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PUBLIC WORKS DEPARTMENT

Modification of or Addition to Improvement Standards and Details

Modification Number: 062405-1

Effective Date of Change: July 29, 2005

Modification:

Add Section 9-26 “On-Site Stormwater Quality Measures” to the adopted Sacramento County Improvement Standards dated June 1, 1999. All new and significant redevelopment projects falling within the priority project categories as defined in the City-wide/Joint NPDES permit waste discharge requirements, Paragraph 19a., are required to construct facilities to reduce pollutant discharges to the maximum extent practicable. Currently, the acceptable on-site stormwater quality treatment options for these new and redevelopment projects are:

1. Non-Proprietary Stormwater Quality Treatment Options

- Vegetative Swale
- Vegetative Filter Strip
- Austin Aboveground Sand Filter
- District of Columbia Underground Sand Filter
- Delaware Surface Sand Filter
- Surface Infiltration Trench
- Infiltration Basin
- Porous Paving Blocks
- Water Quality Detention Basins

2. Proprietary Stormwater Quality Treatment Options. Approved proprietary stormwater quality devices such as oil/water separator and sediment vaults and traps as approved by the Sacramento Stormwater Quality Partnership. Acceptable proprietary facilities are listed on the following website: <http://www.sactostormwater.org/SSQP/treatment-options.asp>

3. Exceptions. Other options for treatment may be proposed that treat multiple development sites and may be off-site. Those “multiple site” solutions proposed will be reviewed by Water Resources and shall be approved by the City Engineer. Such approval shall at his/her sole discretion.

The Draft Guidance Manual “Guidance Manual for On-Site Stormwater Quality Control Measures” (January 2000) and its updates shall be used to determine the acceptability of proposed stormwater treatment measures. Any deviation from the above requires the written approval of the Water Resources Department.

Effect of Modification:

Achieve compliance with the City-wide NPDES Permit # CAS082597 requirements, Section C.9. "Each Permittee shall require implementation of pollutant reduction and control measures to effectively prohibit unauthorized non-storm water discharge and to reduce pollutants in storm water run-off to the Maximum Extent Practicable (MEP)". This constitutes an interim measure to be used until the more comprehensive Development Standards Plan is adopted by the City of Elk Grove.

ATTACHMENTS:

1. Excerpt from NPDES permit, Paragraph 19a
2. Copy of current website pages, "On-Site Stormwater Quality Treatment Options"
3. Maintenance Agreement Template

Request for Modification Initiated By:

Douglas A. Hault 6/24/05
Supervising Engineer, Water Resources Date

Modification Reviewed for Conformity and Consistency to Standards:

Janet Behl 7/29/05
Manager - Development Engineering Date

Modification to Improvement Standards Approved:

Robert J. Lee 7/29/05
City Engineer Date

19. Upon amendment or adoption of local Development Standards, each Permittee shall ensure that all new development and significant redevelopment projects falling under the priority project categories listed below are reviewed and conditioned for compliance with the Development Standards. The local Development Standards shall apply to all priority projects or phases of priority projects that do not have the following by the adoption date for the local Development Standards: approval by the City or County Engineer, permit for development or construction, an approved special permit, or an approved tentative map.
 - a. **Priority Development Project Categories:** Development Standards requirements shall apply to all new development and significant redevelopment projects falling under the priority project categories listed below. The term “significant redevelopment” is defined as the creation or addition of at least 5,000 square feet of impervious surfaces on an already developed site. Significant redevelopment includes, but is not limited to expansion of a building footprint, or replacement of a structure; replacement of impervious surface that is not part of a routine maintenance activity; and land-disturbing activities related to structural or impervious surfaces. Where significant redevelopment results in an increase of less than 50 percent of the impervious surfaces of a previously existing development, and the existing development was not subject to Development Standards, the BMP design standards discussed below apply only to the addition, and not to the entire development. Priority Development Project Categories are listed below.
 - i. Home subdivisions with ten housing units or more. This category includes single-family homes, multi-family homes, condominiums, and apartments.
 - ii. Commercial developments. This category is defined as any development on private land that is not for heavy industrial or residential uses where the impervious land area for development 100,000 square feet or more. The category includes, but is not limited to hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, commercial nurseries, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses, and other light industrial facilities.
 - iii. Automotive repair shops. This category is defined as a facility that is categorized by one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539, where the total impervious area for development is 5,000 square feet or more.
 - iv. Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812) and has 5,000 or more feet of impervious area.

