least potential for storm water impact (Tier 1) as described in more detail below.

Tier 3 - Construction activities that impact one or more acres (individually or cumulatively through phased construction) or that have a significant potential for water quality impairment must prepare a Tier 3 Construction SWPPP in conformance with the standards and the requirements of the Construction General Permit and City Standards.

Tier 2 - Construction activities that impact less than one acre and that pose a moderate threat to water quality must prepare a Tier 2 Construction SWPPP in conformance with City Standards and the General Linear Utility Permit (for underground/overhead linear utility projects).

Tier 1 - Construction activities that impact less than one acre and pose a low threat to storm water quality must prepare a Tier 1 Construction SWPPP in conformance with City Standards and the General Linear Utility Permit (for underground/overhead linear utility projects).

Construction activities that pose no threat to storm water quality do not require preparation of a Construction SWPPP; however, the construction activities must still comply with all construction BMPs required pursuant to Title 15 of the CMC and City Standards. See Section 5.5.1.2 below for more detailed discussion regarding exempt projects.

The criteria used to distinguish between high, moderate, low and no threat to storm water quality are more thoroughly described in the Project Threat Assessment Worksheet for Determination of Construction SWPPP Tier Level included as Appendix A to Section 3 (Construction SWPPP Standards and Requirements) of the City's Storm Water Standards Manual found in Appendix 4-A of this JURMP.

5.5.1.2 Exempt Projects

To qualify for an exclusion from preparation of a Construction SWPPP and other storm water program documentation requirements, project proponents are required to complete a certification of exemption prior to the issuance of any regulatory approval or permit. Approvals of exemptions are limited to only those projects where *all* activity, including

storage and handling of construction-related materials and any wastes or spills, will be completely enclosed (i.e. not exposed to stormwater) and no conduit to storm drains or surface waters exist (except for sanitary sewer system). Examples of types of activities that may be categorized as exempt include:

- Interior remodeling;
- Mechanical permit work;
- Electrical permit work;
- Tenant improvements (where all work and material storage occurs inside the building);
- Signs;
- Changes of use within an existing building;
- Temporary mobile home and trailer permits;
- Minor permits accessory to an existing building such as patio covers, decks and carports; and
- Emergency construction activities required for immediate protection of public health and safety.

These exemptions do not relieve the project proponents from preventing any construction-related materials, wastes, spills or residues from entering stormwater conveyance systems.

5.5.1.3 Projects Requiring Building Permit

For construction activities requiring a building permit, but which are not exempt, project applicants are required to implement the minimum BMPs. These requirements include site management, construction materials, and waste management controls, as well as off-site sediment tracking and transport. Because some activities with the potential to disturb soil (e.g. landscaping, grading less than permit threshold) may not require grading permits, minimum BMPs are still required to address basic erosion and sediment control practices.

5.5.1.4 Projects Not Subject to the State General Construction Permit

Similarly, for projects that require a grading permit and where the amount of soil being disturbed is less than one acre, project proponents are required to implement the City's minimum BMPs.

5.5.1.5 Projects Subject to the State General Construction Permit

For activities that will disturb greater than one acre of soil, project applicants are required to select and implement erosion control, sediment control and non-stormwater BMPs to prevent the discharge of contaminants off-site or to a stormwater conveyance system. In addition to meeting the City's minimum BMP requirements, the project proponent must provide evidence of coverage under the State General Construction Permit. The City has adopted the California Stormwater Quality association model Stormwater Pollution Prevention Plan (SWPPP) that may be completed and used to satisfy this requirement by the SWRCB. Dischargers may, upon approval of City staff, prepare the SWPPP using the Caltrans model. Upon submittal to the SWRCB, the project proponent must also submit a

copy of the Notice of Intent (NOI), proof of fee payment, and the completed SWPPP to the City for review and file.

5.5.1.6 Plan Checks

During plan checks, City staff will review the submittal to see if the minimum required BMPs are addressed and that the applicant-selected BMPs are reasonable and appropriate according to the construction activities planned for the site and in accordance with the Storm Water Standards Manual. The City staff will use a checklist for Tier 2 and 3 to verify that applicable requirements are included on plans. During this process, the plan check staff also serves as a resource for information to project applicants on applicability of BMPs.

