



City of Hollister
MS4 Guidance Document

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This document serves to guide the City of Hollister's storm water pollution prevention program under State Water Resources Control Board Water Quality Order No. 2013-0001-DWQ (PERMIT).

Since February 6, 2006, the under the Phase II MS4 General Permit, Order 2003-0005-DWQ, the City of Hollister has been authorized by the Central Coast Regional Water Quality Control Board to discharge its stormwater to the Waters of the U.S. The City of Hollister's Stormwater Management Plan (SWMP) is a requirement of the MS4 Stormwater Discharge General Permit, Order 2003-0005-DWQ. In February 2013, Order 2003-0005-DWQ was superseded by the Phase II Small MS4 General Permit 2013-0001-DWQ to provide new Phase II MS4 stormwater discharge requirements.

During the City's review of the SWMP and of the PERMIT it was found that virtually all of the existing BMPs that the City performs under the SWMP are also included within the various sections of the PERMIT. The City feels that the existing BMPs do not in themselves demonstrate that they are more protective of water quality than the minimum requirement of the Permit Order, but instead, are just similar in nature and redundant.

The Central Coast Regional Water Quality Control Board (CCRWQCB) has determined that the existing BMPs from the SWMP are more protective of water quality than the minimum requirements of the PERMIT and require their inclusion as part of the City's required renewal under the PERMIT. The directive includes preparing and revising the MS4 Guidance Document (GD) for CCRWQCB review and approval. For clarification of the GD, the City has cross referenced the existing BMPs against related sections of the Permit. When an existing BMP from the SWMP is referenced in this GD, it includes the measurable goals associated with that BMP as identified in the attached addendum entitled "City of Hollister Stormwater Management BMP Descriptions and Measurable Goals - Attachment A". The City will continue to perform the existing BMPs during a transition period from the "old stormwater program" to the "new" PERMIT requirements. As new BMPs are implemented, related existing BMPs will be removed from the program to reduce potential confusion.

Is BMP New or Exist?	BMP Id	Description, and Measurable Goals	Permit Compliance Year (June 30 th unless otherwise noted)	Permit Year	Maintain, Reduce, or Cease Implementation	Other Implement Notes	Is Exist. SWMP BMPS more Protective than minimum require. Of MS4 Order?	City Department Responsible for Implementation	Permit Section Complied With
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Program Management Element										
New	PME-1	Legal Authority	2015	2	Review and revise relevant ordinances or other regulatory mechanisms to obtain adequate legal authority per E.6.a(i)					E.6.a
New	PME-1a	Effectively prohibit non-storm Water discharges through the MS4	2015	2					E.6.a(ii)(a)	
New	PME-1b	Detect and eliminate illicit Discharges to the MS4	2015	2					E.6.a(ii)(b)	
New	PME-1c	Respond to spills and Prohibit discharges other than storm water to the MS4	2015	2					E.6.a(ii)(c)	
New	PME-1d	Require parties responsible For runoff in excess of Incidental runoff to implement Discharge Prohibition B.4.a-e	2015	2					E.6.a(ii)(d)	
New	PME-1e	Require operators to minimize Pollutant discharge to the MS4 through BMPs consistent With CASQA handbooks for Construction, Industrial and Commercial, New and Redevelopment	2015	2					E.6.a(ii)(e)	
New	PME-1f	Require info deemed Necessary to assess Assess compliance with Order	2015	2					E.6.a(ii)(f)	
New	PME-1g	Enter private property for the Purpose of inspecting	2015	2					E.6.a(ii)(g)	
New	PME-1h	Require that dischargers Promptly cease and desist	2015	2					E.6.a(ii)(h)	
New	PME-1i	Have the ability levy citations Or fines; require recovery and Remediation cost from Responsible parties	2015	2					E.6.a(ii)(i)	
New	PME-1j	Impose more substantial civil Or criminal sanctions	2015	2					E.6.a(ii)(j)	

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New	PME-2	Certification	2015	2	Certify by Principal Executive Officer, Ranking Elected Official, or Duly Authorized Rep. that Permittee has and will maintain full legal authority to implement and enforce Order per E.6.b(j)				E.6.b
New	PME-2a	Identification of all Department storm water roles and responsibilities	2015	2					E.6.b(ii)(a)
New	PME-2b	Citation of storm water Related ordinances	2015	2					E.6.b(ii)(b)
New	PME-2c	Identification of local Administrative and legal Procedures and ordinances Available to mandate compliance	2015	2					E.6.b(ii)(c)
New	PME-2d	A description of how storm Water related ordinances are Reviewed and implemented	2015	2					E.6.b(ii)(d)
New	PME-2e	A statement that the Municipality will implement Enforcement actions Consistent with its Enforcement Response Plan	2015	2					E.6.b(ii)(e)
New	PME-2f	Reporting			Submit a Statement signed by an Authorized signatory certifying Adequate legal authority To comply with all Order requirements via SMARTS				E.6.b(iii)
New	PME-3	Enforcement Measures and Tracking	2016	3	Develop Enforcement Response Plan (ERP) per Section E.6.c(i); ERP implementation level per Section E.6.c(ii); Report per Section E.6.c(iii)				E.6.c
Education and Outreach Program									
Exist.	PE-1	WEB PAGE: Provide link on City web page for information related to storm water runoff. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and Reporting to continue During transition period		Maintain	Existing BMP PE-1 is covered under the new PE-8d BMP. PE-1 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the minimum requirement		E.7.a(ii)(d)

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Exist.	PE-2	<p>Bulletins, Brochures and Fact Sheets: Develop storm water fact sheets to educate the residential, construction and commercial/industrial communities on ways they can decrease their impact on storm water runoff.</p> <p>Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.</p>	Tracking and Reporting to continue During transition period			Existing BMP PE-2 is covered under the new PE-8d BMP. PE-2 will remain for transition, but removed in the future to reduce potential confusion.	This BMP is not more protective than the minimum requirement		E.7.a(ii)(d)
Exist.	PE-3	<p>Television Advertising: Provide an informational Presentation regarding storm water pollution to be aired by the local Community Access Programming (CMAP) agency.</p> <p>Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.</p>	Tracking and Reporting to continue During transition period			Existing BMP PE-3 is covered under the new PE-8d BMP. PE-3 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the minimum requirement		E.7.a(ii)(d)
Exist.	PE-4	<p>Storm Drain Marking: Provide a storm drain marking to advise the public not to pollute the storm drain system.</p> <p>Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS</p>	Tracking and Reporting to continue During transition period			Existing BMP PE-4 is covered under the new PE-8d and GH-10 BMPs. PE-4 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the minimum requirement		E.7.a(ii)(d) E.11.g(ii)(c)

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Exist.	PE-5	Storm Water Hotline: Provide a hotline number that residents, businesses and construction contractors can call to get information on the storm water program, get information such as how to dispose of household hazardous waste, or report illegal dumping to the storm system. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and Reporting to continue During transition period			Existing BMP PE-5 is covered under the new PE-8h BMP. PE-5 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the minimum requirement		E.7.a(ii)(h)
Exist.	PE-6	Event Participation: Participate in local events Which emphasizes the impacts and assists with efforts to engage the public in the area of storm water management. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and Reporting to continue During transition period			Existing BMP PE-6 is covered under the new PE-8f BMP. PE-6 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the minimum requirement		E.7.a(ii)(f)
New	PE-7a	Central Coast Regional Water Quality Control Board CBSM Pilot Project Requirement Research on barriers to desired behaviors and benefits; Elicit commitment to implement desired behavior; use concept of social norms; use education messages that are specific and easy to remember and appropriate for target audience create incentives; remove barriers.	2015	2					E.7

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New	PE-7b	CBSM techniques found to be Effective at the pilot project Level are to implemented Jurisdiction-wide	2017	4					E.7
New	PE-8	Public Outreach and Education Select outreach option.	2014	1					E.7.a
New	PE-8a	Develop and implement comprehensive education and outreach program	2015	2					E.7.a (ii)(a)
New	PE-8b	Conduct surveys 2x during permit term	2016 and 2018	3 & 5					E.7.a (ii)(b)
New	PE-8c	Develop and convey a specific Storm water message focusing Pollutants of concern, target Audience, Regional water quality	2015	2					E.7.a (ii)(c)
New	PE-8d	Disseminate education materials to target audiences and translate as appropriate	2015	2					E.7.a (ii)(d)
New	PE-8e	Utilize public input in Developing outreach program	2015	2					E.7.a (ii)(e)
New	PE-8f	Distribute education materials using procedures developed during public education strategy	2015	2					E.7.a (ii)(f)
New	PE-8g	Provide water efficient/ stormwater friendly landscaping information	2015	2					E.7.a (ii)(g)
New	PE-8h	Promote reporting of illicit Discharges	2015	2					E.7.a (ii)(h)
New	PE-8i	Provide pesticide/fertilizer application information	2015	2					E.7.a (ii)(i)
New	PE-8j	Provide materials to school children	2015	2					E.7.a (ii)(j)

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New	PE-8k	Develop messaging to reduce discharges from organized car washes, mobile cleaning and pressure washing	2015	2					E.7.a (ii)(k)(l)(m)
New	PE-9	Staff and Site Operator Training And Education	2015 - 2016	2 & 3					E.7.b
New	PE-9.1	Illicit Discharge Detection and Elimination Training	2016	3					E.7.b.1
New	PE-9.1a	Identification of an illicit Discharge or illegal connection	2016	3					E.7.b.1(ii)(a)
New	PE-9.1b	Proper procedures for reporting And responding to the illicit Discharge or illegal connection	2016	3					E.7.b.1(ii)(b)
New	PE-9.1c	Follow-up training as needed	2016	3					E.7.b.1(ii)(c)
New	PE-9.1d	Annual assessment of trained Staff's knowledge	2016	3					E.7.b.1(ii)(d)
New	PE-9.1e	Train new employees no later Than 6 months after start of employment	2016	3					E.7.b.1(ii)(e)
New	PE-9.1f	Contact info, including the Procedure for reporting an Illicit discharge shall be included In each vehicle that are used by Field staff	2016	3					E.7.b.1(ii)(f)
New	PE-9.1g	Focused education on identified Illicit discharges and associated Discharge locations	2016	3					E.7.b.1(ii)(g)
New	PE-9.1h	Reporting							E.7.b.1(iii)

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New	PE-9.2	Construction Outreach and Education	2015	2					E.7.b.2.
New	PE-9.2	Permittee Staff Training	2015	2					E.7.b.2(a)
New	PE-9.2a	Ensure Plan Reviewers and Permitting Staff are qualified And are Certified as QSD. Designate certified staff to supervise work	2015	2					E.7.b.2(a)(ii)(a)
New	PE-9.2b	Ensure Inspectors are qualified And are Certified as a QSD or a QSP. Designate certified staff To supervise work	2015	2					E.7.b.2(a)(ii)(b)
New	PE-9.2c	Ensure Third-Party Reviewers Are adequately trained	2015	2					E.7.b.2(a)(ii)(c)
New	PE-9.2d	Reporting							E.7.b.2(a)(iii)
New	PE-9.3	Construction Site Operator Training	2016	3					E.7.b.2(b)
New	PE-9.3a	Annually, provide info on Training opportunities for Construction operators	2016	3					E.7.b.2(b)(ii)(a)
New	PE-9.3b	Develop or utilize existing Outreach tools	2016	3					E.7.b.2(b)(ii)(b)
New	PE-9.3c	Distribute appropriate Outreach to all construction Operators disturbing land Within the MS4 boundary	2016	3					E.7.b.2(b)(ii)(c)
New	PE-9.3d	Update the existing storm Water website info, as necessary	2016	3					E.7.b.2(b)(ii)(d)
New	PE-9.3e	Reporting							E.7.b.2(b)(iii)

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New	PE-9.4	Pollution Prevention and Good Housekeeping Staff Training	2015	2					E.7.b.3
New	PE-9.4a	Biennial training for all Employees implementing this Program element	2015	2					E.7.b.3(ii)(a)
New	PE-9.4b	Biennial assessment of trained Staff's knowledge; revise Training as needed	2015	2					E.7.b.3(ii)(b)
New	PE-9.4c	Require Contractors hired by Permittee to perform O&M Activities shall be contractually required to comply with all storm water BMPs, good housekeeping Practices, and standard Operating procedures	2015	2					E.7.b.3(ii)(c)
New	PE-9.4d	Permittee shall provide Oversight of Contractor's activities	2015	2					E.7.b.3(ii)(d)
New	PE-9.4e	Reporting							E.7.b.3(iii)
Public Involvement and Participation Program									
Public Exist.	PP-1	Public Meetings: Hold Public meetings to update City departments, City Council, and the community on the progress of the storm water program. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and Reporting to continue During transition period		Maintain	Existing BMP PP-1 is covered under the new PE-8e BMP. PP-1 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the Min. require. Of the MS4 Order		E.7.a(ii)e

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Exist.	PP-2	Public Presentation: Prepare a standard presentation that informs the community about the need and benefit of the storm water management plan. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and Reporting to continue During transition period		Maintain	Existing BMP PP-2 is covered under the new PE-8d and PE-8j BMPs. PP-2 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the Min. require. Of the MS4 Order		E.7.a(ii)(d) E.7.a(i)(j)
Exist.	PP-3	Web Page: Provide a public comment section on the City's Web Page to take suggestions on City's SWMP. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and Reporting to continue During transition period		Maintain	Existing BMP PP-3 is covered under the new PE-8d BMP, and will be removed in future to reduce potential confusion.	This BMP is not more protective than the Min. require. Of the MS4 Order	Engineering/IT	E.7.a(ii)(d)
Exist.	PP-4	Community Clean-up Events Participate in the program to help remove debris from local creeks and rivers. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and Reporting to continue During transition period		Maintain	Existing BMP PP-4 is covered under the new PP-6c BMP, and will be removed in the future.	This BMP is not more protective than the Min. require. Of the MS4 Order	Community Services	E.8(ii)c
Exist.	PP-5	City Employee Training: Train City staff responsible for implementing the storm water program. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and Reporting to continue During transition period		Maintain	Existing BMP PP-5 is covered under the new PE-9.1 and PE-9.4 BMPs. PP-5 will be removed in future.	This BMP is not more protective than the Min. require. Of the MS4 Order		E.7.b.1(i) E.7.b.3(i)
New	PP-6	PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM Develop and implementation of Activities related to program with public input	2015	2					E.8(i)

