

Development Application Presentation

*By Fernando Duenas, P.E.
Public Works Department*

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Purpose

- To demonstrate the significance of the COEG's current policies for new development as it pertains to floodplain management, water quality and protection of our natural resources



Policy Related to Drainage Mitigation for New Development in COEG

- General Plan
- Floodplain Ordinance
- NPDES MS-4 Permit
- Guidance Manual for SWQ (Partnership)
- Development Application



Regulatory Framework

- Flood management
 - USACE
 - FEMA
 - Local Flood Control Districts
- Habitat protection
 - US Fish & Wildlife Service (Section 7)
 - CA Department of Fish & Game (Section 1601)
- Water Quality
 - Federal Clean Water Act (US EPA)
 - Regional Water Quality Control Boards (RWQCBs)

General Plan Regarding Conservation Policies

- Conservation Policies Obligate:
 - Implement the City's NPDES permit through the approval of development projects and other activities regulated by the permit (CAQ-12)
 - Post-development peak storm water discharge rates and velocities shall be designed to prevent or reduce downstream erosion and to protect stream habitat. (CAQ-18)
 - No placing of fill in 100-yr floodplain...unless specifically approved by the City (CAQ-20)



General Plan Regarding Conservation Policies (CAQ-19)

- Recognizes Natural Stream Corridors to:
 - Protect and Enhance Water Quality
 - Provide Native and Endangered Species Habitat
 - Encourage Ground Water Recharge
 - Provide Community Amenities



General Plan Regarding Conservation Policies

- Does Allow Channel Modification only (CAQ-19):
 - To eliminate flood hazards...after alternatives to realignment have been shown to be infeasible
 - To protect and preserve natural features and vegetation which would otherwise be removed
 - If the existing channel has been significantly disrupted by agricultural improvements or other man-made changes.



General Plan Regarding Safety Policies (SA 12 to 24)

- Requires City to only Approve New Projects that:
 - Do not result in new or increased flooding impacts on adjoining parcels on upstream or downstream areas.
 - Do not develop on land subject to flooding during a 100-year event, based on the most recent FEMA mapping or updated mapping acceptable to the COEG.



Floodplain Ordinance

- Purposes:
 - Protect the life, health and safety from damage due to flooding
 - Protect building and property from damage due to flooding
 - Moderate the impact of new development on others



Floodplain Ordinance

- **Methods of Reducing Flood Losses:**
 - Restrict or prohibit development which is dangerous to health, safety and property due to flood hazards...
 - Control the alteration of natural floodplains, stream channels and natural protective barriers...
 - Control filling, grading, dredging, and other development which may increase flood damage...
 - Prevent or regulate the construction of flood barriers which will unnaturally divert floodwater or which may increase flood hazards in other areas.



NPDES Permit

- Sacramento Stormwater Quality Partnership includes 7 permittees: County of Sacramento and Cities of Sacramento, Citrus Heights, Elk Grove, Folsom, Galt and Rancho Cordova
- Permit required by State and Federal Regulations
- Protect Local Waterways and Associated Uses



Development Application

- Stormwater Quality Standards for Development Projects
- Source Control Fact Sheet
- Stormwater Quality Conceptual Plan Requirements
- Stormwater Quality Compliance Form
- Drainage Study Requirements



Stormwater Quality Standards for Development Projects

A post-construction stormwater quality control plan is required for a proposed project applications that are proposing:

single family residential of 20 acres or more;
multifamily residential of 1 acre or more;
commercial or industrial development of 1 acre or more; and/or
any project with parking lots cumulatively greater than or equal to 5,000 s.f. or 25 spaces.

Minimum Post-Construction Stormwater Quality Control Plan elements (using the Stormwater Quality Design Manual for Sacramento Region [Design Manual]) are:

- a. Preliminary Stormwater Quality Compliance Form (Appendix A, Design Manual).
- b. Project Overview and Stormwater Quality Narrative
- c. Description and site plans/drawings (full size 24"X36") of proposed source and treatment controls to be employed with locations, type of facilities and size of facilities. See Submittal Requirements (Appendix B, Design Manual).
- d. Identification of necessary land to be dedicated to control facilities.
- e. Description of proposed maintenance resources to ensure adequate maintenance of controls in perpetuity.