5.5.2 Contract Specifications

The stormwater requirements for construction activities are applicable to all City Capital Improvement Projects as well. The following is standard provisions to be included in each contract for construction related activities.

WATER POLLUTION CONTROL

Add the following to Section 7-8.6:

The Contractor shall be informed regarding, and shall adhere to, the requirements of the California Regional Water Quality Control Board (RWQCB), and those of the local San Diego area district. All work shall be performed in accordance with RWQCB Order R9-2007-0001. The Contractor shall submit plans showing all pollution prevention, erosion and sediment control, site management practices, and a Storm Water Pollution Prevention Plan (SWPPP) when required by the RWQCB, to the Engineer for review and acceptance, and shall implement and maintain all appropriate measures to prevent polluted discharges from entering storm water conveyance facilities. The SWPPP must be prepared and submitted by the Contractor and accepted by the Engineer before the Notice to Proceed is issued.

The Contractor shall designate a qualified person who is trained and competent in the use of Best Management Practices (BMPs) and who shall be on the site daily, although not necessarily full time, to evaluate the conditions of the site with respect to storm water pollution prevention. This person shall ensure the implementation of the conditions of the SWPPP, the Contract Documents, and other State and local regulations and ordinances with respect to control of erosion, sediment and other forms of water pollution, as well as other waste management regulations. Further, this person shall be responsible for monitoring weather and implementation of any emergency plans as needed. The weather shall be monitored on a five-day forecast plan and a full BMP protection plan shall be activated when a 40% (5-day National Weather Service) chance of rain is forecasted. This person shall also be responsible for overseeing any site grading operations and evaluating the effectiveness of the BMPs. This person shall modify the BMPs as necessary to keep the site in compliance. This person or other

designated site management staff shall be responsible to inspect the BMPs routinely and ensure maintenance measures are implemented.

The Contractor shall educate all employees, subcontractors, and suppliers about storm water pollution prevention and mitigation measures needed during various construction activities to prevent the impact of construction discharges. The Contractor shall ensure that all personnel are trained in basic urban runoff management. A list of attendees and copies of the educational materials shall be kept on file at the site and submitted to the Engineer at the conclusion of each training session, upon request.

The Contractor shall protect with BMPs, such as gravel bags and filter fabric, all new and existing storm water conveyance system structures and other facilities from sedimentation or other related construction debris and discharges, or by any other equal product that is approved by the Engineer. The Contractor shall prevent any discharge of concrete rinse water or other pollutant into a stormwater conveyance facility with physical barriers.

The Contractor shall show in the SWPPP the locations for concrete washout, vehicle maintenance, staging, and storage areas. Further, the Contractor shall show pollutant control measures to be used (BMPs) to confine construction waste in these designated areas, including construction entrance stabilization and wheel-wash measures to reduce the tracking or deposition of sediment onto public and private roads.

During the dry season (May 1 through September 30 each year), the Contractor shall inspect at least monthly all pollutant control measures installed to mitigate construction activities during the dry season. For the duration of the project, the Contractor shall submit, with each progress payment request, documentation that these pollutant control measures were inspected, including detailed inspection reports.

During the rainy season (October 1 through April 30 each year), the Contractor shall inspect at least weekly all pollutant control measures, inspect before and after every rain event and every 24 hours during any prolonged rain event. For the duration of the project, the Contractor shall submit, with each progress payment request, documentation that these pollutant control measures were inspected, including detailed inspection reports.

The contractor shall perform routine maintenance of all pollution control measures continuously for the duration of the project. The Contractor shall implement special maintenance measures before and after every rain event and every 24 hours during any prolonged rain event. The Contractor shall maintain and repair all pollutant control measures as soon as possible after the conclusion of each rain event as worker safety allows. For the duration of the project, the Contractor shall submit, with each progress payment request, documentation that

these pollutant control measures were maintained, including detailed reports on daily routine work and special maintenance work that was performed, and a list of BMPs that were found to be inadequate and what modifications were made.