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New	PP-6a	Develop Public Involvement strategy	2015	2					E.8 (ii)(a)
New	PP-6b	Consider Citizen Advisory Group	2015	2					E.8 (ii)(b)
New	PP-6c	Create Involvement Opportunities	2015	2					E.8 (ii)(c)
New	PP-6d	Ensure public can access info about program	2015	2					E.8 (ii)(d)
New	PP-6e	Engage in IRWMP or equivalent	2015	2					E.8 (ii)(e)
New	PP-6f	Reporting							E.8 (iii)
Illicit Discharge Detection and Elimination									
Exist.	ID-1	Storm Drain Mapping: Maintain a storm drain system map which identifies storm drain lines, inlets and outfalls. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and Reporting to continue During transition period		Maintain	Existing BMP ID-1 is covered under the new ID-9a BMP. ID-1 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the Min. require. Of the MS4 Order	Engineering	E.9.a(i)

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Exist.	ID-2	Discharge Testing & Inspection: Evaluate the general status of all outfalls and repair as necessary prior to first flush event of each reporting period. Collect and analyze storm water discharge for pollutants of concern during first flush event. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and Reporting to continue During transition period		Maintain	Existing BMP ID-2 is covered under the new ID-7c BMP. ID-2 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the minimum requirement of the MS4 Order	Community Services	E.9.c(i)
Exist.	ID-3	Household Hazardous Waste Collection: Allows residents to drop off their household hazardous wastes at the landfill for proper disposal. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and Reporting to continue 2013-2018		Maintain			Community Services	
	ID-4	Storm Water Ordinance: Review sections of the City municipal code which deal with illicit discharge into the storm drain. Update City regulations as necessary to Comply with E.6 Program Management Element. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS	Tracking and Reporting to continue During transition period		Maintain	Existing BMP ID-4 is covered under the new PME-1 BMP. ID-4 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the Min. require. Of the MS4 Order		E.6.a E.6.c

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Exist.	ID-5	<p>Video Surveillance Program Maintain a video library of storm drain system, and will use "old" video footage to compare against future video footage to detect illicit discharge connections.</p> <p>Measurable Goal:—Compare video footages to previous tapes to determine if/how the line may have changed.</p>			<p>Cease the video program. The reason is although pipe line video surveillance has a place in evaluating the system for replacement and/or repairs, the City feels it is not the most effective BMP in detecting illicit discharges. The City will increase its inspection frequency for outfalls and catch basins under ID-2, and believes that would be a more effective BMP for investigating and detecting illicit discharges</p>			Community Services	
Exist.	ID-6	<p>Storm Water Hotline: Establish a storm water phone hotline to receive public complaints related to illegal discharges.</p> <p>Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.</p>	Tracking and Reporting to continue During transition period		Maintain	Existing BMP ID-6 is covered under the new PE-8h BMP. ID-6 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the Min. require. Of the MS4 Order	Engineering /Police Department (WeTIP)	E.7.a (ii)(h)

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New	ID-7	Illicit Discharge Detection and Elimination	2014-2015	1 & 2					E.9
New	ID-7a	Outfall Mapping - Permittee Shall create and maintain an up-to-date and accurate outfall map	2015	2		Implementation level per Section E.9.a(ii); Reporting per Section E.9.a(iii)			E.9.a
New	ID-7b	Illicit Discharge Source/Facility Inventory - Permittee shall maintain an Inventory of all industrial/Commercial facilities/sources Within the Permittee's jurisdiction (regardless of ownership) That could discharge pollutants in storm water to the MS4.	2015	2		Implementation level per Section E.9.b(ii); Reporting per Section E.9.b(iii)			E.9.b
New	ID-7c	Field Sampling to Detect Illicit Discharges -- Sample outfalls that Are flowing or ponding more Than 72 hours; Also, conduct Dry weather sampling of outfalls Annually identified as priority	2015	2		Implementation level per Section E.9.c(ii); Reporting per Section E.9.c(iii)			E.9.c
New	ID-7d	Illicit Discharge Detection and Elimination Source Investigation And Corrective Actions -- The Permittee shall develop written Procedures for conducting investigations	2015	2		Implementation level per Section E.9.d(ii); Reporting per Section E.9.d(iii)			E.9.d
New	ID-7e	Spill Response Plan -- Permittee Shall develop and implement a Spill Response Plan	2014	1		Implementation level per Section E.9.e(ii); Reporting per Section E.9.e(iii)			E.9.e

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Construction Site Storm Water Runoff Control Program

Exist.	CS-1	<p>Grading Ordinance: Review and update grading ordinance as needed to address construction site runoff control, LID, post-construction BMPs, and associated inspection and enforcement. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.</p>	Tracking and reporting to continue during transition period		Maintain	Existing BMP CS-1 is covered under the new PME-1 BMP. CS-1 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the Min. require. Of the MS4 Order	Engineering	E.6.a E.10.b(ii)
Exist.	CS-2	<p>Stormwater BMP Manuals: Adopt BMP guidance manuals which will assist applicants in selecting appropriate stormwater discharge related BMPs. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.</p>	Tracking and reporting to continue during transition period		Maintain	Existing BMP CS-2 is covered under the new PME-1e BMP. CS-2 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the Min. require. Of the MS4 Order	Engineering	E.6.a(ii)(e)
Exist.	CS-3	<p>Preparation of Construction / Community Outreach / Information Materials: Provide the development-construction community informational materials to consider during the planning stage. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.</p>	Tracking and reporting to continue during transition period		Maintain	Existing BMP CS-3 is covered under the new PE-8d BMP. CS-3 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the Min. require. Of the MS4 Order	Community Development	E.7.a(ii)(d)

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New	CS-4	Construction Site Inventory Create inventory of all projects subject to local stormwater ordinance	2014	1		Implementation level per Section E.10.a(ii); Reporting per Section E.10.a(iii)			E.10.a
New	CS-5	Construction Plan Review And Approval Procedures Develop procedures to review approve relevant construction Plan documents	2014	1		Implementation level per Section E.10.b(ii); Reporting per Section E.10.b(iii)			E.10.b
New	CS-6	Construction Site Inspector And Enforcement Use Legal Authority to Implement procedures	2015	2		Implementation level per Section E.10.c(ii); Reporting per Section E.10.c(iii)			E.10.c
Pollution Prevention/Good Housekeeping for Permittee Operations									
Exist.	GH-1	Fix-Facilities Survey: Evaluate each fixed-facility site For Potential pollutant generating activities and identify appropriate BMPs to be implemented accordingly. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and reporting to continue during transition period		Maintain	Existing BMP GH-1 is covered under the new GH-4, GH-6, and GH-8 BMPs. GH-1 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the Min. require. Of the MS4 Order		E.11.a E.11.c E.11.e
Exist.	GH-2	Operation and Maintenance Activities Evaluation: Perform evaluation of O&M activities for the potential to generate pollutants to the stormwater system; implement BMPs accordingly Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.	Tracking and reporting to continue during transition period		Maintain	Existing BMP GH-2 is covered under the new GH-6 BMP. GH-2 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the Min. require. Of the MS4 Order		E.11.c

Is BMP New or Exist?	BMP Id	Description, and Measurable Goals	Permit Compliance Year (June 30 th unless otherwise noted)	Permit Year	Maintain, Reduce, or Cease Implementation	Other Implement Notes	Is Exist. SWMP BMPs more Protective than minimum require. Of MS4 Order?	City Department Responsible for Implementation	Permit Section Complied With
Exist.	GH-3	City Employee Training: Appropriate amount of training of City staff based on their level of responsibility for implementing the storm water program; Develop fact sheets to provide general direction to all City employees concerning water quality both at work and at home. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS	Tracking and reporting to continue during transition period		Maintain	Existing BMP GH-3 is covered under the new PE-9.1 and PE-9.4 BMPs. GH-3 will remain for transition, but removed in future to reduce potential confusion.	This BMP is not more protective than the Min. require. Of the MS4 Order	Existing BMP PP-5 is covered under the new PE-9.1 and PE-9.4 BMPs. PP-5 will be removed in future.	E.7.b.1 E.7.b.3
New	GH-4	Inventory of Permittee-Owned and Operated Facilities	2015	2	Develop and maintain an inventory of Permittee-owned or operated facilities within jurisdiction that are a potential threat to water quality, if applicable, per Section E.11.a.(i); implementation level per Section E.11.a.(ii); Report per Section E.11.a.(iii)				E.11.a
New	GH-5	Map of Permittee-Owned or Operated Facilities	2015	2	Submit a map of the area within the permit boundary and identify where the inventoried Permittee-owned facilities are located per Section E.11.b.(i); implementation level per Section E.11.b.(ii); Report per Section E.11.b.(iii)				E.11.b
New	GH-6	Facility Assessment	2016	3	Conduct a comprehensive inspection and assessment for all inventoried Permittee-owned or operated facilities, per Section E.11.c.(i); implementation level per Section E.11.c.(ii); Report per Section E.11.c.(iii)				E.11.c
New	GH-7	Storm Water Pollution Prevention Plans	2017	4	Develop and implement SWPPPs for pollutant hotspots, per Section E.11.d.(i); implementation level per Section E.11.d.(ii); Report per Section E.11.d.(iii). If Permittee has an existing document such as Hazardous Materials Business Plan, Spill Prevention Plan, or equivalent document Permittee is not required to develop a SWPPP				E.11.d
New	GH-8	Inspections, Visual Monitoring Remedial Action	2018	5	Conduct regular inspections of Permittee-owned and Operated Facilities, per Section E.11.e.(i); implementation level per Section E.11.e.(ii); Report per Section E.11.e.(iii).				E.11.e
New	GH-9	Storm Drain System Assessment and Prioritization	2015	2	Develop and implement procedures to assess and prioritize MS4 storm drain system maintenance, per Section E.11.f.(i); implementation level per Section E.11.f.(ii); Report per Section E.11.f.(iii)				E.11.f

Is BMP New or Exist?	BMP Id	Description, and Measurable Goals	Permit Compliance Year (June 30 th unless otherwise noted)	Permit Year	Maintain, Reduce, or Cease Implementation	Other Implement Notes	Is Exist. SWMP BMPs more Protective than minimum require. Of MS4 Order?	City Department Responsible for Implementation	Permit Section Complied With
New	GH-10	Maintenance of Storm Drain System	2016		Begin maintenance of all high level priority storm drain systems on an ongoing schedule, per Section E.11.g.(f); implementation level per Section E.11.g.(f); Report per Section E.11.g.(iii)				E.11.g
New	GH-11	Permittee Operations and Maintenance Activities (O&M)	2016		Assess O&M activities for potential to discharge pollutants in storm water and inspect O&M BMPs on a quarterly basis, per Section E.11.h; implementation level per Section E.11.h.(ii); Report per Section E.11.h.(iii)				E.11.h
New	GH-12	Incorporation of Water Quality And Habitat Enhancement Features in New Flood Management Features	2016		Develop and implement a process for incorporating water quality and habitat enhancement features into new and rehabilitated flood management facilities, per Section E.11.i(i); implementation level per Section E.11.i.(ii); Report per Section E.11.i.(iii)				E.11.i
New	GH-13	Landscape Design and Maintenance	2015		Implement a landscape design and maintenance program to reduce the amount of water, pesticides, herbicides and fertilizers used during Permittee operations and activities, per Section E.11.j(i); implementation level per Section E.11.j.(ii); Report per Section E.11.j.(iii)				E.11.j
Post Construction Storm Water Management Program									
Exist.	PC-1	<p>General Plan Land Use Criteria: Include a number of policies Related to storm-water protection in the revised General Plan. Measurable Goal: Adopt ordinances through the development code update</p>	This work is done.		Cease			Community Development	
Exist	PC-2	<p>Development Requirements: Adopt new ordinances through the development code update to help implement the post construction storm water management plan. Measurable Goal: SEE ATTACHMENT FOR MEASURABLE GOALS.</p>	Implement until March 6, 2014, and then cease and implement new PC requirements per Res. R3-2013-0032.		Maintain current BMP until March 6, 2014 Then implement E.12.k.	SEE ATTACHED CCRWQCB RESOLUTION No. R3-2013-0032 ATTACHMENT 1 FOR NEW POST-CONSTRUCTION REQUIREMENTS		Engineering / Community Development	

Is BMP New or Exist?	BMP Id	Description, and Measurable Goals	Permit Compliance Year (June 30 th unless otherwise noted)	Permit Year	Maintain, Reduce, or Cease Implementation	Other Implementation Notes	Is Exist. SWMP BMPS more Protective than minimum require. Of MS4 Order?	City Department Responsible for Implementation	Permit Section Complied With
Exist	PC-3	Enforceable Mechanisms: develop or modify existing enforceable mechanisms to effectively incorporate hydromodification controls, low impact development principles and features, Measurable Goal: Analyze, and adopt all applicable codes as necessary to implement and enforce Hydromodification Control, and LID	Implement until March 6, 2014, and then cease and implement new post-construction requirements per Res. R3-2013-0032.		Maintain current BMP until March 6, 2014 Then implement E.12.k.	SEE ATTACHED CCRWQCB RESOLUTION No. R3-2013-0032 ATTACHMENT 1 FOR NEW POST-CONSTRUCTION REQUIREMENTS			
Exist	PC-4	Hydromodification Control Measures: develop, adopt, and apply hydromodification control criteria using the methodology developed through the Joint Effort. Measurable Goal: Coordinate with Joint Effort to develop Hydromod criteria	Implement until March 6, 2014, and then cease and implement new post-construction requirements per Res. R3-2013-0032.		Maintain current BMP until March 6, 2014 Then implement E.12.k.	SEE ATTACHED CCRWQCB RESOLUTION No. R3-2013-0032 ATTACHMENT 1 FOR NEW POST-CONSTRUCTION REQUIREMENTS			
Exist	PC-5	Low Impact Development (LID): Adopt requirements for the implementation of LID principles and design features in new and redevelopment projects; Require LID as a condition of approval for new and redevelopment projects Measurable Goal: Apply LID principles to all applicable new and redevelopment projects	Implement until March 6, 2014, and then cease and implement new post-construction requirements per Res. R3-2013-0032.		Maintain current BMP until March 6, 2014 Then implement E.12.k.	SEE ATTACHED CCRWQCB RESOLUTION No. R3-2013-0032 ATTACHMENT 1 FOR NEW POST-CONSTRUCTION REQUIREMENTS			

