



8400 LAGUNA PALMS WAY • ELK GROVE, CALIFORNIA 95758  
TEL: 916.683.7111 • FAX: 916.691.2001 • [www.elkgrovecity.org](http://www.elkgrovecity.org)

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The Draft Guidance Manual “Guidance Manual for On-Site Stormwater Quality Control Measures” (January 2000) and its updates shall be used to determine the acceptability of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: Donald 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 85<sup>th</sup> 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 85<sup>th</sup> 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



<b>SSQP Home</b>
<b>Partners</b>
County of Sacramento
City of Sacramento
City of Citrus Heights
City of Elk Grove
City of Folsom
City of Galt
City of Rancho Cordova
<b>Joint Programs</b>
New Development
IPM Tool Kit

## On-Site Stormwater Quality Treatment Options for New and Redevelopment Projects

This information applies generally to projects in unincorporated Sacramento County, and the cities of Citrus Heights, Rancho Cordova, Elk Grove, Folsom, Galt and Sacramento. For more details, check with your local permitting agency.

## Non-Proprietary Stormwater Quality Treatment Options

The following stormwater quality facilities are generally allowed depending on the proposed application:

- 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

The Guidance Manual for Design of On-Site Stormwater Quality Treatment Control Measures (January 2000) includes selection, design and maintenance information for several facilities currently accepted for use in the Sacramento area: vegetative swales and filter strips, sand filters, infiltration trenches and basins, and paving blocks. For design specifications for water quality detention basins, contact your local permitting agency. The local permitting agency may also allow the use of innovative treatment measures that are not listed above, but since approval is not guaranteed, site designers proposing to use an alternative technique should coordinate with the permitting agency early in the design process.

## Proprietary Stormwater Quality Treatment Options

Since the late 1990's, the Sacramento Stormwater Quality Partnership has been conducting a study to investigate the performance of proprietary stormwater quality devices. In November 1999, they published the Investigation of Structural Control Measures



for New Development. The report documents the protocol that must be followed in order for a particular device to be accepted for use in the Sacramento area. Manufacturers have been invited on several occasions since then to submit data which could be reviewed for conformance with the protocol, but to date, only one proprietary stormwater quality treatment device has successfully met the protocol: Stormvault Mitigation System by CON/SPAN® (formerly the Jensen Precast Stormvault™). Site designers proposing to use this device need to submit sizing calculations to the local permitting agency (software is supplied by the manufacturer for this purpose). Note that no other Jensen models (e.g., JPHV interceptor) are approved at this time.

In select cases, the local permitting agency may allow the use of other proprietary treatment measures as a "pilot study". In such cases, the property owner and/or manufacturer will be required to fund and complete a monitoring study to verify the device's performance. Since approval is not guaranteed, site designers proposing to use an alternative technique should coordinate with the permitting agency early in the site design process.

The local agencies are embarking on another phase of their investigation in 2005, whereby questionnaires will be sent to manufacturers and pollutant removal effectiveness data will be requested for submission and evaluation. This web site will be updated if any additional proprietary devices are found to meet the agencies' protocol.

## **Maintenance Agreements**

Long-term maintenance of stormwater quality treatment facilities is necessary to ensure that the facilities operate as designed. If a device isn't operated and maintained properly, the measures could result in no treatment of stormwater runoff, whereby pollutants are delivered to the downstream storm drain system and local waterways. The local permitting agency will require maintenance agreements for stormwater quality treatment facilities; some agencies require them already, and others are in the process of developing the agreement language. Such agreements must be signed by the property owner and are intended to be recorded against the property. Appendix C of the The Guidance Manual for Design of On-Site Stormwater Quality Treatment Control Measures (January 2000) presents an example maintenance agreement. Check with your local permitting agency for the exact maintenance agreement language that they require.

## **Contact Information**

County of Sacramento, Paul Olson 916-874-3910  
City of Sacramento, Sherill Huun 916-808-1455  
City of Citrus Heights, Kevin Becker 916-727-4700  
City of Elk Grove, Ramy Kamel 916-687-3043  
City of Folsom, Carmel Brown 916-351-3545  
City of Galt, Tony Elce 209-366-7260



City of Rancho Cordova, Paul Olson 916-874-3910

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If you have problems, comments or suggestions regarding this site, please email Customer Service.