Monthly progress payments are conditioned upon the Owner having received from the Contractor the pollution control inspection and maintenance reports.

The Contractor shall mark with a stencil, concrete stamp, or ceramic tile every storm drain inlet within the project boundaries to indicate that no dumping is allowed in storm drainage facilities that discharge in the ocean. The stencil or tiles are available from the Engineer, with five days advance notice. On curb inlets, the stencil shall be placed at the curb line on the inlet roof, the stamp should be placed on the inlet roof or in the sidewalk behind the inlet, and the tile shall be affixed to the gutter with pavement-marker adhesive or inset in the concrete in the center of the inlet opening. On catch basins, the stencil, stamp, and tile shall be placed or imprinted next to the inlet grate. Extra concrete may be required next to the grate to accommodate the stencil, stamp, or tile dimensions.

If an unmitigated non-stormwater discharge leaves the project site, the Contractor shall immediately stop all the activity causing the discharge and mitigate the discharge. The Contractor shall also immediately notify the Engineer of the discharge. As soon as practical, any and all waste material, sediment, debris or other pollution from any discharge shall be removed from the drainage system by the Contractor.

DRAINAGE AND EROSION CONTROL

Add the following to Section 7-8.7:

Before commencement, and until final acceptance of the Work by the City, the Contractor shall provide all measures necessary to avoid erosion and adverse drainage conditions, in conformance with the requirements of the National Pollutant Discharge Elimination System (NPDES) Number CAS0108758 (RWQCB Order R9-2007-0001). Such measures shall prevent the impounding of runoff, nuisance water, sediment movement, and debris movement from the construction site onto adjacent properties or from adjacent properties onto the construction site. If the Engineer determines that the Contractor's measures are not adequate, the Contractor shall provide whatever additional measures are required.

Payment for all work necessary for preventing storm water pollution and providing drainage and erosion control, as specified, will be as shown in the Bid Schedule, and no additional compensation will be allowed.

5.5.3 BMP Implementation

In accordance with Order R9-2007-0001, the City established a set of minimum BMPs for all projects to be implemented year-round. Because all sites, regardless of the priority, must be protected to prevent discharges to the maximum extent practicable, the minimum BMP requirements are the same for each priority. Each site must be protected by an effective combination of erosion and sediment controls, materials and waste management controls, and site management controls. These minimum requirements are included in the Storm Water Standards Manual.

If particular BMPs are infeasible at any specific site, the project proponent must install other equivalent BMPs. At any time of the year, an inactive site must be fully protected from erosion and discharges of sediment. A site will be considered inactive if construction activities have ceased for a period of ten or more consecutive days. It is also the project proponent's responsibility at both active and inactive sites to implement a plan to address all potential non-stormwater discharges.

5.5.3.1 Dry Season Requirements

The following are the minimum BMPs that must be in place at all sites during the dry season, which is defined as May 1st through September 30th.

- All graded areas must have erosion protection BMPs properly installed.
- Adequate perimeter protection BMPs must be installed and maintained.
- Adequate sediment control BMPs must be installed and maintained.
- Adequate BMPs to control offsite sediment tracking must be installed and maintained.
- A minimum of 125% of the material needed to install standby BMPs to protect the exposed areas from erosion and prevent sediment discharges, must be stored onsite. Areas already protected from erosion using physical stabilization or established vegetation stabilization BMPs are not considered to be "exposed" for purposes of this requirement.
- The project proponent must have an approved "weather triggered" action plan and be able to deploy standby BMPs to completely protect the exposed portions of the site within 48 hours of a predicted storm event (a predicted storm event is defined as a forecasted, 40% chance of rain by 5-day National Weather Service). On request, the project proponent must provide proof of this capability that is acceptable to the City.
- Deployment of physical or vegetation erosion control BMPs must commence as soon as slopes are completed. The project proponent may not continue to rely on the ability to deploy standby BMP materials to prevent erosion of slopes that have been completed.
- The area that can be cleared, graded, and left exposed at one time is limited to the amount of acreage that the contractor can adequately protect prior to a predicted rainstorm. For larger sites grading should be phased. It may be necessary to deploy erosion and sediment control BMPs in areas that are not completed, but are not actively being worked before additional grading is done.