Is BMP New or Exist?	BMP Id	Description, and Measurable Goals	Permit Compliance Year (June 30 th unless otherwise noted)	Permit Year	Maintain, Reduce, or Cease Implementation	Other Implement Notes	Is Exist. SWMP BMPs more Protective than minimum require. Of MS4 Order?	City Department Responsible for Implementation	Permit Section Complied With
Exist	PC-6	<p>Plan Review: build capacity to Review development proposals And apply hydromodification control criteria, LID principles and features to new and redevelopment projects; review project plans for compliance with General Permit and City requirements.</p> <p>Measurable Goal: Develop plan review Checklist; review projects for compliance with post-construction storm-water management requirements</p>	Implement until March 6, 2014, and then cease and implement new post-construction requirements per Res. R3-2013-0032.		Maintain current BMP until March 6, 2014 Then implement E.12.k.	SEE ATTACHED CCRWQCB RESOLUTION No. R3-2013-0032 ATTACHMENT 1 FOR NEW POST-CONSTRUCTION REQUIREMENTS			
Exist	PC-7	<p>Inspection and Enforcement: Inspect all post-construction Stormwater BMPs for proper performance prior to final project approval/occupancy.</p> <p>Measurable Goal: Develop Inspection Checklist; inspect all post-construction Stormwater BMPs prior to final Project Approval</p>	Implement until March 6, 2014, and then cease and implement new post-construction requirements per Res. R3-2013-0032.		Maintain current BMP until March 6, 2014 Then implement E.12.k.	SEE ATTACHED CCRWQCB RESOLUTION No. R3-2013-0032 ATTACHMENT 1 FOR NEW POST-CONSTRUCTION REQUIREMENTS			
	PC-8	<p>Long-Term Post-Construction BMP Maintenance: Develop, adopt, and enforce a long-term maintenance strategy.</p> <p>Measurable Goal: Develop and adopt maintenance strategy; Apply and enforce maintenance strategy.</p>	Implement until March 6, 2014, and then cease and implement new post-construction requirements per Res. R3-2013-0032.		Maintain current BMP until March 6, 2014 Then implement E.12.k.	SEE ATTACHED CCRWQCB RESOLUTION No. R3-2013-0032 ATTACHMENT 1 FOR NEW POST-CONSTRUCTION REQUIREMENTS			

Is BMP New or Exist?	BMP Id	Description, and Measurable Goals	Permit Compliance Year (June 30 th unless otherwise noted)	Permit Year	Maintain, Reduce, or Cease Implementation	Other Implement Notes	Is Exist. SWMP BMPS more Protective than minimum require. Of MS4 Order?	City Department Responsible for Implementation	Permit Section Complied With
Exist	PC-9	<p>Track BMPs: Develop a system to document and track all post-construction stormwater management BMPs in the City, from plan review through long-term maintenance</p> <p>Measurable Goal: Develop and implement a system to track construction BMPs</p>	Implement until March 6, 2014, and then cease and implement new post-construction requirements per Res. R3-2013-0032.		<p>Maintain current BMP until March 6, 2014</p> <p>Then implement E.12.k.</p>	SEE ATTACHED CCRWQCB RESOLUTION No. R3-2013-0032 ATTACHMENT 1 FOR NEW POST-CONSTRUCTION REQUIREMENTS			
Exist	PC-10	<p>Education and Outreach: Inform stakeholders about Relevant post-construction stormwater management requirements; develop and distribute materials to apply and achieve compliance with those requirements.</p> <p>Measurable Goal: Develop and document Goals, distribute materials to achieve compliance and report progress</p>	Implement until March 6, 2014, and then cease and implement new post-construction requirements per Res. R3-2013-0032.		<p>Maintain current BMP until March 6, 2014</p> <p>Then implement E.12.k.</p>	SEE ATTACHED CCRWQCB RESOLUTION No. R3-2013-0032 ATTACHMENT 1 FOR NEW POST-CONSTRUCTION REQUIREMENTS			
Exist	PC-11	<p>Staff Training: provide annual training in the implementation of the City's post-construction stormwater management requirements.</p> <p>Measurable Goal: Train annually in the implementation of post-construction stormwater management requirements.</p>	Implement until March 6, 2014, and then cease and implement new post-construction requirements per Res. R3-2013-0032.		<p>Maintain current BMP until March 6, 2014</p> <p>Then implement E.12.k.</p>	SEE ATTACHED CCRWQCB RESOLUTION No. R3-2013-0032 ATTACHMENT 1 FOR NEW POST-CONSTRUCTION REQUIREMENTS			

Is BMP New or Exist?	BMP Id	Description, and Measurable Goals	Permit Compliance Year (June 30 th unless otherwise noted)	Permit Year	Maintain, Reduce, or Cease Implementation	Other Implement Notes	Is Exist. SWMP BMPS more Protective than minimum require. Of MS4 Order?	City Department Responsible for Implementation	Permit Section Complied With
New	PC-12	Post Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes	MARCH 6, 2014		IMPLEMENT POST-CONSTRUCTION STORMWATER REQUIREMENTS FOR DEVELOPMENT PROJECTS IN THE CENTRAL COAST REGION AS MANDATED PER THE CCRWQCB RESOLUTION No. R3-2013-0032. THE CITY OF HOLLISTER OVERLIES TWO WATERSHED MANAGEMENT ZONES (SEE ATTACHED MAP). THE CITY OF HOLLISTER OVERLIES THE GILROY-HOLLISTER GROUNDWATER BASIN.				E.12.k
New	PC-13	Source Controls – Implement Source Controls as defined in E.12.d	2015	2					E.12.e (ii)(e)
New	PC-14	Planning and Development Review Process Conduct review using an existing guide such as Municipal Regulatory Update Assistance Program	2014-2016	1 & 3		Implementation level per Section E.12.j(ii); Reporting per Section E.12.j(iii)			E.12.j(i)
New	PC-14a	Conduct an analysis of the landscape code to correct gaps hindering post construction requirements	2014	1					E.12.j(ii)(a)
New	PC-14b	Complete any changes to landscape code to administer post-construction requirements	2015	2					E.12.j(ii)(b)
WATER QUALITY MONITORING									
New	WQM-1	ASBS Monitoring - MS4s that discharge to ASBS and are covered by an Ocean Plan exception comply with Attachment C	2014	1				Engineering	E.13.a

Is BMP New or Exist?	BMP Id	Description, and Measurable Goals	Permit Compliance Year (June 30 th unless otherwise noted)	Permit Year	Maintain, Reduce, or Cease Implementation	Other Implement Notes	Is Exist. SWMP BMPS more Protective than minimum require. Of MS4 Order?	City Department Responsible for Implementation	Permit Section Complied With
New	WQM-2	TMDL Monitoring - MS4s w TMDLs must comply with Attachment G and consult with Regional Board within 1 year of effective date to determine monitoring requirements and schedule. And shall implement TMDL monitoring as specified by RB Executive Officer	2014	1				Engineering	E.13.b
New	WQM-3	303(d) Monitoring - MS4s discharging to 303(d) listed waterbodies shall consult with Regional Board within 1 year of effective date to determine whether monitoring is necessary	2014	1				Engineering	E.13.c
New	WQM-4	Receiving Water Monitoring and Special Studies (Select either Receiving Water Monitoring or Special Studies, if not already conducting E.13.a, b or c monitoring)	2014	1				Engineering	E.13.d
New	WQM-5	Receiving Water Monitoring	2014	1					E.13.d.1
New	WQM-6	Special Studies							E.13.d.2
PROGRAM EFFECTIVENESS ASSESSMENT									
New	PEA-1	Program Effectiveness Assessment and Improvement Plan (PEAIP)	2015	2				Engineering	E.14.a
New	PEA-2	Storm Water Program Modifications	2018	5				Engineering	E.14.b

Is BMP New or Exist?	BMP Id	Description, and Measurable Goals	Permit Compliance Year (June 30 th unless otherwise noted)	Permit Year	Maintain, Reduce, or Cease Implementation	Other Implement Notes	Is Exist. SWMP BMPS more protective than minimum require. Of MS4 Order?	City Department Responsible for Implementation	Permit Section Complied With
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TOTAL MAXIMUM DAILY LOADS COMPLIANCE REQUIREMENTS

New	TMDL-1	Comply with all approved TMDLs (Attachment G)						Engineering	E.15.a
New	TMDL-2	Waste load allocations are incorporated herein by reference as enforceable parts of this Order						Engineering	E.15.b
New	TMDL-3	Regional Board reviews TMDLs within one year of effective date and may propose modifications to requirements						Engineering	E.15.c
New	TMDL-4	Report status of implementation via SMARTS						Engineering	E.15.d
New	TMDL-5	Comply with Clean Water Act Sections 303d, 306b and 314						Engineering	E.15.e

ANNUAL REPORTING PROGRAM

New	ARP-1	Use SMARTS to report and certify	2014-2018	1-5				Engineering	E.16.a
New	ARP-2	Complete and retain annual reports and make available to RWQCB during working hours	2014-2018	1-5				Engineering	E.16.b
New	ARP-3	Submit detailed written or oral report to RWQCB if directed.	2014-2018	1-5				Engineering	E.16.c
New	ARP-4	May coordinate reporting if regional programs	2014-2018	1-5				Engineering	E.16.d

City of Hollister Stormwater Management BMP Descriptions and Measurable Goals Attachment

The City of Hollister's Stormwater Management Plan (SWMP) is a requirement of the MS4 Stormwater Discharge General Permit, Order 2003-0005-DWQ. In February 2013, Order 2003-0005-DWQ was superseded by the Phase II Small MS4 General Permit 2013-0001-DWQ (PERMIT) which provides new Phase II MS4 stormwater discharge requirements.

As directed and required by the California Central Coast Regional Water Quality Control Board (CCRWQCB), the existing BMPs from the SWMP which are listed below are included as part of the City's required renewal under the PERMIT. The directive includes preparing and revising the MS4 Guidance Document (GD) for CCRWQB review and approval.

It is noted that the GD basically appears to be a successor to the SWMP. During the City's review of the SWMP and of the Permit it was found that virtually all of the existing BMPs that the City performs under the SWMP are included in some form within the various sections of the PERMIT. The City feels that the existing BMPs do not in themselves demonstrate that they are more protective of water quality than the minimum requirement of the Permit Order, but instead, are just similar in nature.

For clarification of the GD, the City has crossed referenced the existing BMPs against related sections of the Permit. The City will continue to perform the existing BMPs during a transition period from the "old stormwater program" to the new PERMIT requirements. As new BMPs are implemented, related existing BMPs will be removed from the program to reduce potential confusion. The existing BMPs are listed below:

PUBLIC EDUCATION and OUTREACH

PE-1 Web Page: This BMP is for the City to include a link on its web page to provide information related to stormwater management.

Measurable Goal

The City will continue to provide stormwater information via a link on its existing website. The City will update the site periodically as new information becomes available. The City will maintain and track the number of hits to the existing web site and the number of hits for the stormwater information link. Each year those numbers will be compared against the previous year and used to gauge if there is an increase or decrease in the amount of times the link was viewed. The City will report on the progress annually.

PE-2 Bulletins, Brochures and Fact Sheets: This BMP is for the City to develop stormwater facts sheets to educate the residential, construction and commercial/industrial communities on ways they can decrease their impact on stormwater runoff.

Measurable Goal

- I. The City will continue to include a stormwater pollution prevention message in resident's monthly utility bills. These statements will provide regular reminders of how each person affects the community. The City will maintain and track the number of messages that are distributed with utility bills and report on the progress annually.
- II. The City will continue to distribute stormwater pollution prevention brochures to all contractors through the permit process. The City will track the number of brochures distributed and report on the progress annually.

- III. The city will continue to distribute stormwater pollution prevention brochures to tenant and business owners through the city business license process. The City will track the number of brochures distributed and report on the progress annually.
- IV. The City of Hollister is an agency partner of the Water Resource Association (WRA). The WRA has programs in place to educate the community on practices of conserving water usage. The City, through the WRA, will continue to distribute stormwater related materials at various functions and report on the progress annually.

PE-3 Television Advertising: This BMP is for the City to develop an informational presentation regarding stormwater pollution for airing by the local Community Access Programming (CMAP) agency.

Measurable Goal

The City will continue to air a stormwater pollution prevention presentation on the local access television channel. The City will track the number of times the presentation was aired, and estimate the number of households that the video presentation reaches. The City will report on the progress annually.

PE-4 Storm Drain Marking: This BMP is for the City to conduct a storm drain marking program to advise the public not to pollute the storm drain system. As new catch basins are added to the system they are marked with a do not pollute storm drain message stenciled on the catch basin. The BMP also includes providing a comprehensive numbering/identification system of catch basins to allow residents to relay information about a particular catch basin for City response.

Measurable Goal

The City will continue to provide “Do Not Pollute” storm drain markings on its storm drain inlets. The City will also continue to perform inspections of all drain inlets and track the number that need to be marked/remarked, and make repairs as necessary. The City will report on the progress annually.

