

**FREQUENTLY ASKED QUESTIONS**  
**Requirements for New Development and Redevelopment Projects**  
**Ventura County NPDES Municipal Stormwater Permit**  
**(Order No. R4-2010-0108)**

The new National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit was adopted on July 8, 2010. The Final Version of the Permit is available on the Los Angeles Regional Water Quality Control Board’s website at: [http://www.swrcb.ca.gov/rwqcb4/water\\_issues/programs/stormwater/municipal/index.shtml](http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/index.shtml)

The Regional Board Executive Officer approved the 2011 Update to the Ventura County Technical Guidance Manual (TGM). The updated TGM is available on <http://www.vcstormwater.org/technicalguidancemanual.html>

	<u>Page</u>
<b>When will New Development and Redevelopment projects be expected to meet the new permit regulations? .....</b>	<b>2</b>
<b>What projects will have to meet the new requirements? .....</b>	<b>2</b>
<b>What is the Technical Guidance Manual? .....</b>	<b>2</b>
<b>Where is the Technical Guidance Manual available? .....</b>	<b>2</b>
<b>When 2011 Updated TGM becomes effective? .....</b>	<b>2</b>
<b>What is Low Impact Development (LID) in this permit? .....</b>	<b>2</b>
<b>What is Effective Impervious Area (EIA)? .....</b>	<b>3</b>
<b>How to Meet 5% EIA? .....</b>	<b>3</b>
<b>What is the general LID design process under the new Permit? .....</b>	<b>3</b>
<b>Who can certify LID feasibility? .....</b>	<b>4</b>
<b>What is the design storm for LID design? .....</b>	<b>4</b>
<b>What off-site mitigation and alternative possibilities are there? .....</b>	<b>4</b>
<b>What’s the definition of Infill? .....</b>	<b>5</b>
<b>What’s the definition of Smart Growth? .....</b>	<b>5</b>
<b>How does this Permit affect watershed planning? .....</b>	<b>5</b>

**ATTACHMENTS:**

- Attachment A      Applicability Criteria for New Development and Redevelopment Projects (Final Permit Order No. R4-2010-0108 dated July 8, 2011)
- Attachment B      Watersheds and Sub-Watersheds in the Los Angeles Region Basin Plan

### **When will New Development and Redevelopment projects be expected to meet the new permit regulations?**

The effective date for the new requirements for New Development and Redevelopment projects is **October 11, 2011**. Plans that are completed before the effective date are still required to meet the requirements of the 2000 Permit. Completed plans are defined in the new permit as those "Deemed Complete" for processing by the local agency or that have "Vested Tentative Maps" or Tentative Maps with a valid time extension.

### **What projects will have to meet the new requirements?**

The applicability requirements for new development and redevelopment projects are shown in Subpart 4.E "Applicability Criteria" (Attachment A). This list has changed since the previous (2000) Permit. For additional consideration, refer to Figure 2-1 "Stormwater Management Control Measures Design Decision Flowchart" in the updated TGM also provided in the FAQ Attachment A.

### **What is the Technical Guidance Manual?**

A Technical Guidance Manual (TGM) was developed in 2002 for the previous (2000) Permit to explain how to design and implement a variety of specific Low Impact Development (LID) and Best Management Practices (BMPs) for the treatment of stormwater utilizing source control, site design, and structural treatment control. The TGM was updated for the new permit requirements to provide cost effective strategies to successfully meet the latest stormwater quality improvement goals. The 2011 Updated TGM also provides alternative compliance measures where LID is infeasible or limited.

### **Where is the Technical Guidance Manual available?**

The approved 2011 Updated TGM is available at <http://www.vcstormwater.org/technicalguidancemanual.html>

### **When 2011 Updated TGM becomes effective?**

1. For projects that are not likely to be "deemed complete" before October 11, 2011, the applicants should prepare plans to meet the requirements of the new 2010 Permit and follow the 2011 Updated TGM.
2. Projects "deemed complete" before October 11, 2011, can utilize the 2002 TGM and must continue to meet the requirements of the 2000 Permit.

For more information refer to Section 1.5 "Applicability" of the 2011 Updated TGM.

### **What is Low Impact Development (LID) in this permit?**

In general, LID is a strategy to limit runoff from new development and redevelopment to mimic pre-development\* runoff (See Section I "Purpose" under Subpart 4.E, and definition of LID in Part 6 of the Permit). There are various ways to design and implement LID principles that will be detailed in the TGM.

The core LID requirements in the new Permit are to:

1. Mimic pre-development runoff
2. Limit effective impervious area (EIA) to 5% for new development and up to 30% for redevelopment (where 5% is not feasible or off-site mitigation is used).
3. If 5% EIA is not feasible, the project must reduce %EIA to as close to 5% as feasible, and no more than 30% of the total project area.