- v. Hillside developments 5,000 square feet or more of impervious area. This category is defined as any development that creates 5,000 square feet of impervious surface in an area with known erosive soil located in an area with natural slopes having a twenty-five percent or greater grade.
- vi. Parking lots exposed to rainfall that are 5,000 square feet or more, or with 25 or more parking spaces. This category is defined as an uncovered impervious area for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
- vii. Street, roads, highways, and freeways. This category includes any paved surface five acres or greater used by automobiles, trucks, motorcycles, and other vehicles.
- viii. Retail Gasoline Outlets. “Retail Gasoline Outlet” is defined as any facility engaged in selling gasoline with 5,000 square feet or more of impervious surface area.
- b. **BMP Requirements:** The Development Standards Plan shall include a list of recommended source and/or structural treatment control BMPs for all new development and significant redevelopment projects falling under the above priority project categories or locations. At a minimum, Retail Gasoline Outlets shall be required to use the BMPs listed in the California Storm Water Quality Task Force, March 1997 BMP Guide for Retail Gasoline Outlets.
- c. **Numeric Sizing Criteria:** As a part of the DSP, the Permittees shall review their existing numeric sizing criteria for structural treatment BMPs and ensure that it is comparable to the following numeric sizing criteria:
 - i. Volume-based BMPs shall be designed to mitigate (infiltrate or treat) either:
 - a) The volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the local historical rainfall record; or
 - b) The volume of runoff produced by the 85th percentile 24-hour rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998); or
 - c) The volume of annual runoff based on unit basin storage volume, to achieve 80 percent or more volume treatment by the method recommended in California Storm Water Best Management Practices Handbook – Industrial/Commercial, (1993).

- ii. Flow-based BMPs shall be designed to mitigate (infiltrate or treat) either:
 - a) The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or
 - b) The maximum flow rate of runoff, as determined from local historical rainfall records, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.
- d. Equivalent Numeric Sizing Criteria: The Permittee may develop or use any equivalent numeric sizing criteria or performance-based standard for post-construction structural treatment BMPs as part of these requirements. Such equivalent sizing criteria may be authorized for use in place of the above criteria. In the absence of an equivalent numeric sizing criteria, the criteria contained above shall be implemented.
- e. Pollutants and Activities of Concern: The DSP shall consider pollutants of concern or activities of concern in identifying appropriate BMPs for new development or significant redevelopment projects. In selecting BMPs, the following shall be considered: (1) the target pollutants; (2) land use and pollutants associated with that land use type; (3) pollutants expected to be present on site at concentrations that would pose potential water quality concerns; and (4) changes in flow rates and volumes resulting from the development project and sensitivity of receiving waters to changes in flow rates and volumes.
- f. Implementation Process: The DSP shall describe the process used to implement the Development Standards and all proposed modifications to the process. The process shall also include identification of the roles and responsibilities of various municipal departments in implementing these standards, as well as any other measures necessary for the implementation of these standards.
- g. Infiltration and Groundwater Protection: To protect groundwater quality, the Permittee shall apply restrictions to the use of structural BMPs designed to primarily function as infiltration devices (such as infiltration trenches and infiltration basins). Such restrictions shall ensure that the use of such infiltration structural treatment BMPs shall not cause a violation of applicable groundwater quality standards.
- h. Downstream Erosion: The DSP shall include any existing criteria or proposed modifications to ensure that discharges from new development and significant redevelopment address the potential for downstream erosion and protect stream habitat. At a minimum, the Permittees' Development Standards process shall consider the need for measures to control peak storm water discharge rates and velocities in order to protect downstream erosion and stream habitat. Storm

water discharge volumes and durations should also be considered in the Development Standards.

- i. **Waiver Provision:** The Permittee may provide for a project to be waived from the requirement of implementing structural treatment BMPs if infeasibility can be established as described below.
 - j. **Conflicts with Local Practices:** The DSP shall include a description of necessary modifications to existing codes and ordinances and an implementation schedule for these modifications.
20. **Regional Storm Water Mitigation Program:** A Permittee may apply to the Regional Board for approval of a regional or sub-regional storm water mitigation program to substitute in part or wholly for Development Standard requirements. Upon review and a determination by the Executive Officer that the proposal is technically valid and appropriate, the Regional Board may consider for approval such a program if its implementation will:
- a. Result in equivalent or improved storm water quality;
 - b. Protect stream habitat;
 - c. Promote cooperative problem solving by diverse interests;
 - d. Be fiscally sustainable via secured funding; and
 - e. Be completed in five years, including the construction and start-up of treatment facilities.

Nothing in this provision shall be construed as to delay the implementation of Development Standard requirements as required by this Order.

21. **Waiver Program:** Anytime during the term of the Order, a Permittee may propose a waiver program that would require any developers receiving waivers to transfer the savings in cost, as determined by the Permittee, to a storm water mitigation fund. Any proposed waiver program shall be subject to the approval of the Executive Officer. Any Permittee may consider a waiver for projects where structural treatment BMPs are infeasible. The Permittee shall only grant a waiver when all appropriate structural treatment BMPs have been considered and rejected as infeasible. The Permittee shall notify the Regional Board **within one month** of each waiver issued and shall include the name of the person granting each waiver. Funds may be used for projects to improve urban runoff quality within the watershed of the waived project. At a minimum, a proposed waiver program shall identify the following:
- a. The entity or entities that will manage (i.e., assume full responsibility for) the storm water mitigation fund;
 - b. The range and types of acceptable projects for which mitigation funds may be expended;
 - c. The entity or entities that will assume full responsibility for each mitigation project, including its successful completion; and