PE-5 Stormwater Hotline: This BMP is for the City to develop a hotline number that residents, businesses and construction contractors can call to get information on the stormwater program, report water quality issues or get information such as how to dispose of household hazardous waste. The number is to be included in public outreach materials. This BMP is essentially the same as ID-6

Measurable Goal

The City will continue to provide a hotline number that residents, businesses and construction contractors can call to get more information on the stormwater program, report water quality issues or get information such as how to dispose of household hazardous waste. The phone numbers will be included in program materials and on the City’s web site. The City will track the number of calls that result in a City response to remedy a stormwater pollution problem. The City will report on the progress annually.

PE-6 Event Participation: This BMP is for the City to participate in local events which emphasis the impacts, and assist with efforts to engage the public, in the area of stormwater management.

Measurable Goal

The City through its agency membership in the Water Resources Association of San Benito County will continue to educate the community about water quality issues and their role in solutions through outreach at events, school classrooms, and after school programs. The City will track the number of presentations provided, and the number of people in attendance of each presentation annually. The City will report on the progress annually.

PUBLIC PARTICIPATION AND INVOLVEMENT

PP-1 Public Meetings: This BMP is for the City to provide status updates to the community, City Council, and City Departments on the progress of the stormwater program.

Measurable Goal

The City will continue to provide periodic status updates to the community, City Council and City Departments on the progress of the stormwater program during the permit period. The City will track the number of public participants who attend the meetings as well as the number of comments received. The City will report on the progress annually.

PP-2 Public Presentations: This BMP is for the City to prepare a presentation that informs the community about the need and benefit of the stormwater management plan. The objective is to educate the public and emphasize that they have an important role in protecting the environment.

Measurable Goal

The City through its agency membership in the Water Resources Association of San Benito County will continue to educate the community about water quality issues and their role in solutions through outreach at events, school classrooms, and after school programs. The City will track the number of presentations provided, and the number of people in attendance of each presentation annually. The City will report on the progress annually.

PP-3 Web: This BMP is for the City to provide a public comment section on the City's web page to receive suggestions and comments from the public on the City's Stormwater Management Program.

Measurable Goal

The City will continue to track the number of comments received via the City's web page comment form. The City will report on the progress annually.

PP-4 Community Clean-up Events: This BMP is for the City to participate in community clean-up events such as River Clean-up Day (a.k.a. Earth Day), Hollister Downtown Spring Clean-up Event, and the Hollister Downtown Fall Clean-up Event.

Measurable Goal

The City will continue to participate in community clean-up events to remove trash and debris from the river banks, and from streets and parking lots in the downtown area to reduce the chance of pollution reaching the stormwater system. The City will continue to offer assistance through equipment and personnel, and will track the number of volunteers that participate at each event. The City will also track the amount of trash and debris that is collected and properly disposed of for each event. The City will report on the progress annually.

PP-5 City Employee Training: This BMP is for the City to provide appropriate training for staff responsible implementing the stormwater program.

Measurable Goal

The City will continue to appropriately train staff responsible to implement the City's stormwater program. The City will track the number of employees trained and will report on the progress annually.

ILLCIT DISCHARGE DETECTION AND ELIMINATION

ID-1 Storm Drain Mapping: This BMP is for the City is to maintain a storm drain system map which identifies storm drain lines, catch basins and outfalls. The map is to be updated periodically to reflect changes in the system due to construction. The BMP also includes assigning identification numbers to each storm drain inlet located within the City rights-of-way

Measurable Goal

The City will continue to maintain and update its storm drain map periodically to reflect changes that are made to the system as a result of construction. The City will track and document the total linear feet of storm drain mainline, and the number of drain inlets, constructed. As part of the mapping effort, the City will continue to assign an identification number to each storm drain inlet located within the City rights-of-way. The identification numbering system will assist clean-up crews in locating illicit discharges that are reported, as well as, enforcement authorities (Code Enforcement, Police, etc.) for illicit discharges that are in progress. The City will report on the progress annually.

ID-2 Discharge Inspection and Sampling: This BMP is for the City to inspect its storm drain system outfalls and repair them as needed, and monitor water quality for pollutants of concern.

Measurable Goal

The City will continue to inspect all storm drain outlets and make repairs as needed prior to the first storm of the wet season. A sample of the first flush from each outlet location will be collected and analyzed for pollutants of concern each year of the permit period. The City will continue to track the results from the sampling annually. The City will compare those results to the results of the previous year to gage a general idea of the effectiveness of the stormwater program. The City will report on the progress annually.

ID-3 Household Hazardous Waste Collection: This BMP allows residents to drop off their household hazardous wastes at the John Smith Landfill for proper disposal. The program is co-sponsored by the City of Hollister and its agency partner, San Benito County Integrated Waste Management. The amount of material brought to the facility for disposal is to be compared on an annual basis.

Measurable Goal

The City will continue to track the amount of Household Hazardous Waste material brought to the landfill for proper disposal. The City will continue to track the amount of material disposed of each year. The City will compare those results to the results of the previous year to gage a general idea of the effectiveness of the stormwater program. The City will report on the progress annually.

ID-4 Stormwater Ordinance: This BMP is for the periodic review of relevant sections of the City's municipal code to address illicit discharges into the storm drain system, determine if the code allows for appropriate inspection and enforcement action to take place, and to update City regulations as necessary.

Measurable Goal

The City will continue to review relevant sections of the City's municipal code and update City regulations as necessary. The City will report on the progress annually.

ID-5 Video Surveillance Program: This BMP is no longer performed.

ID-6 Stormwater Hotline: This BMP is the establishment of a stormwater phone hotline to receive public complaints. The complaints are to be forwarded to the appropriate personnel for review and action if necessary. This BMP is essentially the same as PE-5.

Measurable Goal

The City will continue to provide a hotline number that residents, businesses and construction contractors can call to get more information on the stormwater program, report water quality issues or get information such as how to dispose of household hazardous waste. The phone numbers will be included in program materials and on the City's web site. The City will track the number of calls that result in a City response to remedy a stormwater pollution problem. The City will report on the progress annually.

CONSTRUCTION SITE STORMWATER CONTROL

CS-1 Grading Ordinance: This BMP is for the periodic review of relevant sections of the City's municipal code to address construction site runoff control, determine if the code allows for appropriate inspection and enforcement action to take place, and to update City regulations as necessary.

Measurable Goal

The City will continue to review relevant sections of the City's municipal code related to construction stormwater runoff control and update the regulations as necessary, to remain compliant with all State and Federal mandates. The City will report on the progress annually.

CS-2 Stormwater BMP Manuals: This BMP is for the City to utilize BMP guidance manuals which can assist applicants in the selection of appropriate and sufficient BMPs for municipal, construction, commercial/industrial, and new development projects.

Measurable Goal

The City will continue to utilize the CASQA stormwater BMP manuals to assist applicants in BMP selection, and to assist City staff during development design review and construction inspection. The City will report on the progress annually.

CS-3 Stormwater BMP Information Materials: This BMP is for the City to provide the developers and contractors with informational stormwater best management practice materials to consider during the planning and construction stages. The informational handouts will focus on use of good site planning, minimization of soil movement, good housekeeping practices, and minimization of impacts of post construction stormwater discharges.

Measurable Goal

The City will continue to provide BMP materials to developers and contractors. The City will track the number of development projects and the number of BMP brochures distributed. The City will report on the progress annually.

POST-CONSTRUCTION STORMWATER MANAGEMENT

NOTE: As directed by the CCRWQCB, the City of Hollister SWMP Post-Construction Section (PC-1 through PC11) will continue until March 6, 2014, and then cease. At that time, the City of Hollister will begin applying Post-Construction requirements as outlined in the CCRWQCB Resolution R3-2013-0032.

PC-1 General Plan Land Use Criteria: This work is done. This BMP is no longer performed.

PC-2 Development Requirements: This BMP is for the City to perform periodic review of relevant sections of the City's municipal code to determine if the regulations need to be amended to assist in the implementation of State mandated post-construction stormwater management requirements.

Measurable Goal

The City will continue to review relevant sections of the City's municipal code related to post-construction stormwater management and update City regulations as necessary until CCRWQCB R3-2013-0032 is implemented.

PC-3 Enforcement Mechanisms: This BMP is for the City to modify existing enforcement mechanisms to incorporate Low Impact Development (LID) principles.

Measurable Goal

The City will continue to review relevant sections of the City's municipal code related to LID implementation, inspection and enforcement, and update City regulations as necessary until CCRWQCB R3-2013-0032 is implemented.

PC-4 Hydromodification Control Criteria: This BMP is for the City to modify existing enforcement mechanisms to incorporate Low Impact Development (LID) principles.

Measurable Goal

The City will continue to review relevant sections of the City's municipal code related to LID implementation, inspection and enforcement, and update City regulations as necessary until CCRWQCB R3-2013-0032 is implemented.

PC-5 Low Impact Development: This BMP is for the City to modify existing enforcement mechanisms to incorporate Low Impact Development (LID) principles.

Measurable Goal

The City will continue to review relevant sections of the City's municipal code related to LID implementation, inspection and enforcement, and update City regulations as necessary until CCRWQCB R3-2013-0032 is implemented.

PC-6 Plan Review: This BMP is for the City to modify existing enforcement mechanisms to incorporate Low Impact Development (LID) principles.

Measurable Goal

The City will continue to review relevant sections of the City’s municipal code related to LID implementation, inspection and enforcement, and update City regulations as necessary.

PC-7 Inspection and Enforcement: This BMP is for the City to inspect all new development post-construction BMPs for proper performance prior to final project approval.

Measurable Goal

The City will continue to inspect all post-construction BMPs in accordance with the approved plans until CCRWQCB R3-2013-0032 is implemented.

PC-8 Long-Term Post-Construction BMP Maintenance: This BMP is for the City to develop, implement and enforce a long-term post-construction stormwater BMP maintenance policy. It is anticipated that the strategy include elements to address matters such as, identification of the parties responsible for long-term maintenance, inspection, and enforcement.

Measurable Goals

The City will continue to implement a long-term post-construction BMP maintenance policy and will continue to track and inspect new development post-construction BMPs until CCRWQCB R3-2013-0032 is implemented.

PC-9 Track BMPs: This BMP is for the City to track new development post-construction BMPs.

Measurable Goal

The City will continue to track new development post-construction BMPs until CCRWQCB R3-2013-0032 is implemented.

PC-10 Education and Outreach: This BMP is for the City to inform developers/contractors about post-construction stormwater management requirements.

Measurable Goal

The City will continue to inform developers and contractors about post-construction stormwater requirements until CCRWQCB R3-2013-0032 is implemented.

PC-11 Staff Training: The BMP is for the City to provide training to City planning and engineering staff, development plan reviewers, inspectors, and enforcement officers that are assigned responsibilities related to the implementation of State mandated post-construction stormwater management requirements.

Measurable Goals

The City will continue to provide appropriate training to City planning and engineering staff, development plan reviewers, inspectors, and enforcement officers.

POLLUTION PREVENTION/GOOD HOUSEKEEPING

GH-1 Fixed-Facilities Surveys: The City operates many different kinds of fixed-facilities. This BMP is for the City to evaluate each facility for potential stormwater pollution generating activities, identify appropriate BMP measures, and implement those BMPs accordingly.

Measurable Goal

The City will continue to evaluate each of its fixed-facilities for the potential of pollution entering the stormwater system, identify appropriate BMP measures, and implement those BMP accordingly. The City will report on the progress annually.

GH-2 Operation and Maintenance Activities Evaluation: The City performs many different kinds of operations and maintenance activities. This BMP is for the City to evaluate its operation and maintenance activities for the potential of stormwater pollution, identify appropriate BMP measures, and implement those BMPs accordingly.

Measurable Goal

The City will continue to evaluate its operations and maintenance activities for the potential of pollution entering the stormwater system, identify appropriate BMP measures, and implement those BMP accordingly. The City will report on the progress annually.

GH-3 Employee Training: The BMP is for the City to provide appropriate training to City operation and maintenance staff based on their level of responsibility for implementing the stormwater management program.

Measurable Goal

The City will continue to provide appropriate training to operation and maintenance staff based on their level of responsibility for implementing the stormwater management program. The City will report on the progress annually.

**POST-CONSTRUCTION STORMWATER MANAGEMENT REQUIREMENTS FOR
DEVELOPMENT PROJECTS IN THE
CENTRAL COAST REGION**

July 12, 2013

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

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Documents also are available at:

http://www.waterboards.ca.gov/centralcoast/water_issues/programs/stormwater/docs/lid/lid_hydromod_charette_index.shtml

POST-CONSTRUCTION STORMWATER MANAGEMENT REQUIREMENTS FOR DEVELOPMENT PROJECTS IN THE CENTRAL COAST REGION

TABLE of CONTENTS

- A. Watershed Management Zones (WMZs) 1
- B. Post-Construction Requirements 1
 - 1) Regulated Projects 1
 - 2) Performance Requirement No. 1: Site Design and Runoff Reduction 3
 - 3) Performance Requirement No. 2: Water Quality Treatment..... 3
 - 4) Performance Requirement No. 3: Runoff Retention..... 5
 - 5) Performance Requirement No. 4: Peak Management.....10
 - 6) Performance Requirement No. 5: Special Circumstances11
- C. Alternative Compliance (Off-Site Compliance)12
 - 1) Technical Infeasibility12
 - 2) Approved Watershed or Regional Plan.....13
 - 3) Approved Urban Sustainability Area14
- D. Field Verifications of Post-Construction Stormwater Control Measures15
- E. Operation and Maintenance for Structural SCMs16
 - 1) O&M Plan.....16
 - 2) Maintenance Agreement and Transfer of Responsibility for SCMs16
 - 3) Structural Stormwater Control Measure O&M Database.....16
- F. Permittee Reporting Requirements17
- G. Pre-existing Programs18
- ATTACHMENT A: Watershed Management Zones.....19
- ATTACHMENT B: Designated Groundwater Basins20
- ATTACHMENT C: Definitions Related to Post-Construction Requirements23
- ATTACHMENT D: Hydrologic Analysis and Stormwater Control Measure Sizing Guidance.....27
- ATTACHMENT E: Ten Percent Adjustment to Retention Requirement – Calculation
- Instructions.....31
- ATTACHMENT F: Calculating Off-Site Retention Requirements.....33

A. Watershed Management Zones (WMZs)

The urbanized portions of the Central Coast Region are categorized into 10 Watershed Management Zones (WMZs), based on common key watershed processes and receiving water type (creek, marine nearshore waters, lake, etc). Maps in Attachment A illustrate the WMZs for the Central Coast Region's urbanized areas. Designated Groundwater Basins of the Central Coast Region (Attachment B) underlie some but not all WMZs in urbanized portions of the Central Coast Region. The map and table in Attachment B illustrates the Groundwater Basins of the Central Coast Region. Each WMZ and, where present, Groundwater Basin, is aligned with specific Post-Construction Stormwater Management Requirements to address the impacts of development on those watershed processes and beneficial uses.