**NO FEE DOCUMENT**

Government Code §6103  
**RECORDING REQUESTED BY AND**  
**WHEN RECORDED MAIL TO:**

CITY OF ELK GROVE  
8380 Laguna Palms Way  
Elk Grove, CA 95758  
Attn: City Clerk

The Above Space For Recorder's Use Only

O.K. to accept: \_\_\_\_\_  
Date: \_\_\_\_\_

Project Name:  
Address: Elk Grove, CA  
APN:  
Project No.: EG-

**STORM WATER TREATMENT  
ACCESS AND MAINTENANCE AGREEMENT**

THIS AGREEMENT is made and entered into on this \_\_\_\_ day of \_\_\_\_\_ 2005,  
by and between the City of Elk Grove a municipal corporation, hereinafter referred to as "City,"  
and \_\_\_\_\_, hereinafter referred to as "Owner."

1. The Owner owns real property ("Property") in the City of Elk Grove, County of Sacramento, State of California, more specifically described in the legal description and plot map in Exhibit "A," attached hereto and incorporated herein by this reference.
2. The Owner has chosen to install \_\_\_\_\_ **Model No.** \_\_\_\_\_, referred to as "System."
3. System is a private facility and all maintenance or replacement, are therefore the sole responsibility of the Owner in accordance with the terms of this Agreement.
4. The Owner is aware that periodic and continuous maintenance is required to assure peak performance of System and that, furthermore, such maintenance activity will require compliance with all Local, State, or Federal laws and regulations in effect at the time such maintenance occurs.
5. Owner hereby provides the City or City's designee complete access to the System and its immediate vicinity at any time, upon twenty-four (24) hour advance notice in writing, for any duration for the purpose of inspection, sampling and testing of System. City shall make every effort at all times to minimize interference with Owner's use of the Property and/or System.
6. Owner shall use its best efforts diligently to maintain System in a manner assuring peak performance at all times.

7. Owner, and Owner's representative or contractor, in the removal and extraction of materials, in a manner consistent with all relevant laws and regulations, in effect at the time, shall exercise all reasonable precautions. The Owner shall submit to the City Engineer on July 1<sup>st</sup> of each year, documentation identifying the materials removed, the quantity, and disposal destination and dates of inspection and maintenance.

8. In the event Owner, or its successors or assigns, fails to accomplish the necessary maintenance contemplated by this Agreement, within fourteen (14) days of written notice by the City, the City is hereby authorized to cause any maintenance necessary to be done and charge the entire cost and expense to the Owner or Owner's successors or assigns, charge the costs incurred as a lien against the property, file a suit to compel the maintenance necessary or any combination thereof. The costs charged shall include administrative costs and interest thereon at the maximum rate authorized by the Civil Code from the date of notice of expense until paid in full.

9. This Agreement shall be recorded in the Office of the Recorder of Sacramento County, California, at the expense of the Owner and shall constitute notice to all successors and assigns of the title to said Property of the obligation herein set forth.

10. In the event of legal action occasioned by any default or action of the Owner, or its successors or assigns, then the Owner and its successors or assigns agree(s) to pay all costs incurred by the City in enforcing the terms of this Agreement, including reasonable attorney's fees, litigation expenses, including experts' fees and costs, and other costs which shall become part of the lien against the property.

11. It is the intent of the parties hereto that burdens and benefits herein undertaken shall constitute covenants that run with said Property.

12. The obligations herein undertaken shall be binding upon the heirs, successors, executors, administrators and assigns of the parties hereto. The term "Owner" shall include not only the present Owner, but also its heirs, successors, executors, administrators, and assigns. Owner shall notify any successor to title all or part of the Property about the existence of this Agreement. Owner shall provide such notice prior to such successor obtaining an interest in all or part of the Property. Owner shall provide a copy of such notice to the City at the same time such notice is provided to the successor.

13. Time is of the essence in the performance of this Agreement.

14. If any provision in this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions shall continue in full force without being impaired.

15. Any notice to a party required or called for in this Agreement shall be served in person, or by deposit in the U.S. Mail, first class postage prepaid, to the address set forth below. Notice(s) shall be deemed effective upon receipt, or seventy-two (72) hours after deposit in the U.S. Mail, whichever is earlier. A party may change a notice address only by providing written notice thereof to the other party.

IN WITNESS THEREOF, the parties hereto have affixed their signatures as of the date first written above.

<p>CITY OF ELK GROVE, a Municipal Corporation of the State of California</p> <p>By: _____ CITY ENGINEER</p> <p>ATTEST:</p>     <p>_____ Peggy E. Jackson, City Clerk</p> <p>APPROVED AS TO FORM:</p>  <p>_____ Anthony B. Manzanetti, City Attorney</p>	<p>PRINCIPAL:</p> <p>_____ _____ _____</p> <p>Contact: _____ Ph: _____</p> <p>By: _____</p> <p>_____ (Print Name &amp; Title)</p> <p>and</p> <p>By: _____</p> <p>_____ (Print Name &amp; Title)</p>
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**EXHIBIT "A"**  
**[Legal Description and plot map of the Real Property]**

**Show the location of the system on the plot map**