Stormwater Matrix

Stormwater Quality Standards for Development Projects Selection Matrix for Priority Project Categories

For Agencies in Sacramento County: Effective May 18, 2008

Priority Project Category	Residential				Commercial/Industrial										
	Single Family Residential ^(a) ≤ 1/4 ac, ≤ 20 units ≤ 25 ac	Multi-Family Residential ^(a) ≥ 1/4 ac	Commercial Developments ^(a) ≤ 10,000 sq ft	Auto Repair Shops ^(a) ≤ 10,000 sq ft	Hotel/Guesthouse/Office ^(a) ≤ 10,000 sq ft	Restaurants ^(a) ≤ 10,000 sq ft	Industrial Development ^(a) ≤ 10,000 sq ft	High-Rise Developments ^(a) ≥ 125 story	Parking Lots ^(a) ≥ 1,000 sq ft	Stennis-Rozell ^(a) ≤ 10,000 sq ft	Other ^(a) ≤ 10,000 sq ft	Other ^(a) ≤ 10,000 sq ft	Other ^(a) ≤ 10,000 sq ft	Other ^(a) ≤ 10,000 sq ft	Other ^(a) ≤ 10,000 sq ft
Source Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Storm Drain, Message and Storage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Swales	NA	NA	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Landfill/Unloading Area	NA	NA	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Outdoor Storage Areas	NA	NA	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Outdoor Work Areas	NA	NA	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Vehicle/Equipment Wash Areas	NA	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Waste Management Areas	NA	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Runoff Reduction Measures	00	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Alternative Driveway Design	•	•	•	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Disconnected Roof Drains	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Divided Sidewalks	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Grass	NA	NA	•	•	•	•	•	•	•	•	•	•	•	•	•
Interceptor Traps	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Permeable Pavement	NA	NA	•	•	NA	NA	•	•	•	•	•	•	•	•	•
Treatment Controls^{(b),(c)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Permeable Pavement Detention	NA	•	•	•	NA	NA	•	•	•	•	•	•	•	•	•
Stormwater Filter (Flow-through)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Stormwater Filter (Infiltration)	•	•	•	•	NA	NA	•	•	•	•	•	•	•	•	•
Constructed Wetland Basin	•	•	•	•	NA	NA	•	•	•	•	•	•	•	•	•
Detention Basin, Conventional	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Detention Basin, Dry	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Detention Basin, Wet	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Infiltration Basin	•	•	•	•	NA	NA	•	•	•	•	•	•	•	•	•
Infiltration Trench	•	•	•	•	NA	NA	•	•	•	•	•	•	•	•	•
Media Filter (Austin Basin Filter)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Multi-Functional Storage Control	•	•	•	•	NA	NA	•	•	•	•	•	•	•	•	•
Vegetated Filter Strip	•	•	•	•	NA	NA	•	•	•	•	•	•	•	•	•
Vegetated Swale	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Properly Devices ^(d)	00	•	•	•	•	•	•	•	•	•	•	•	•	•	•

✓ Required if applicable to project

• Applicable

NA Not applicable or allowed

- (a) Single family residential development of one acre or more with a density of 10 duplex units may be required to incorporate treatment controls starting in Fall 2008.
- (b) May require coverage under State's NPDES General Permit for Stormwater Discharges Associated with Industrial Activity.
- (c) Short-term parking lots only. Parking lots associated with buildings/facilities need to meet requirements of associated land use (commercial, industrial, etc.)
- (d) Public road right-of-way projects and expansions that are not associated with new residential, commercial and industrial developments.
- (e) Depends on type of land use (commercial, residential, etc.).
- (f) Runoff reduction measures will be required starting in Fall 2008.
- (g) If the project drains to a regional treatment facility (e.g., detention basin), additional treatment controls may not be required. Contact permitting agency for verification.
- (h) Some treatment devices may not be allowed in the public right-of-way or in areas where the local agency would be required to conduct maintenance. Contact the local permitting agency for requirements and restrictions.
- (i) Contact the local permitting agency for a list of accepted devices.

Updated 3-06-08



Stormwater Quality Conceptual Plan Requirements

CITY OF ELK GROVE Development Project Application Stormwater Quality Conceptual Plan Requirements

Objective of the Stormwater Quality Conceptual Plan: To demonstrate that conceptually, the applicant has adequately incorporated suitable stormwater quality control measure(s) into the design of the proposed project, in accordance with City of Elk Grove stormwater ordinances, improvement standards, the municipal stormwater quality permit, and all applicable state and federal stormwater quality regulations, prior to the issuing of development conditions.

Submittal Requirements: All new development and significant redevelopment projects falling within the priority project categories as defined in the Development Standards Plan, approved by the Regional Water Quality Control Board in May, 2005; are required to implement stormwater quality control measure(s) to reduce pollutant discharges. The applicant shall submit a Stormwater Quality Conceptual Plan that demonstrates how the proposed project will utilize acceptable control measures to be compliant with all applicable ordinances, standards, permits and regulations. **Acceptable control measures and priority project categories are listed in the “Selection Matrix for Priority Project Categories” on the following page.** The conceptual plan can be submitted as text or in text/graphic format.



For questions and additional information please contact Leslie Nguyen-Pickett, Public Works, at 916-478-2213.