4. Off-site mitigation is required for the volume of stormwater from the design storm that cannot be retained on-site within the 5% EIA limitations.
5. Any design storm volume runoff from the impervious area of the site needs to be treated.

\* Pre-development means native vegetation and soils that existed at a site prior to first development. The pre-developed condition may be assumed to be an area with the typical vegetation, soil, and storm water runoff characteristics of open space areas in coastal Southern California unless reasonable historic information is provided that the area was atypical.

### **What is Effective Impervious Area (EIA)?**

This is the portion of the total project area that cannot absorb stormwater runoff, expressed as a percentage. Impervious surfaces may be rendered “ineffective” if the stormwater runoff is fully retained onsite. In other words, any impervious area can become effectively pervious that collects and fully retains the design storm. For example, a parcel with 5% EIA in the Ventura County Permit means that the design storm runoff from 95% of the impervious area is retained – either infiltrated, reused, evapotranspired, or in some way used – on-site.

### **How to Meet 5% EIA?**

- Reduce EIA to 5% by retaining the water quality volume of the design storm (e.g. 0.75” storm depth) using infiltration, reuse, or evapotranspiration BMPs (Retention BMPs)
- Provide treatment for 5% EIA and developed pervious areas
- If it is technically infeasible (see Section 3.2 of TGM) to reduce EIA to 5%, then biofilter 1.5 times the remaining volume
- If project does not fall into “technically infeasible categories” (Section 3.2 of TGM), then applicant must redesign site to meet 5% EIA.

### **What is the general LID design process under the new Permit?**

- Check to see if area of disturbance and type of project qualifies for the new permit regulations (see Attachment A).
- Review site for drainage early in the planning and conceptualizing process.
- Arrange the site plan so that EIA is limited to 5% for new development.
- Applicant must certify in a professional report if 5% EIA and complete capture of the design storm by LID on-site is not feasible. Remaining runoff would require bio-filtration or other treatment, and off-site mitigation projects.
- Feasibility for LID may be limited by:
  - o High seasonal groundwater - within 5 feet
  - o Areas within 100 feet of a groundwater water well used for drinking water
  - o Brownfield development
  - o Geotechnical hazards
  - o Smart Growth and infill
  - o Other site constraints identified in the TGM update.
- Cost effective strategies are possible by considering the integration of water quality treatment and LID BMPs.

Note: Design drainage and LID features to capture small storms on site support *Leadership in Energy and Environmental Design (LEED)* Green Building Rating System, and green architecture award points.

### **Who can certify LID feasibility?**

A licensed professional engineer, geologist, architect, and/or a landscape architect can certify LID feasibility in a report (Section III under Subpart 4.E of the Permit).

### **What is the design storm for LID design?**

The set of design storms from the current Ventura County Storm Water Quality Urban Impact Mitigation Plan (SQUIMP) is used in the new permit. The new permit uses runoff volume:

- 85<sup>th</sup> percentile 24-hour runoff event using a 48 to 72-hour draw down time, or
- Runoff based on unit basin storage volume per 2002 Technical Guidance Manual, or
- Runoff from 0.75-inch storm

The applicant can choose one of the above listed methods, but must demonstrate how it is applied in LID retention volume and post-construction BMP sizing calculations.

### **What off-site mitigation and alternative possibilities are there?**

When on-site post-construction stormwater BMPs to meet the 5% EIA are not feasible in accordance with Alternative Compliance for Technical Infeasibility (Section III "New Development/redevelopment Performance Criteria under Subpart 4.E of the Permit), then off-site mitigation can be considered. Feasibility is determined by a professionally certified technical report.

- If Retention BMPs and Biofiltration BMPs have been used to maximum extent practicable and 5% EIA standard still cannot be met, then the following projects types are eligible for alternative compliance:
  - 1) Redevelopment projects,
  - 2) Infill projects,
  - 3) Smart Growth projects,
  - 4) Pedestrian/bike trail projects,
  - 5) Agencies' flood control, drainage, and wet utilities projects,
  - 6) Historical preservation projects, and
  - 7) Low income housing projects
- If the site does not meet one of the above criteria, then the applicant must redesign site to meet 5% EIA
- Alternative compliance may be met through two options:
  - offsite mitigation project; or
  - offsite mitigation fee
- Alternative compliance is based on the "mitigation volume."
  - If designed EIA is less than 30% then the mitigation volume is the difference between the volume of runoff required to meet 5% EIA and the volume of runoff generated with the actual EIA achieved onsite.
  - The offsite mitigation for any EIA in excess of 30% is 1.5 times the amount of stormwater not managed onsite

Of-site mitigation is required for the portion of the design storm volume that cannot be infiltrated or reused on-site. For example if an EIA of 28% is the best that can be obtained on-site, the difference of 28% (actual EIA) and 5% (the EIA requirement) is 23% EIA. Then the design storm runoff volume from 23% of the total project area would need to be mitigated off-site.