- 1) The Permittee shall maintain the ability to identify the WMZs and their boundaries, and to determine the WMZ in which development projects are proposed, throughout the urbanized portions of their jurisdiction corresponding with the Phase I or Phase II Municipal Stormwater Permit boundary.
- 2) The Permittee shall maintain the ability to determine whether development projects are proposed in areas overlying designated Groundwater Basins, throughout the urbanized portions of their jurisdiction subject to either a Phase I or Phase II Municipal Stormwater Permit.

B. Post-Construction Requirements

The primary objective of these Post-Construction Stormwater Management Requirements (hereinafter, Post-Construction Requirements) is to ensure that the Permittee is reducing pollutant discharges to the Maximum Extent Practicable and preventing stormwater discharges from causing or contributing to a violation of receiving water quality standards in all applicable development projects that require approvals and/or permits issued under the Permittee's planning, building, or other comparable authority. The Post-Construction Requirements emphasize protecting and, where degraded, restoring key watershed processes to create and sustain linkages between hydrology, channel geomorphology, and biological health necessary for healthy watersheds. Maintenance and restoration of watershed processes impacted by stormwater management is necessary to protect water quality and beneficial uses.

- 1) Regulated Projects
Regulated Projects include all New Development or Redevelopment projects that create and/or replace $\geq 2,500$ square feet of impervious surface (collectively over the entire project site)
 - a) Regulated Projects include, but are not limited to the following road projects/practices:
 - i) Removing and replacing a paved surface resulting in alteration of the original line and grade, hydraulic capacity or overall footprint of the road
 - ii) Extending the pavement edge, or paving graveled shoulders
 - iii) Resurfacing by upgrading from dirt to asphalt, or concrete; upgrading from gravel to asphalt, or concrete; or upgrading from a bituminous surface treatment ("chip seal") to asphalt or concrete
 - b) Regulated Projects do not include:
 - i) Road and Parking Lot maintenance:
 - (1) Road surface repair including slurry sealing, fog sealing, and pothole and square cut patching
 - (2) Overlaying existing asphalt or concrete pavement with asphalt or concrete without expanding the area of coverage
 - (3) Shoulder grading
 - (4) Cleaning, repairing, maintaining, reshaping, or regrading drainage systems

- (5) Crack sealing
- (6) Resurfacing with in-kind material without expanding the road or parking lot
- (7) Practices to maintain original line and grade, hydraulic capacity, and overall footprint of the road or parking lot
- (8) Repair or reconstruction of the road because of slope failures, natural disasters, acts of God or other man-made disaster
- ii) Sidewalk and bicycle path or lane projects, where no other impervious surfaces are created or replaced, built to direct stormwater runoff to adjacent vegetated areas
- iii) Trails and pathways, where no other impervious surfaces are replaced or created, and built to direct stormwater runoff to adjacent vegetated areas
- iv) Underground utility projects that replace the ground surface with in-kind material or materials with similar runoff characteristics
- v) Curb and gutter improvement or replacement projects that are not part of any additional creation or replacement of impervious surface area (e.g., sidewalks, roadway)
- vi) Second-story additions that do not increase the building footprint
- vii) Raised (not built directly on the ground) decks, stairs, or walkways designed with spaces to allow for water drainage
- viii) Photovoltaic systems installed on/over existing roof or other impervious surfaces, and panels located over pervious surfaces with well-maintained grass or vegetated groundcover, or panel arrays with a buffer strip at the most down gradient row of panels
- ix) Temporary structures (in place for less than six months)
- x) Electrical and utility vaults, sewer and water lift stations, backflows and other utility devices
- xi) Above-ground fuel storage tanks and fuel farms with spill containment system
- c) The Permittee shall apply the Post-Construction Requirements by March 6, 2014¹, to all applicable Regulated Projects that require approvals and/or permits issued under the Permittee's planning, building, or other comparable authority. Applicable Regulated Projects include both private development requiring permits, and public projects:
 - i) Private Development Projects
 - (1) Discretionary Projects – The Permittee shall apply the Post-Construction Requirements to those projects that have not received the first discretionary approval of project design.
 - (2) Ministerial Projects – If the project is only subject to ministerial approval, the Permittee shall apply the Post-Construction Requirements to those projects that have not received any ministerial approvals. If the ministerial project receives multiple ministerial approvals, the Permittee shall apply the Post-Construction Requirements to the first ministerial approval. Ministerial approvals include, but are not limited to, building permits, site engineering improvements, and grading permits.
 - ii) Public Development Projects
 - (1) The Permittee shall develop and implement an equivalent approach, to the above approach used for private development projects, to apply the Post-Construction Requirements to applicable public development projects, including applicable university development projects
 - iii) Exemptions – The Permittee may propose, to the Central Coast Water Board Executive Officer, a lesser application of the Post-Construction Requirements for

¹ Newly enrolled Permittees Gonzales, Greenfield, and Guadalupe shall apply the Post-Construction Requirements by July 1, 2014.

projects with completed project applications dated prior to September 6, 2012. The Permittee must demonstrate that the application of the Post-Construction Requirements would pose financial infeasibility for the project. The Permittee shall not grant any exemptions without prior approval from the Central Coast Water Board Executive Officer.

- 2) Performance Requirement No. 1: Site Design and Runoff Reduction
 - a) The Permittee shall require all Regulated Projects that create and/or replace $\geq 2,500$ square feet of impervious surface (collectively over the entire project site), including detached single-family home projects, to implement at least the following design strategies throughout the Regulated Project site:
 - i) Limit disturbance of creeks and natural drainage features
 - ii) Minimize compaction of highly permeable soils
 - iii) Limit clearing and grading of native vegetation at the site to the minimum area needed to build the project, allow access, and provide fire protection
 - iv) Minimize impervious surfaces by concentrating improvements on the least-sensitive portions of the site, while leaving the remaining land in a natural undisturbed state
 - v) Minimize stormwater runoff by implementing one or more of the following site design measures:
 - (1) Direct roof runoff into cisterns or rain barrels for reuse
 - (2) Direct roof runoff onto vegetated areas safely away from building foundations and footings, consistent with California building code
 - (3) Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas safely away from building foundations and footings, consistent with California building code
 - (4) Direct runoff from driveways and/or uncovered parking lots onto vegetated areas safely away from building foundations and footings, consistent with California building code
 - (5) Construct bike lanes, driveways, uncovered parking lots, sidewalks, walkways, and patios with permeable surfaces
 - b) The Permittee shall confirm that projects comply with Site Design and Runoff Reduction Performance Requirements by means of appropriate documentation (e.g., check lists) accompanying applications for project approval.
- 3) Performance Requirement No. 2: Water Quality Treatment
 - a) The Permittee shall require Regulated Projects, except detached single-family homes, $\geq 5,000$ square feet of Net Impervious Area, and detached single-family homes $\geq 15,000$ square feet of Net Impervious Area, to treat stormwater runoff as required in the Water Quality Treatment Performance Requirements in Section B.3.b. to reduce pollutant loads and concentrations using physical, biological, and chemical removal.
 - i) Net Impervious Area is the total (including new and replaced) post-project impervious areas, minus any reduction in total imperviousness from the pre-project to post-project condition: *Net Impervious Area = (New and Replaced Impervious Area) - (Reduced Impervious Area Credit)*, where *Reduced Impervious Area Credit* is the total pre-project to post-project reduction in impervious area, if any.
 - b) The Permittee shall require each Regulated Project subject to Water Quality Treatment Performance Requirements to treat runoff generated by the Regulated Project site using the onsite measures below, listed in the order of preference (highest to lowest). Water Quality Treatment Performance Requirements shall apply to the runoff from existing, new, and replaced impervious surfaces on sites where runoff from existing impervious surfaces cannot be separated from runoff from new and replaced impervious surfaces.

- i) Low Impact Development (LID) Treatment Systems – Implement harvesting and use, infiltration, and evapotranspiration Stormwater Control Measures that collectively achieve the following hydraulic sizing criteria for LID systems:
 - (1) Hydraulic Sizing Criteria for LID Treatment Systems – LID systems shall be designed to retain stormwater runoff equal to the volume of runoff generated by the 85th percentile 24-hour storm event, based on local rainfall data.
- ii) Biofiltration Treatment Systems – Implement biofiltration treatment systems using facilities that must be demonstrated to be at least as effective as² a biofiltration treatment system with the following design parameters:
 - (1) Maximum surface loading rate appropriate to prevent erosion, scour and channeling within the biofiltration treatment system itself and equal to 5 inches per hour, based on the flow of runoff produced from a rain event equal to or at least:
 - (a) 0.2 inches per hour intensity; or
 - (b) Two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depth
 - (2) Minimum surface reservoir volume equal to the biofiltration treatment system surface area times a depth of 6 inches
 - (3) Minimum planting medium depth of 24 inches. The planting medium must sustain a minimum infiltration rate of 5 inches per hour throughout the life of the project and must maximize runoff retention and pollutant removal. A mixture of sand (60%-70%) meeting the specifications of American Society for Testing and Materials (ASTM) C33 and compost (30%-40%) may be used. A Regulated Project may utilize an alternative planting medium if it demonstrates its planting medium is equal to or more effective at attenuating pollutants than the specified planting medium mixture.
 - (4) Proper plant selection³
 - (5) Subsurface drainage/storage (gravel) layer with an area equal to the biofiltration treatment system surface area and having a minimum depth of 12 inches
 - (6) Underdrain with discharge elevation at top of gravel layer
 - (7) No compaction of soils beneath the biofiltration facility (ripping/loosening of soils required if compacted)
 - (8) No liners or other barriers interfering with infiltration, except for situations where lateral infiltration is not technically feasible.
- iii) Non-Retention Based Treatment Systems – Implement Stormwater Control Measures that collectively achieve at least one of the following hydraulic sizing criteria for non-retention based treatment systems:
 - (1) Hydraulic Sizing Criteria for Non-Retention Based Treatment Systems:
 - (a) Volume Hydraulic Design Basis – Treatment systems whose primary mode of action depends on volume capacity shall be designed to treat stormwater runoff equal to the volume of runoff generated by the 85th percentile 24-hour storm event, based on local rainfall data.

² Facilities or a combination of facilities, of a different design than in Section B.3.b.ii. may be permitted if all of the following measures of equivalent effectiveness are demonstrated: 1) equal or greater amount of runoff infiltrated or evapotranspired; 2) equal or lower pollutant concentrations in runoff that is discharged after biofiltration; 3) equal or greater protection against shock loadings and spills; and 4) equal or greater accessibility and ease of inspection and maintenance.

³ Technical guidance for designing bioretention facilities is available from the Central Coast LID Initiative. The guidance includes design specifications and plant lists appropriate for the Central Coast climate. (http://www.centralcoastlidi.org/Central_Coast_LIDI/LID_Structural_BMPs.html)

- (b) Flow Hydraulic Design Basis – Treatment systems whose primary mode of action depends on flow capacity shall be sized to treat:
 - (i) The flow of runoff produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths; or
 - (ii) The flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity.
 - c) Stormwater Control Plan Requirements – For each Regulated Project subject to the Water Quality Treatment Performance Requirement, the Permittee shall require the Project Applicant to provide the below information in a Stormwater Control Plan. The Permittee shall not grant final project approval, until the Stormwater Control Plan for the Regulated Project sufficiently demonstrates the Regulated Project design meets the Water Quality Treatment Performance Requirements.
 - i) Project name, application number, location including address and assessor's parcel number
 - ii) Name of Applicant
 - iii) Project Phase number (if project is being constructed in phases)
 - iv) Project Type (e.g., commercial, industrial, multi-unit residential, mixed-use, public), and description
 - v) Total project site area
 - vi) Total new impervious surface area, total replaced impervious surface area, total new pervious area, and calculation of Net Impervious Area
 - vii) Statement of Water Quality Treatment Performance Requirements that apply to the Project
 - viii) Summary of Site Design and Runoff Reduction (Performance Requirement No. 1) measures selected for the project
 - ix) Description of all post-construction structural Stormwater Control Measures
 - x) Supporting calculations used to comply with the applicable Water Quality Treatment Performance Requirements
 - xi) Documentation certifying that the selection, sizing, and design of the Stormwater Control Measures meet the full or partial Water Quality Treatment Performance Requirement
 - xii) Water quality treatment calculations used to comply with Water Quality Treatment Performance Requirement and any analysis to support infeasibility determination
 - xiii) Statement of Compliance:
 - (1) Statement that Water Quality Treatment Performance Requirement has been met on-site, or, if not achievable:
 - (a) Documentation of the volume of runoff for which compliance cannot be achieved on-site and the associated off-site compliance requirements.
 - (b) Statement of intent to comply with Water Quality Treatment Performance Requirement through Alternative Compliance
- 4) Performance Requirement No. 3: Runoff Retention
- a) The Permittee shall require Regulated Projects, except detached single-family homes, that create and/or replace $\geq 15,000$ square feet of impervious surface (collectively over the entire project site), and detached single-family homes $\geq 15,000$ square feet of Net Impervious Area, in WMZs 1, 2, 5, 6, 8 and 9, and those portions of WMZs 4, 7, and 10 that overlie designated Groundwater Basins (Attachment B) to meet the Runoff Retention Performance Requirements in Sections B.4.b. and B.4.c. using the LID Development Standards in Section B.4.d. for optimal management of watershed processes.

