October 22, 2012 Water Quality Management Plan
A Guidance Document for the Santa Ana Region of Riverside County
Errata

POSTED 06/30/2016

Page i:

~~Co-~~Permittees:

County of Riverside
All Project applications:
www.countyofriverside.us/

For WQMP questions in unincorporated County areas:
~~www.rcflood.org~~
www.rctlma.org
(951) 955-3185

Beaumont
www.ci.beaumont.ca.us/

Calimesa
www.cityofcalimesa.net/

Canyon Lake
www.cityofcanyonlake.com

Corona
www.discovercorona.com

Eastvale
www.eastvalecity.org/

Hemet
www.cityofhemet.org/

Jurupa Valley
www.jurupavalley.org/

Lake Elsinore
www.lake-elsinore.org/

Menifee
www.cityofmenifee.us/

Moreno Valley
www.moval.org/

Norco
www.norco.ca.us/

Perris
www.cityofperris.org/

Riverside
www.riversideca.gov/

Riverside County Flood Control and Water Conservation District
http://rcflood.org/

San Jacinto
www.ci.san-jacinto.ca.us/

Introduction

Page 2:

Assuming ~~**proprietary Stormwater BMPs (**~~Treatment Control BMPs~~)~~ will be adequate for compliance. LID BMPs that maximize infiltration, harvest and use, evapotranspiration and/or bio-treatment, are now required for nearly all projects. See Chapter 2 for criteria affecting what Stormwater BMPs can be used on a project.

Page 15

~~Many stormwater controls, including LID, have proven to be practicable in most Development Projects.~~ To achieve fair and effective implementation, criteria and guidance for stormwater BMPs must be detailed and specific—while also offering the right amount of flexibility or exceptions for special cases. The 2010 SAR MS4 Permit includes various standards, including hydrologic criteria, which the Santa Ana Regional Board has found to provide “MEP” control.

Chapter 2: Concept and Criteria

Page 17:

The CBRP developed by the Co-Permittees was ~~submitted to the~~ **approved by the** Regional Board ~~for approval on June 28, 2011~~**on February 10, 2012**, and the CNRP was **approved on July 19, 2013**~~submitted on December 31, 2011~~. These documents describe specific actions the Co-Permittees have taken or will be taking to achieve compliance with the Urban Waste Load Allocations. ~~As these documents are approved by the Regional Board, any actions committed to that relate to development projects will be reflected in an update to this WQMP as applicable.~~

Page 22:

Where multiple surface types are present, an ~~Composite Runoff Factor~~ average impervious fraction can be calculated using the following equation:

$$I_f = \frac{\left[(I_f)_1 \cdot A_1\right] + \left[(I_f)_2 \cdot A_2\right] + [\ldots]}{A_T}$$

Page 23:

The DCV can then be calculated based on the following equation:

$$DCV = \frac{D_{85} \cdot C \cdot A_{TRIB}}{\mathbf{12}},$$

Where:

DCV = (ft3)

D_{85} = the Design Storm rainfall depth (see Exhibit A)

C = composite rational method runoff factor for the Drainage Management Area (unitless)

A_{TRIB} = area tributary to the BMP (~~acres~~ **ft²**)

Page 31:

As a significant portion of the San Jacinto sub-watershed that drains to Lake Elsinore is expected to develop or re-develop over time, most urban areas will be subjected to the LID requirements identified in the MS4 Permit, including the 'Tier 1' requirement to retain runoff. ~~The CNRP that will be submitted to the Regional Board on December 31, 2011, will further assess potential negative impacts of retention upon the beneficial uses of Lake Elsinore. The final form of the CNRP may include specific exceptions to retention within this sub-watershed. As such time that the CNRP is approved by the Regional Board, this WQMP will be amended as necessary to reflect such requirements~~.

Page 33:

Table ~~4-5~~ 3-4 of the WQMP includes specific direction regarding LID Bioretention and the assumed infiltration capacity

Page 36:

If the proposed project ~~does~~ **cannot** meet or exceed this minimum demand, implementing this Harvest and Use BMP would be less effective than a Bioretention BMP, and as such, this Harvest and Use BMP would not be required for the project.

Page 39:

Minimum *Demands*

Tables ~~2-1,~~ 2-2, ~~and~~ 2-3, **and 2-4** provide minimum demands to provide for reuse of 40 percent of the total runoff.

Page 40:

Table **2-5** ~~2-4~~ provides the recommended percentage of a project site that is required to be made available for LID BMPs. The project may provide more area for LID BMPs if desired.

Table **2-5** ~~2-4~~ is intended to be used as follows:

Page 41:

If the percentage of the site provided for LID BMPs is lower than the value shown in Table **2-5** ~~2-4~~ and the DCV cannot be fully managed, a reviewer can request that additional area be made available for BMPs in the site design until either the percentage of the site in Table 2-5 is provided or the entire DCV is managed, whichever is less.

Chapter 3: Preparing Your Project-Specific WQMP

Page 52:

DMA					Receiving Self-Retaining DMA		
DMA Name/ ID	Area (square feet) [A]	Post-project surface type	~~Runoff Factor~~ **Impervious Fraction** [B]	Product [C] = [A] x [B]	DMA name /ID	Area (square feet) [D]	Ratio [C]/[D]
C/1	*1100*	*Roof*	*1*	*1100*			
C/2	*800*	*Pervious Walkway*	*0.1*	*80*			

Page 56:

If any of the anticipated demands exceed the applicable minimum values, Harvest and Use BMPs will be required to be used for applicable DMAs before LID Bioretention can be used. Such DMAs shall be identified as self-retaining. If all of the anticipated demands are less than the applicable minimum values, Harvest and Use BMPs are not required and you should proceed to utilize LID Bioretention ~~and Biotreatment~~, unless a site specific analysis has been completed that demonstrates technical infeasibility. Consult with your local Co-Permittee prior to eliminating the Bioretention and Biotreatment option(s).

Page 57:

4. **Biotreatment BMPs**, which can be used only where soils are relatively impermeable (measured K_{SAT} < 0.3"/hr.) These BMPs are distinguished from bioretention BMPs in that they do not process the entire DCV through a soil media. However, they still provide similar functions and benefits to bioretention BMPs by incorporation of features that provide for natural biological processes while maximizing opportunities for ~~infiltration and~~ evapotranspiration. Examples of Biotreatment BMPs include extended detention basins, bioswales and constructed wetlands. Consult your Co-Permittee to determine approved Biotreatment BMPs.

Page 59: **Table 3-4. LID BMP Applicability**

Notes for Table **3-4** ~~3-5~~:

See also Figure 3-6 for guidance in selecting appropriate BMPs

Column A: Selections from this column may be used in locations

Page 67: Table 3-10. Format for Presenting Calculations for Treatment Control BMPs

[B], [C] are obtained as described in section 2.3.1

[E] for Flow-Based Treatment Control BMPs [E] = .2, for Volume-Based Control Treatment BMPs, [E] = is obtained from Exhibit A

[G] for Flow-Based Treatment Control BMPs [G] = 43,560, for Volume-Based Control Treatment BMPs, [G] = 12

[H] is obtained from a design procedure sheet from the BMP manufacturer

Chapter 5: O &M of Stormwater BMPS

Page 78-87 HEADER:

CHAPTER 5 ~~6~~: O&M OF STORMWATER BMPS