Each Co-Permittee will identify LID projects (public and/or private) that could be used to benefit the local sub-watershed by increasing infiltration (groundwater recharge), reuse, and evapotranspiration. Such measures may include bioretention, biofiltration, green streets projects, porous pavement or other BMPs.

The local sub-watershed where alternative compliance can occur is defined by the Basin Plan map shown in the Attachment B. A mitigation alternative must be within the same sub-area as the proposed project on the Basin Plan sub-areas shown in the Attachment B.

### **What's the definition of Infill?**

1. The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations;
2. The proposed development occurs on a project site of no more than five acres substantially surrounded by urban uses;
3. The project site has no value as habitat for endangered, rare, or threatened species;
4. Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and
5. The site can be adequately served by all required utilities and public services (modified from State Guidelines § 15332).

### **What's the definition of Smart Growth?**

Smart Growth projects are defined as new development and redevelopment projects that occur within existing urban areas (see maps in Appendix B) designed to achieve the majority of the following principles:

1. Create a range of housing opportunities and choices;
2. Create walkable neighborhoods;
3. Mix land uses;
4. Preserve open space, natural beauty, and critical areas;
5. Farmland preservation may also be considered for projects occurring outside the City Urban Restriction Boundary (CURB) but within existing urban centers (as defined by the Appendix B maps).
6. Provide a variety of transportation choices;
7. Includes transit oriented development (development located within an average 2,000 foot walk to a bus or train station).
8. Strengthen and direct development toward existing communities (as defined by Appendix B maps);
9. Take advantage of compact building design.

The City or County Planning Division in which a project is proposed will ultimately determine whether a project meets this Smart Growth criteria.

### **How does this Permit affect watershed planning?**

The increased requirements for LID practices will tend to shift stormwater runoff towards mimicking pre-development\* conditions in the watershed. Since there are places where LID infiltration or reuse is not practical, the off-site LID projects are an opportunity for watershed planning and to improve recharge for the watershed.

## Attachment A

### Applicability Criteria for New Development and Redevelopment Projects Final Permit Order No. R4-2010-0108 (July 8, 2011)

The following New Development and Redevelopment projects are subject to post-construction controls to mitigate stormwater pollution in accordance with Section 4.E of the Final Permit Order No. R4-2010-0108 and 2011 Update to Ventura County Technical Guidance Manual:

#### I. New Development Projects:

- 1) All development projects equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area.
- 2) Industrial park with 10,000 square feet or more of total altered surface area.
- 3) Commercial strip mall with 10,000 square feet or more of impervious surface area
- 4) Retail gasoline outlet with 5,000 square feet or more of total altered surface area.
- 5) Restaurant (SIC 5812) with 5,000 square feet or more of total altered surface area.
- 6) Parking lot with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces
- 7) Streets, roads, highways, and freeway construction of 10,000 square feet or more of impervious surface area shall incorporate USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets to the maximum extent practicable.
- 8) Automotive service facilities (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) of 5,000 square feet or more of total altered surface area]
- 9) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
  - (A) Discharge storm water runoff that is likely to impact a sensitive biological species or habitat; and
  - (B) Create 2,500 square feet or more of impervious surface area.
- 10) Single-family hillside homes (see below for specific requirements).

#### II. Redevelopment Projects

- (A) Redevelopment projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution, prior to completion of the project(s) are redevelopment projects in New Development project categories 1-9 above that involve land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface are on an already developed site.

##### Additionally:

- 1) Projects where redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to the post development stormwater quality control requirements of Board Order 00-108, shall mitigate the entire redevelopment project area.
- 2) Projects where redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was subject to the post development stormwater quality control requirements of Board Order 00-108, must mitigate only the

altered portion of the redevelopment project area and not the entire project area.

- 3) Projects where redevelopment results in an alteration of less than fifty percent of impervious surfaces of a previously existing development must mitigate only the altered portion of the redevelopment project area and not the entire project area.
- (B) Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.
  - (C) Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

**Single-family Hillside\*\* Homes.** For a single-family hillside home, the following measures shall be implemented:

- (A) Conserve natural areas
- (B) Protect slopes and channels
- (C) Provide storm drain system stenciling and signage
- (D) Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability
- (E) Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability.

Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

*Note: \*\* Hillside means property with known erosive soil conditions, and with grading on any slope greater than 20% or greater, or area designated by the Municipality as a "hillside area"*

**Roadway Projects.** Street, roadway, highway, and freeway projects that construct 10,000 square feet or more of impervious surface area are required to incorporate USEAP Guidance "*Managing Wet Weather with Green Infrastructure: Green Streets*" to the maximum extent practicable.