- b) Adjustments to the Runoff Retention Performance Requirements for Redevelopment – Where the Regulated Project includes replaced impervious surface, the below adjustments apply. These adjustments are accounted for in the Retention Tributary Area calculation in Attachment D.
 - i) Redevelopment Projects outside an approved Urban Sustainability Area, as described in Section C.3. – The total amount of replaced impervious surface shall be multiplied by 0.5 when calculating the volume of runoff subject to Runoff Retention Performance Requirements.
 - ii) Redevelopment Projects located within an approved Urban Sustainability Area (Section C.3.) – The total amount of runoff volume to be retained from replaced impervious surfaces shall be equivalent to the pre-project runoff volume retained.
- c) The Permittee shall require Regulated Projects, subject to the Runoff Retention Performance Requirements, to meet the following Performance Requirements:
 - i) Watershed Management Zone 1 and portions of Watershed Management Zones 4, 7 and 10 which overlie designated Groundwater Basins:
 - (1) Retain 95th Percentile Rainfall Event – Prevent offsite discharge from events up to the 95th percentile 24-hour rainfall event as determined from local rainfall data.⁴
 - (2) Compliance must be achieved by optimizing infiltration. Compliance for retention of the remaining volume must be achieved via storage, rainwater harvesting and/or evapotranspiration.
 - ii) Watershed Management Zone 2:
 - (1) Retain 95th Percentile Rainfall Event – Prevent offsite discharge from events up to the 95th percentile 24-hour rainfall event as determined from local rainfall data.
 - (2) Compliance must be achieved via storage, rainwater harvesting, infiltration, and/or evapotranspiration.
 - iii) Watershed Management Zones 5 and 8:
 - (1) Retain 85th Percentile Rainfall Event – Prevent offsite discharge from events up to the 85th percentile 24-hour rainfall event as determined from local rainfall data.
 - (2) Compliance must be achieved by optimizing infiltration. Compliance for retention of the remaining volume must be achieved via storage, rainwater harvesting and/or evapotranspiration.
 - iv) Watershed Management Zones 6 and 9:
 - (1) Retain 85th Percentile Rainfall Event – Prevent offsite discharge from events up to the 85th percentile 24-hour rainfall event as determined from local rainfall data.
 - (2) Compliance must be achieved via storage, rainwater harvesting, infiltration, and/or evapotranspiration.
- d) LID Development Standards – The Permittee shall require Regulated Projects, subject to Runoff Retention Performance Requirements, to meet Runoff Retention Performance Requirements (Sections B.4.b. and B.4.c.) using the following LID Development Standards:
 - i) Site Assessment Measures – Permittees shall require the applicant for each Regulated Project to identify opportunities and constraints to implement LID Stormwater Control Measures. Permittees shall require the applicant to document the following, as appropriate to the development site:

⁴ Use either the methodology provided in Part I.D of the December 2009 Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act, or, rainfall statistics provided by the Central Coast Water Board, whichever produces a more accurate value for rainfall depth.

- Site topography
 - Hydrologic features including contiguous natural areas, wetlands, watercourses, seeps, or springs
 - Depth to seasonal high groundwater
 - Locations of groundwater wells used for drinking water
 - Depth to an impervious layer such as bedrock
 - Presence of unique geology (e.g., karst)
 - Geotechnical hazards
 - Documented soil and/or groundwater contamination
 - Soil types and hydrologic soil groups
 - Vegetative cover/trees
 - Run-on characteristics (source and estimated runoff from offsite which discharges to the project area)
 - Existing drainage infrastructure for the site and nearby areas including the location of municipal storm drains
 - Structures including retaining walls
 - Utilities
 - Easements
 - Covenants
 - Zoning/Land Use
 - Setbacks
 - Open space requirements
 - Other pertinent overlay(s)
- ii) Site Design Measures – Permittees shall require the applicant for each Regulated Project to optimize the use of LID site design measures, as feasible and appropriate at the project site. Regulated Projects subject to Performance Requirement No. 3 must augment design strategies required by Performance Requirement No. 1 (Section B.2.a.i-v) with the following:
- Define the development envelope and protected areas, identifying areas that are most suitable for development and areas to be left undisturbed
 - Conserve natural areas, including existing trees, other vegetation, and soils
 - Limit the overall impervious footprint of the project
 - Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety or mobility uses are not compromised
 - Set back development from creeks, wetlands, and riparian habitats
 - Conform the site layout along natural landforms
 - Avoid excessive grading and disturbance of vegetation and soils
- iii) Delineation of discrete Drainage Management Areas (DMAs) – The Permittee shall require each Regulated Project to delineate DMAs to support a decentralized approach to stormwater management.
- (1) The Permittee shall require the applicant for each Regulated Project to provide a map or diagram dividing the entire project site into discrete DMAs
 - (2) The Permittee shall require the applicant for each Regulated Project to account for the drainage from each DMA using measures identified in Sections B.4.d.iv. and B.4.d.v., below.
- iv) Undisturbed and Natural Landscape Areas – Permittees shall require each Regulated Project to implement appropriate Site Design (Section B.4.d.ii.), and Runoff Reduction Measures in Performance Requirement No. 1, to reduce the amount of runoff for which retention and treatment is required. Runoff reduction

measures that can be used to account for this reduction also include the below measures. The Retention Tributary Area calculation in Attachment D accounts for these reductions.

- (1) Undisturbed or areas planted with native, drought-tolerant, or LID appropriate vegetation that do not receive runoff from other areas may be considered self-treating and no additional stormwater management is required.
 - (2) Runoff from impervious surfaces, generated by the rainfall events identified in Section B.4.c, may be directed to undisturbed or natural landscaped areas. When the applicant can demonstrate that this runoff will be infiltrated and will not produce runoff to the storm drain system, or a surface receiving waterbody, or create nuisance ponding that may affect vegetation health or contribute to vector problems, then no additional stormwater management is required for these impervious surfaces.
- v) Structural Stormwater Control Measures – Where Regulated Project Applicants have demonstrated in their Stormwater Control Plans, and the Permittee has confirmed, that use of Site Design measures listed in Section B.4.d.ii., Runoff Reduction measures listed in Performance Requirement No.1, and undisturbed and natural landscape areas discussed in Section B.4.d.iv., has been maximized to the extent feasible, Structural Stormwater Control Measures designed for water quality treatment and/or flow control shall be used to comply with Performance Requirement No. 3.
- (1) The Permittee shall require the Regulated Project applicant to use structural Stormwater Control Measures that optimize retention and result in optimal protection and restoration of watershed processes, such as Structural Control Measures associated with small-scale, decentralized facilities designed to infiltrate, evapotranspirate, filter, or capture and use stormwater.
- vi) Hydrologic Analysis and Structural Stormwater Control Measure Sizing – To determine Stormwater Control Measure sizing and design, Permittees shall require Regulated Project applicants to use one of the following: 1) hydrologic analysis and sizing methods as outlined in Attachment D; 2) locally/regionally calibrated continuous simulation model that results in equivalent optimization of on-site runoff volume retention; or 3) hydrologic analysis and sizing methods, equally effective in optimizing on-site retention of the runoff generated by the rainfall event specified in Section B.4.c, that have been approved by the Central Coast Water Board Executive Officer.
- e) Ten Percent Adjustment for Sites with Technical Infeasibility – Where technical infeasibility, as described in Section C.1.c., prevents full on-site compliance with the Runoff Retention Performance Requirement, on-site retention of the full Retention Volume per Section B.4.d.vi. is not required and the Regulated Project is required to dedicate no less than ten percent of the Regulated Project's Equivalent Impervious Surface Area⁵ to retention-based Stormwater Control Measures.
- i) Use the Attachment E instructions to calculate the ten percent adjustment for applying the Runoff Retention Performance Requirement.
 - ii) The Water Quality Treatment Performance Requirement is not subject to this adjustment, i.e., mitigation to achieve full compliance with the Water Quality Treatment Performance Requirement is required on- or off-site.
- f) Off-Site Mitigation – Off-site mitigation is required when Regulated Projects do not retain the full Retention Volume per Section B.4.b and B.4.c, and 1) fail to demonstrate technical infeasibility of full retention; or 2) demonstrate technical infeasibility of full

⁵ Calculate Equivalent Impervious Surface Area using guidance in Attachment E

retention AND fail to dedicate at least ten percent of the Regulated Project's Equivalent Impervious Surface Area to retention-based Stormwater Control Measures.

- i) Use the Attachment F instructions to calculate the Off-Site retention requirements when a Regulated Project subject to the Runoff Retention Performance Requirement does not allocate the full ten percent of the project site's Equivalent Impervious Surface Area to retention-based Stormwater Control Measures.
- g) Reporting Requirements – For each Regulated Project subject to the Runoff Retention Performance Requirement, the Permittee shall require the Project Applicant to provide the below information in a Stormwater Control Plan. The Permittee shall not grant final project approval, until the Stormwater Control Plan for the Regulated Project sufficiently demonstrates the Regulated Project design meets the Water Quality Treatment and Runoff Retention Performance Requirements.
 - i) Project Name, application number, and location including address and assessor's parcel number
 - ii) Name of Applicant
 - iii) Project Phase number (if project is being constructed in phases)
 - iv) Project Type (e.g., commercial, industrial, multiunit residential, mixed-use, public), and description
 - v) Total project site area
 - vi) Total new and/or replaced impervious surface area
 - vii) Statement of Water Quality Treatment and Runoff Retention Performance Requirements that apply to the Project
 - viii) Adjusted Requirements based on the local jurisdiction's approval, that the Project is allowed a Special Circumstance, Watershed or Regional Plan, or Urban Sustainability Area designation
 - ix) Site assessment summary
 - x) LID Measures used:
 - (1) Site design measures
 - (2) Runoff Reduction Measures
 - (3) Post-construction structural Stormwater Control Measures
 - xi) Summary of Runoff Reduction Measures and Structural Stormwater Control Measures, by Drainage Management Area, as well as for the entire site
 - xii) Supporting calculations used to comply with the applicable Water Quality Treatment and Runoff Retention Performance Requirements
 - xiii) Documentation demonstrating infeasibility where Site Design and Runoff Reduction measures cannot retain required runoff volume
 - xiv) Documentation demonstrating infeasibility where retention-based Stormwater Control Measures cannot retain and/or treat the required runoff volume
 - xv) Documentation demonstrating infeasibility where on-site compliance cannot be achieved
 - xvi) Documentation demonstrating percentage of the project's Equivalent Impervious Surface Area dedicated to retention-based Stormwater Control Measures
 - xvii) Documentation of certification that the selection, sizing, and design of the Stormwater Control Measures meets the applicable Water Quality Treatment and Runoff Retention Performance Requirement
 - xviii) O&M Plan for all structural Stormwater Control Measures to ensure long-term performance
 - xix) Owner of facilities
 - xx) Statement of Compliance:
 - (1) Statement that the Water Quality Treatment and Runoff Retention Performance Requirements have been met on-site, or, if not achievable:

- (a) Documentation of the volume of runoff for which compliance cannot be achieved on-site and the associated off-site compliance volume.
- (b) Statement of intent to comply with Water Quality Treatment and Runoff Retention Performance Requirements through an Alternative Compliance agreement.

5) Performance Requirement No. 4: Peak Management

The Permittee shall require all Regulated Projects that create and/or replace $\geq 22,500$ square feet of impervious surface (collectively over the entire project site) in Watershed Management Zones 1, 2, 3, 6, and 9 to manage peak stormwater runoff as required below (Section B.5.a.i.), and to meet Water Quality Treatment and Runoff Retention Performance Requirements.