Stormwater Quality Compliance Form

**Sacramento County Supplemental Application:
Preliminary Stormwater Quality Compliance Form**

1) Project Information

Applicant Name: _____ Phone Number: _____
 Address: _____
 Project Contact: _____ Phone Number: _____
 Project name: _____ Assessor Parcel Number(s): _____
 Site Address: _____

Project Category (check all that apply): Refer to Design Manual Table 3-2 for Priority Project Categories

<input type="checkbox"/> Residential (Single Family)	<input type="checkbox"/> Retail Gasoline Outlet	<input type="checkbox"/> Hillside Development
<input type="checkbox"/> Residential (Multi-Family)	<input type="checkbox"/> Restaurant	<input type="checkbox"/> Parking Lot
<input type="checkbox"/> Commercial Development	<input type="checkbox"/> Industrial Development	
<input type="checkbox"/> Automotive Repair Shop	<input type="checkbox"/> Street/Road	

Project Gross Area: _____ Project Net Area: _____
 Existing Impervious Surface Area: _____ Proposed Impervious Surface Area: _____
 Watershed or receiving water: _____

2) Source Controls (check source control measure or applicable pollutant sources, check Design Manual Chapter 4 for more information on source control measures)

Refer to Design Manual Table 3-2 for Requirements

<input type="checkbox"/> Storm Drain Message and Signs	<input type="checkbox"/> Outdoor Work Areas
<input type="checkbox"/> Paving Areas	<input type="checkbox"/> Vehicle/Equipment Wash Areas
<input type="checkbox"/> Loading/Unloading Areas	<input type="checkbox"/> Waste Management Areas
<input type="checkbox"/> Outdoor Storage Areas	<input type="checkbox"/> Other Describe: _____

3) Runoff Reduction Measures

Refer to Design Manual Table 3-2 for Requirements

Will runoff reduction measures be utilized for this project? Yes No

If yes, check selected runoff reduction measures below; attach completed Runoff Reduction worksheets (Design Manual Appendix D):

Alternative Driveway Design
 Disconnected Roof Drains
 Disconnected Pavement
 Green Roof
 Infiltrator Trench
 Porous Pavement
 Other Describe: _____

4) Stormwater Quality Treatment Requirements

Refer to Design Manual Table 3-2 for Requirements

Is treatment required? Yes No If no, form is complete with signature. If yes, complete this section.

Indicate No. of drainage sheds for the site: _____
 Early consideration of stormwater quality during site planning may reduce the overall cost of treatment controls. Runoff reduction methods and innovative design options can reduce the size of treatment options. In addition, early consideration allows for non-proprietary treatment options that can significantly reduce construction and maintenance costs.

5) Attach Project Overview and Stormwater Quality Narrative

Include Project description (including nature of project (e.g. is it a newly developing site, replacement of previously developed site, is it an infill site). Describe activities planned for site that may impact water quality such as a retail gasoline outlet as part of a development. Describe selected treatment options. Developers should keep in mind that proprietary devices require extensive maintenance by the owner of the property and should consider alternative treatment measures first. Project description should be no more than 1 page relating to stormwater quality.

6) Attach Site Plans* and/or Drawings Showing:

Existing and natural hydrologic features
 Existing and proposed drainage systems
 Proposed drainage sheds including (Refer to item #4, if treatment is required)

- o Name of shed
- o Existing amount of pervious and impervious areas
- o Proposed amount of pervious and impervious areas
- o Proposed treatment option(s) for each shed

Pollutant source areas including loading docks, food service areas, refuse areas, outdoor processes and storage, vehicle cleaning, repair or maintenance, fuel dispensing, equipment washing, etc.
 Proposed design features to minimize impervious areas, applicable runoff reduction techniques, innovative design, and all treatment options selected

*Note: Plans will not be checked for adequacy of treatment options until design review of drainage systems. For information related to correct sizing and other requirements refer to *Stormwater Quality Design Manual for Sacramento and South Placer Regions*.

7) List Sheds and Selected Stormwater Quality Treatment Controls (if treatment is required)

Shed Name	Total Shed Area		Flow (cfs) or Volume (ft ³)	Treatment Controls Selected
	Impervious Area	Pervious Area		

Attach more sheets as necessary

7) Signature

Print Name: _____ Indicate Owner or Title _____

Signature: _____ Date: _____



Drainage Study Requirements

- Objective: To demonstrate that conceptually, the site is physically suitable for the type and density of the proposed project, with the addition of appropriate on-site and off-site drainage improvements, in accordance with COEG Improvement Standards and flood control policies prior to issuing development conditions.



City Review of Preliminary Drainage Study

- The applicant must adequately study the drainage in the pre-and post development form to insure that the project can be built.
- If the preliminary drainage study is inadequate, flawed, or inaccurate, it could lead to a determination that the project is not feasible; therefore, the applicant is advised to insure the preliminary study is prepared with due care.



Website

- Forms/Policies/Documents that were a part of this presentation can be download from the COEG's website at the following address:

www.elkgrovecity.org