5.5.3.2 Rainy Season Requirements

In addition to the dry season requirements, the following must be implemented during the rainy season, which is defined as October 1st through April 30th:

- Perimeter protection and sediment control BMPs must be upgraded if necessary to provide sufficient protection for storms likely to occur during the rainy season.
- Adequate physical or vegetation erosion control BMPs must be installed and established for all completed slopes prior to the start of the rainy season. These BMPs must be maintained throughout the rainy season. If a selected BMP fails, it must be repaired and improved, or replaced with an acceptable alternate as soon as it is safe to do so. The failure of a BMP indicates it was not adequate for the circumstances in which it was used. Repairs or replacements must therefore put a more robust BMP in place.
- The amount of exposed soil allowed at one time shall not exceed that which can be adequately protected by deploying standby erosion control and sediment control BMPs prior to a predicted rainstorm.
- A disturbed area that is not completed but that is not being actively graded must be fully protected from erosion if left for 10 or more days. The ability to deploy standby BMP materials is not sufficient for these areas. BMPs must actually be deployed.

5.5.4 Inspection of Construction Sites

5.5.4.1 Inspection Frequencies

The inspection frequencies for determining compliance with the City's requirements are based upon the threat to water quality prioritization of sites which is described in Section 5.2.1 of this document.

At a minimum, each site that is determined to be high inspection frequency priority will be inspected at least every two weeks during the rainy season (October 1st through April 30th). Medium inspection frequency priority projects are to be inspected at least monthly during the rainy season. Low inspection frequency priority construction sites will be inspected on an as-needed basis during the rainy season. All construction sites will be inspected for stormwater management compliance on an as needed basis during the dry season. Site specific inspection frequencies will be reevaluated periodically, particularly when grading activities are being conducted during the rainy season. The need for additional inspections may vary depending upon several factors including:

- Site conditions;
- Previous violations;
- History of developer or contractor past performance;
- Grading during rainy season; and
- Weather patterns.

5.5.4.2 Inspection Procedures

The City currently inspects all ongoing construction projects including both private projects and City CIPs. A team of Engineering Inspectors are responsible for all grading, infrastructure, right-of-way and engineering projects, while a team of Building Inspectors are responsible for all building projects within the City. Inspectors are

responsible for ensuring construction activities are being performed in accordance with the project plans, building and grading permits, and all applicable codes, regulations and ordinances. Currently, if inspected sites do not meet the City's requirements or do not comply with City ordinances, City inspection staff immediately directs compliance and conducts follow-up inspections to assure compliance is attained. Enforcement procedures are used when necessary and may include verbal or written warnings, stop work orders, revocation of permits, and/or legal action.

In accordance with Order R9-2007-0001, the City's inspection procedures will continue to include the following:

- Assessment of BMP effectiveness including implementation of an effective combination of erosion, sediment and non-stormwater BMPs to meet the City's minimum water quality protection requirements and prevent the discharge of pollutants into stormwater and receiving waters, and
- Checking for coverage under the General Construction Permit (NOI and/or WDID No.) during initial inspection;
- Ensure compliance with the City's applicable ordinances, permits and other site-specific requirements;
- Visual observations for non-stormwater discharges, potential illicit connections and potential discharge of pollutants in stormwater runoff;
- Ensure proper implementation of plans and specifications,
- Education and outreach on stormwater pollution prevention as needed;
- Ensure that the project proponents implement their stormwater management on a year-round basis, and;
- Creation of a written or electronic inspection report.

The inspection program will be expanded to not only include City inspectors ongoing participation in project preconstruction meetings and regular site inspections, but also requiring the Developer/Contractor Self-Inspections consisting of implementation, maintenance, monitoring and revision of BMPs.