- a) The Permittee shall apply the following Peak Management Performance Requirements:
 - i) Post-development peak flows, discharged from the site, shall not exceed pre-project peak flows for the 2- through 10-year storm events.
- b) Reporting Requirements – For each Regulated Project subject to the Peak Management Performance Requirement, the Permittee shall require the Project Applicant to provide the below information in a Stormwater Control Plan. The Permittee shall not grant final project approval, until the Stormwater Control Plan for the Regulated Project sufficiently demonstrates the Regulated Project design meets the Water Quality Treatment, Runoff Retention, and Peak Management Requirements.
 - i) Project Name, application number, and location including address and assessor's parcel number
 - ii) Name of Applicant
 - iii) Project Phase number (if project is being constructed in phases)
 - iv) Project Type (e.g., commercial, industrial, multiunit residential, mixed-use, public), and description
 - v) Total project site area
 - vi) Total new and/or replaced impervious surface area
 - vii) Statement of Water Quality Treatment, Runoff Retention, and Peak Management Performance Requirements that apply to the Project
 - viii) Adjusted Requirements based on the local jurisdiction's approval, that the Project is allowed a Special Circumstance, Watershed or Regional Plan, or Urban Sustainability Area designation
 - ix) Site assessment summary
 - x) LID Measures used:
 - (1) Site design measures
 - (2) Runoff Reduction Measures
 - (3) Post-construction structural Stormwater Control Measures
 - xi) Summary of Runoff Reduction Measures and Structural Stormwater Control Measures, by Drainage Management Area, as well as for the entire site
 - xii) Supporting calculations used to comply with the applicable Water Quality Treatment, Runoff Retention, and Peak Management Performance Requirements
 - xiii) Documentation demonstrating infeasibility where on-site compliance cannot be achieved
 - xiv) Documentation of certification that the selection, sizing, and design of the Stormwater Control Measures meets the applicable Water Quality Treatment, Runoff Retention, and Peak Management Performance Requirements
 - xv) O&M Plan for all structural SCMs to ensure long-term performance
 - xvi) Owner of facilities
 - xvii) Statement of Compliance:

- (1) Statement that the Water Quality Treatment, Runoff Retention, and Peak Management Performance Requirements have been met on-site, or, if not achievable:
 - (a) Documentation of the volume of runoff for which compliance cannot be achieved on-site and the associated off-site compliance requirements.
 - (b) Statement of intent to comply with Water Quality Treatment, Runoff Retention, and Peak Management Performance Requirements through an Alternative Compliance agreement.
- 6) Performance Requirement No. 5: Special Circumstances
- The Permittee may designate Regulated Projects as subject to Special Circumstances based on certain site and/or receiving water conditions. The Special Circumstances designation exempts a Regulated Project from Runoff Retention and/or Peak Management Performance Requirements where those Performance Requirements would be ineffective to maintain or restore beneficial uses of receiving waters. The Regulated Project subject to Special Circumstances must still comply with the Water Quality Treatment Performance Requirements.
- a) Special Circumstances include:
 - i) Highly Altered Channel Special Circumstance:

The Permittee may designate Regulated Projects as subject to Special Circumstances for Highly Altered Channels for the following conditions:

 - (1) Project runoff discharges into stream channels that are concrete-lined or otherwise continuously armored from the discharge point to the channel's confluence with a lake, large river (>200-square mile drainage area).
 - (2) Project runoff discharges to a continuous underground storm drain system that discharges directly to a lake, large river (>200-square mile drainage area), the San Lorenzo River in the City of Santa Cruz, or marine nearshore waters
 - (3) Project runoff discharges to other areas identified by the Central Coast Water Board
 - (4) Under no circumstance described in 6.a.i. can runoff from the Regulated Project result in adverse impacts to downstream receiving waters
 - ii) Intermediate Flow Control Facility Special Circumstance:
 - (1) The Permittee may designate Regulated Projects as subject to Special Circumstances for Intermediate Flow Control Facilities if the project runoff discharges to an existing (as of the date when the Central Coast Water Board approved Resolution R3-2012-0025) flow control facility that regulates flow volumes and durations to levels that have been demonstrated to be protective of beneficial uses of the receiving water downstream of the facility.
 - (2) The flow control facility must have the capacity to accept the Regulated Project's runoff.
 - (3) Demonstration of facility capacity to accept runoff and to regulate flow volumes and durations must include quantitative analysis based on numeric, hydraulic modeling of facility performance.
 - (4) Under no circumstance described in Section B.6.a.ii. can runoff from the Regulated Project result in adverse impacts to downstream receiving waters.
 - iii) Historic Lake and Wetland Special Circumstance:
 - (1) The Permittee may designate Regulated Projects as subject to Special Circumstances for Historic Lakes and Wetlands for the following conditions:
 - (a) Project is located where there was once a historic lake or wetland where pre-development hydrologic processes included filtration and storage but no significant infiltration to support downstream receiving water.

- (b) The Special Circumstance has been established based on a delineation of the historic lake or wetland approved by the Central Coast Water Board Executive Officer
- b) Performance Requirements for Highly Altered Channel and/or Intermediate Flow Control Facility Special Circumstances:
- i) For Regulated Projects that: 1) create and/or replace $\geq 22,500$ square feet of impervious surface; 2) are located in WMZs 1, 2, 5, and 8, and those portions of WMZs 4, 7, and 10 that overlie a designated Groundwater Basin:
 - (1) Water Quality Treatment (Performance Requirement No. 2)
 - (2) Runoff Retention (Performance Requirement No. 3)
 - ii) For Regulated Projects that: 1) create and/or replace $\geq 22,500$ square feet of impervious surface; and 2) are located in WMZs 3, 6, and 9, and those portions of WMZs 4, 7, and 10 that do not overlie a designated Groundwater Basin:
 - (1) Water Quality Treatment (Performance Requirement No. 2)
- c) Performance Requirements for Historic Lake and Wetland Special Circumstances
- i) For Regulated Projects that create and/or replace $\geq 15,000$ and $< 22,500$ square feet of impervious surface and meet the Historic Lake and Wetland Special Circumstance:
 - (1) Water Quality Treatment (Performance Requirement No. 2)
 - (2) Detention: Detain runoff such that the post-project peak discharge rate does not exceed the pre-project rate for all runoff up to the 95th percentile 24-hr rainfall event, or a more protective rate consistent with the Permittee's own development requirements
 - ii) For Regulated Projects that create and/or replace $\geq 22,500$ square feet of impervious surface and meet the Historic Lake and Wetland Special Circumstance:
 - (1) Water Quality Treatment (Performance Requirement No. 2)
 - (2) Peak Management: Detain runoff such that the post-project peak discharge rate does not exceed the pre-project rate for the 95th percentile 24-hr rainfall event and the 2- through 10-yr storm events or a more protective rate consistent with the Permittee's own development requirements.
- d) Documentation and Approval of Special Circumstances – The Permittee shall provide reasonable documentation to justify that a Regulated Project is more appropriately categorized under the Special Circumstances category.
- i) Historic Lake and Wetland Special Circumstance – Prior to granting a Regulated Project Special Circumstances, the Permittee shall submit a proposal to the Central Coast Water Board Executive Officer for review and approval. The proposal shall include, at a minimum:
 - (1) Delineation of historic lakes and wetlands and any supporting technical information to substantiate the requested Special Circumstances designation; and
 - (2) Documentation that the proposal was completed by a registered professional engineer, geologist, architect, and/or landscape architect.

C. Alternative Compliance (Off-Site Compliance)

Alternative Compliance refers to Water Quality Treatment, Runoff Retention and Peak Management Performance Requirements that are achieved off-site through mechanisms such as developer fee-in-lieu arrangements and/or use of regional facilities. Alternative Compliance may be allowed under the following circumstances:

- 1) Technical Infeasibility

Off-site compliance with Water Quality Treatment, Runoff Retention, or Peak Management Performance Requirements may be allowed when technical infeasibility limits or prevents use of structural Stormwater Control Measures.

- a) To pursue Alternative Compliance based on technical infeasibility, the Regulated Project applicant, for Regulated Projects outside of Urban Sustainability Areas, must submit a site-specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer, geologist, architect, and/or landscape architect, demonstrating that compliance with the applicable numeric Post-Construction Stormwater Management Requirements is technically infeasible
 - b) The Regulated Project applicant must submit a description of the project(s) that will provide off-site mitigation. The proposed off-site projects may be existing facilities and/or prospective projects that are as effective in maintaining watershed processes as implementation of the applicable Post-Construction Stormwater Requirements on-site. The description shall include:
 - i) The location of the proposed off-site project(s) must be within the same watershed as the Regulated Project. Alternative Compliance project sites located outside the watershed may be approved by the Central Coast Water Board Executive Officer
 - ii) A schedule for completion of offsite mitigation project(s), where the off-site mitigation project(s) has not been constructed.
 - c) Technical infeasibility may be caused by site conditions, including:
 - i) Depth to seasonal high groundwater limits infiltration and/or prevents construction of subgrade stormwater control measures⁶
 - ii) Depth to an impervious layer such as bedrock limits infiltration
 - iii) Sites where soil types significantly limit infiltration
 - iv) Sites where pollutant mobilization in the soil or groundwater is a documented concern
 - v) Space constraints (e.g., infill projects, some redevelopment projects, high density development)
 - vi) Geotechnical hazards
 - vii) Stormwater Control Measures located within 100 feet of a groundwater well used for drinking water
 - viii) Incompatibility with surrounding drainage system (e.g., project drains to an existing stormwater collection system whose elevation or location precludes connection to a properly functioning treatment or flow control facility)
- 2) Approved Watershed or Regional Plan
- An approved Watershed or Regional Plan as described below (Section C.2.a.), may be used to justify Alternative Compliance for a Regulated Project's numeric Runoff Retention and Peak Management Performance Requirements without demonstrating technical infeasibility.
- a) The Permittee must submit the proposed Watershed or Regional Plan to the Central Coast Water Board Executive Officer for approval. Watershed and Regional Plans must take into consideration the long-term cumulative impacts of urbanization including existing and future development and include, at minimum:

⁶ According to the CASQA Frequently Asked Questions about LID, "some MS4 permits and BMP guidance manuals require anywhere from 3-10 feet of separation from the groundwater level for infiltration practices. This distance depends on the soil type, pollutants of concern, and groundwater use. In some cases, however, where there may be groundwater or soil contamination, LID infiltrative practices may be restricted completely. (p. 7 in https://www.casqa.org/Portals/0/LID/CA_LID_FAQ_06-28-2011.pdf)

- i) A description of the project(s) that will provide off-site mitigation. The proposed off-site projects may be existing facilities and/or prospective projects.
 - ii) The location of the proposed off-site project(s), which must be within the same watershed as the Regulated Project. Alternative Compliance project sites located outside the watershed may be approved by the Central Coast Water Board Executive Officer.
 - iii) Demonstration that implementation of projects per the Watershed or Regional Plan will be as effective in maintaining watershed processes as implementation of the applicable Post-Construction Stormwater Requirements on-site. The proposal must include quantitative analysis (e.g., calculations and modeling) used to evaluate off-site compliance.
 - iv) A schedule for completion of offsite mitigation project(s), where the off-site mitigation project(s) has not been constructed.
 - b) The Permittee may use projects identified per the Watershed or Regional Plan to meet Water Quality Treatment Performance Requirements off-site only when:
 - i) The Regulated Project applicant has demonstrated that on-site water quality treatment is infeasible as described in Sections C.1.a and C.1.c., and
 - ii) The proposed off-site project(s) has been demonstrated to comply with the Water Quality Treatment Performance Requirements for the Regulated Project.
 - c) The Central Coast Water Board Executive Officer will deem complete a Permittee's Watershed or Regional Plan proposal within 60 days of receiving a complete proposal. The Central Coast Water Board Executive Officer will approve or deny the proposal within 120 days of a proposal being deemed complete.
- 3) Approved Urban Sustainability Area
The Permittee may allow Regulated Projects located within an approved Urban Sustainability Area to pursue Alternative Compliance for numeric Runoff Retention and Peak Management Performance Requirements without demonstrating technical infeasibility.
 - a) The Urban Sustainability Area shall encompass high density urban centers (but not limited to incorporated jurisdictional areas) where the Permittee's documented objective is to preserve or enhance an existing pedestrian-oriented and/or public transit-oriented type of urban design through the promotion of high density redevelopment and infill. The Permittee must submit a proposal to the Central Coast Water Board Executive Officer for approval of an Urban Sustainability Area. The USA proposal must include, at minimum:
 - i) A definition and delineation of the USA for high-density infill and redevelopment for which area-wide approval for Alternative Compliance is sought.
 - ii) Information and analysis that supports the Permittee's intention to balance water quality protection with the needs for adequate housing, population growth, public transportation, land recycling, and urban revitalization.
 - iii) Demonstration that implementation of Alternative Compliance for Regulated Projects in the USA will meet or exceed the on-site requirements for Runoff Retention and Peak Management. The proposal must include quantitative analysis (e.g., calculations and modeling) used to evaluate off-site compliance. Identification of specific off-site projects is not necessary for approval of the USA designation.
 - b) The Permittee may allow Regulated Projects in a USA to meet Water Quality Treatment Performance Requirements off-site only when:
 - i) The Regulated Project applicant has demonstrated that on-site water quality treatment is infeasible as described in Sections C.1.a. and C.1.c., and
 - ii) The proposed off-site project(s) have been demonstrated to comply with the Water Quality Treatment Performance Requirements.

- c) The Central Coast Water Board Executive Officer will deem complete a Permittee's USA proposal within 60 days of receiving a complete proposal. The Central Coast Water Board Executive Officer will approve or deny the proposal within 120 days of a proposal being deemed complete.
- 4) Other situations as approved by the Central Coast Water Board Executive Officer
- 5) Location of Alternative Compliance Project(s) – The location of the proposed off-site project(s) must be within the same watershed as the Regulated Project. Alternative Compliance project sites located outside the watershed may be approved by the Central Coast Water Board Executive Officer.
- 6) Timing and Funding Requirements for Alternative Compliance Projects – The Permittee shall develop a schedule for the completion of off-site mitigation projects, including milestone dates to identify funding, design, and construction of the off-site projects.
 - a) Complete the project(s) as soon as practicable and no longer than four years from the date of the certificate of occupancy for the project for which off-site mitigation is required, unless a longer period is otherwise authorized by the Central Coast Water Board Executive Officer.
 - b) The timeline for completion of the off-site mitigation project may be extended, up to five years with prior Central Coast Water Board Executive Officer approval. Central Coast Water Board Executive Officer approval will be granted contingent upon a demonstration of good faith efforts to implement an Alternative Compliance project, such as having funds encumbered and applying for the appropriate regulatory permits.
 - c) Require sufficient funding be transferred to the Permittee for public off-site mitigation projects. Require private off-site mitigation projects to transfer sufficient funding to a Permittee controlled escrow account, or provide the Permittee with appropriate project bonding within one year of the initiation of construction of the Regulated Project.
 - d) The Permittee may establish different timelines and requirements that are more restrictive than those outlined above.