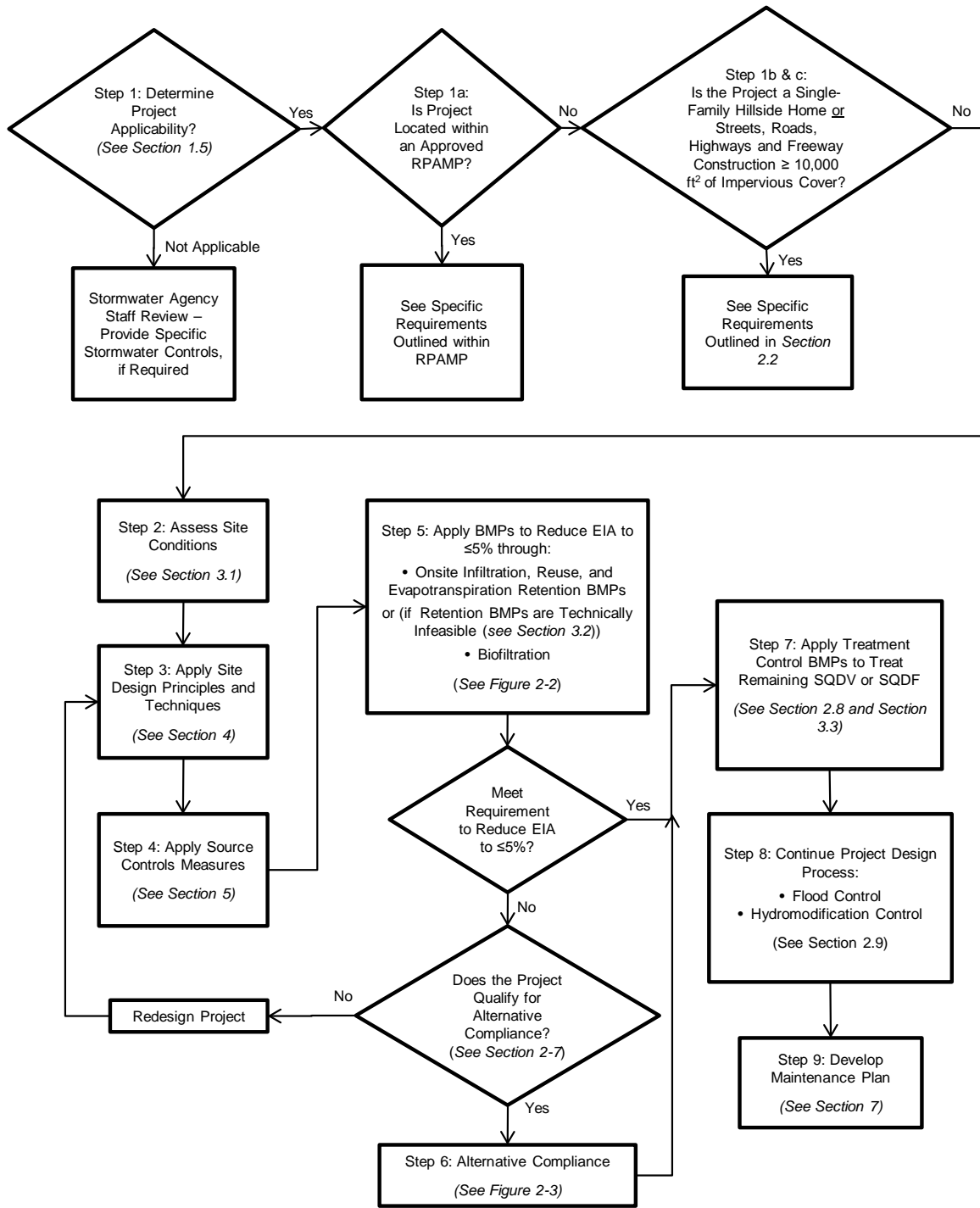


Figure 2-1: Stormwater Management Control Measures Design Decision Flowchart





**Legend**

- |                            |                                   |  |                  |
|----------------------------|-----------------------------------|--|------------------|
|                            | River                             |  | Santa Paula      |
|                            | Lake                              |  | Simi Valley      |
|                            | National Forest                   |  | Thousand Oaks    |
|                            | 10-Digit Hydrologic Unit Boundary |  | Port Hueneme     |
| <b>Existing Urban Area</b> |                                   |  | Ventura          |
|                            | Camarillo                         |  | Ojai             |
|                            | Fillmore                          |  | Urban County     |
|                            | Moorpark                          |  | Non-Urban County |
|                            | Oxnard                            |  | Adjacent County  |



**Hydrologic Areas  
Ventura County, CA**

**Geosyntec**  
consultants

Figure  
**B-1**

Oakland Office

April 2010