The primary mechanism inspectors use to determine if minimum water quality protection requirements and BMPs for construction activities are being met is to assess the site against the minimum BMP requirements that are designated by the City in the Storm Water Standards Manual. The minimum BMP requirements are intended to be easy to interpret field observations that allow an assessment of site conditions during both dry and wet conditions.

For projects subject to the State General Construction Permit, the RWQCB is responsible for verifying and enforcing requirements of the General Construction Permit. The City inspection staff will continue to work with RWQCB staff in assuring compliance at these sites.

5.5.5 Enforcement at Construction Sites

The following enforcement measures and remedies are available to the City for grading and construction related activities and may be undertaken in lieu of or in addition to any

remedial actions undertaken in accordance with Section 15.16.140 of the Carlsbad Municipal Code:

Stop Work Notice

The City may issue a stop work notice demanding that all unlawful activities be stopped until a valid grading permit is obtained or corrective action is authorized by the City. The City may allow continuance of the work to the extent necessary to install protective measures to safeguard the public or to secure the site against erosion, sedimentation and the discharge of non-storm water pollutants. Prior to resumption of any work, other than as may be permitted by the City on a permitted grading operation, the permittee shall restore all cash deposits and/or other securities consumed by the City to the amount specified in the approved grading and erosion control agreement.

Owner Notification

The owner of the property will be notified in writing that a violation has occurred. The notification will specify the location, nature and extent of the activity or condition which contributed to the violation, the corrective action needed to cure the violation and the period of time deemed necessary by the City to correct the violation.

Record Notice of Grading Violation

In the event that the owner does not correct the violation in the manner or within the time period requested by the City, the City will record a notice of grading violation against the property with the county recorder. Upon completion of any corrective action and/or issuance of a valid grading permit and upon payment of the investigation fee required, the City will file a notice of release of grading violation with the county recorder releasing the property from the notice of grading violation.

Prohibition of Development Permits

Any property which has a notice of grading violation recorded against it shall be prohibited from obtaining or using any development permit pursuant to Titles 18, 20 and 21 of the CMC until after all corrective actions are taken in accordance with the requirements of the city engineer and, a notice of release of grading violation has been recorded with the county recorder.

Investigation Fee

An investigation fee shall be paid by the person responsible for the violation in accordance with the provisions of Section 15.16 of the CMC. The payment of such investigation fee shall not relieve any person from the performance of the corrective work or otherwise complying with the requirements of this chapter.

Criminal Penalties

Each person, firm or corporation who commences or does any grading contrary to the provisions of this chapter, or otherwise violates the provisions of Section 15.16 of the CMC, is guilty of an infraction. Every day during any portion of which any violation of any provisions of this title is committed, continued or permitted by such person, firm or

corporation, will be deemed a separate violation and will be punishable as provided in the CMC.

Abatement of Public Nuisance

Any grading commenced or done contrary to the provisions of Section 15.16, or other violation of the CMC, shall be, and the same is declared to be, a public nuisance. Upon order of the City Council, the City Attorney will commence necessary proceedings for the abatement of any such public nuisance in the manner provided by law. Any failure, refusal, or neglect to obtain a permit as required by this chapter shall be prima facie evidence of the fact that a public nuisance has been committed in connection with any grading commenced or done contrary to the provisions of Section 15.16 of the CMC.

Civil Action

The City Attorney may, at the request of the City Engineer, initiate any appropriate civil action in a court of competent jurisdiction to enforce the stop work notice, including the required corrective actions, and/or the grading and erosion control agreement, including the recovery of any funds expended by the City to abate any public nuisance resulting from an unlawful act as defined in Section 15.16.170 of the CMC and any additional civil penalties provided for by law.

5.5.6 Reporting of Non-Compliant Sites

City staff will document observations of potential violations and will notify the RWQCB of the noncompliance in accordance with Order R9-2007-0001 if the noncompliance endangers health or the environmental. Additionally, the City will provide notification to the RWQCB when Stop Work enforcement or higher levels of enforcement actions are taken against violators.