D. Field Verifications of Post-Construction Stormwater Control Measures

- 1) The Permittee shall establish and implement a mechanism (a checklist or other tools) to verify⁷ that structural Water Quality Treatment, Runoff Retention, and/or Peak Management controls are designed and constructed in accordance with these Post-Construction Stormwater Management Requirements
- 2) Prior to occupancy of each Regulated Project, the Permittee shall field verify that the Site Design, Water Quality Treatment, Runoff Retention, and/or Peak Management controls have been implemented in accordance with these Post-Construction Requirements
 - a) The Permittee may accept third-party verification of SCMs conducted and endorsed by a registered professional engineer, geologist, architect, and/or landscape architect
 - b) The Permittee shall ensure, through conditions of approval or other legally enforceable agreements or mechanisms, that site access is granted to all representatives of the Permittee for the sole purpose of performing operation and maintenance (O&M) inspections of the installed Stormwater Control Measures

⁷ A series of checklists that can be used by both inspectors and maintenance personnel is available in the City of Santa Barbara Storm Water BMP Guidance Manual, Appendix H: Facility Inspection and Maintenance Checklists. GeoSyntec Consultants, July 2008.
http://www.santabarbaraca.gov/Resident/Community/Creeks/Low_Impact_Development.htm

E. Operation and Maintenance for Structural SCMs

The Permittee shall require O&M Plans and Maintenance Agreements that clearly establish responsibility for all structural Water Quality Treatment, Runoff Retention, and/or Peak Management controls on private and public Regulated Projects. The Permittee shall also maintain a structural SCM tracking database to support long-term performance of structural SCMs.

1) O&M Plan

The Regulated Project applicant shall develop and implement a written O&M Plan that, at a minimum, includes each component listed below. The Permittee may allow the Regulated Project applicant to include the O&M Plan components in the Stormwater Control Plan in place of developing a separate document. The Permittee shall approve the O&M Plan prior to final approval/occupancy. The O&M Plan must include, at minimum:

- a) A site map identifying all structural Stormwater Control Measures requiring O&M practices to function as designed
- b) O&M procedures for each structural stormwater control measure including, but not limited to, LID facilities, retention/detention basins, and proprietorship devices.
- c) The O&M Plan will include short-and long-term maintenance requirements, recommended frequency of maintenance, and estimated cost for maintenance.

2) Maintenance Agreement and Transfer of Responsibility for SCMs

Prior to issuing approval for final occupancy each Permittee shall require that Regulated Projects subject to these Post-Construction Requirements provide verification of ongoing maintenance provisions for Structural Stormwater Control Measures, including but not limited to legal agreements, covenants, CEQA mitigation requirements, and or conditional use permits. Verification shall include, at a minimum:

- a) The project owner's signed statement accepting responsibility for the O&M of the installed onsite and/or offsite structural treatment and flow control SCMs until such responsibility is legally transferred to another entity; and either
 - i) A signed statement from the public entity assuming responsibility for structural treatment and flow control SCM maintenance and stating that the SCM meets all local agency design standards; or
 - ii) Written conditions in the sales or lease agreements or deed for the project that require the buyer or lessee to assume responsibility for the O&M of the onsite and/or offsite structural treatment and flow control SCM until such responsibility is legally transferred to another entity; or
 - iii) Written text in project deeds, or conditions, covenants and restrictions for multi-unit residential projects that require the homeowners association or, if there is no association, each individual owner to assume responsibility for the O&M of the onsite and/or offsite structural treatment and flow control SCM until such responsibility is legally transferred to another entity; or
 - iv) Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns responsibility for the O&M of the onsite and/or offsite structural treatment and flow control SCM to the project owner(s) or the Permittee

3) Structural Stormwater Control Measure O&M Database

The Permittee shall develop a database with information regarding each structural Stormwater Control Measure installed per these Post-Construction Stormwater Management Requirements. The Database shall contain, at a minimum, fields for:

- a) SCM identification number and location/address
- b) Type of SCM
- c) Completion date of the following project stages, where applicable:
 - i) Construction
 - ii) Field verification of SCM

- iii) Final Project approval/occupancy
- iv) O&M plan approval by Permittee
- d) Location (physical and/or electronic) where the O&M Plan is available to view
- e) Party responsible for O&M
- f) Source of funding for O&M
- g) Verification that responsible party has maintained the SCM as outlined in the O&M Plan, or, indication that a self-inspection program is in place to verify that the SCM continues to function as designed and to repair and/or replace the SCM if it is not functioning as designed
- h) Any problems identified during inspections including any vector or nuisance problems.

F. Permittee Reporting Requirements

- 1) The Permittee shall submit a sample checklist and the number of permits regulated under the Site Design and Runoff Reduction Requirement (No. 1) as part of Stormwater Program Annual Reporting. This information must demonstrate the Site Design and Runoff Reduction Performance Requirement (No. 1) is applied to all applicable projects.
- 2) The Permittee shall report the following for all Regulated Projects subject to numeric Performance Requirements (Nos. 2, 3, 4, and 5) in Stormwater Program Annual Reporting:
 - a) The total number of completed Regulated Projects
 - b) The total number of Regulated Projects within each of the following categories of new and/or replaced impervious surface:
 - i) $\geq 5,000$ and $< 15,000$ (based on Net Impervious Area)
 - ii) $\geq 15,000$ and $< 22,500$
 - iii) $\geq 22,500$
 - c) A list of which projects were granted each of the following :
 - i) Special Circumstances – Highly Altered Channel
 - ii) Special Circumstances – Intermediate Flow Control Facility
 - iii) Special Circumstances – Historic Lake or Wetland
 - iv) Alternative Compliance – Technical Infeasibility
 - (1) Performance Requirement No. 2: Water Quality Treatment
 - (2) Performance Requirement No. 3: Runoff Retention
 - (3) Performance Requirement No. 4: Peak Management
 - v) Alternative Compliance – Watershed or Regional Plan
 - vi) Alternative Compliance – Urban Sustainability Area
 - vii) Other Technical Infeasibility
 - (1) Technical infeasibility to retain the required runoff volume (per Performance Requirement No. 3: Runoff Retention) using Site Design and Runoff Reduction measures
 - (2) Technical infeasibility to retain and/or treat the required runoff volume (per Performance Requirement No. 3: Runoff Retention) using retention-based Stormwater Control Measures
 - d) Confirmation by the Permittee that for all Permittee-approved technical infeasibility determinations, the Regulated Project's Stormwater Control Plan adequately demonstrated the basis for the technical infeasibility
 - e) A list of mitigation projects constructed for Alternative Compliance and the following project information:
 - i) A summary description of mitigation projects constructed during the reporting period comparing the expected aggregate results of Alternative Compliance projects to the results that would otherwise have been achieved by meeting the numeric Performance Requirements on-site

- ii) For public offsite mitigation projects, a summation of total offsite mitigation funds raised to date and a description (including location, general design concept, volume of water expected to be retained, and total estimated budget) of all pending public offsite mitigation projects
- f) Number of Regulated Projects where Field Verification of Post-Construction Stormwater Management Measures was required and was NOT completed
- g) Number of Regulated Projects where the required O&M Plan was NOT submitted/completed
- h) Number of Regulated Projects where Ownership and Responsibility of structural Stormwater Control Measures was not completed
- i) Structural Stormwater Control Measure O&M Database, including elements identified in Section E.3. Tabular spreadsheet data are acceptable.
 - i) The Permittee shall provide Central Coast Water Board staff electronic access to the database.

G. Pre-existing Programs

- a) A Permittee may propose, for Central Coast Water Board Executive Officer approval, implementation of pre-existing post-construction stormwater management requirements for development projects in the Permittee's jurisdictional coverage area, in place of implementing the requirements set forth in the Post-Construction Requirements. To be eligible for consideration and approval, the proposal must demonstrate the following:
 - i) The Permittee's pre-existing post-construction stormwater management requirements are as effective as the Post-Construction Requirements in maintaining watershed processes, impacted by stormwater management, that are necessary to protect water quality and beneficial uses;
 - ii) The Permittee was implementing its pre-existing post-construction stormwater management requirements prior to Central Coast Water Board approval of the Post-Construction Requirements; and
 - iii) The Permittee's pre-existing post-construction stormwater management requirements include LID site design and runoff reduction measures, numeric runoff treatment controls, numeric runoff retention controls, numeric runoff peak management controls, and project applicability thresholds as effective as those included in the Post-Construction Requirements.
- b) A Permittee must submit its proposal within 30 days of adoption of the Post-Construction Requirements by the Central Coast Water Board. The Central Coast Water Board Executive Officer will approve or deny the proposal within 90 days of receipt of a proposal.
- c) If the Central Coast Water Board Executive Officer denies a Permittee's proposal, the Permittee shall adhere to the Post-Construction Requirements provisions and deadlines.

ATTACHMENT A: Watershed Management Zones

Available electronically at:

http://www.waterboards.ca.gov/centralcoast/water_issues/programs/stormwater/docs/lid/lid_hydromod_charette_index.shtml

ATTACHMENT B: Designated Groundwater Basins

Groundwater basin areas are defined by the California Department of Water Resources (CDWR)⁸ and used in the Central Coast Water Board Joint Effort for Hydromodification Control to identify groundwater receiving-water issues and areas where recharge is a key watershed process. CDWR based identification of the groundwater basins on the presence and areal extent of unconsolidated alluvial soils identified on a 1:250,000 scale from geologic maps provided by the California Department of Conservation, Division of Mines and Geology. CDWR then further evaluated identified groundwater basin areas through review of relevant geologic and hydrogeologic reports, well completion reports, court-determined adjudicated basin boundaries, and contact with local agencies to refine the basin boundaries.

Designated Groundwater Basins include those identified in the CDWR Groundwater Basins Map. Numbers correspond to Groundwater Basins in Table 1.

⁸ California Department of Water Resources. 2004. Groundwater basin map. <http://www.water.ca.gov/groundwater/bulletin118/gwbasin_maps_descriptions.cfm>. Accessed September 15, 2006.

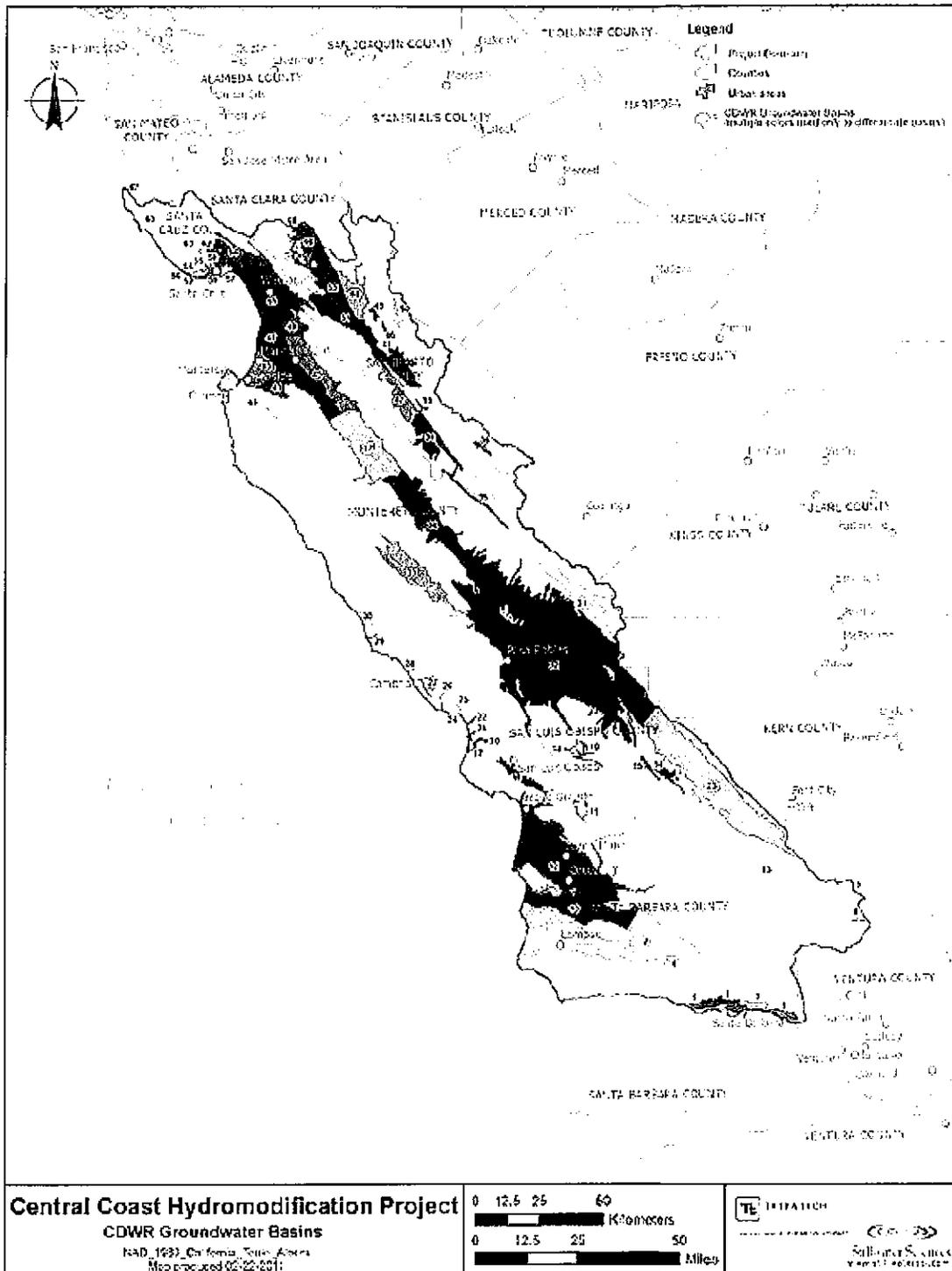


Table 1: Groundwater Basins in the Central Coast Region by GIS Basin Number (See Map)

GIS BASIN NUMBER	GROUNDWATER BASIN NAME	GIS BASIN NUMBER	GROUNDWATER BASIN NAME
1	Carpinteria	35	Peach Tree valley
2	Santa Barbara	36	Hernandez valley
3	Montecito	37	Salinas valley
4	Foothill	38	Bitter Water valley
5	Goleta	39	Dry Lake valley
6	Santa Ynez River valley	40	Carmel valley
7	Santa Ynez River valley	41	Salinas valley
8	Lockwood valley	42	San Benito river valley
9	Mil Potrero area	43	Salinas valley
10	San Antonio Creek valley	44	Tres Pinos valley
11	Huasna valley	45	Salinas valley
12	Santa Maria	46	Upper Santa Ana valley
13	Cuyama valley	47	Salinas valley
14	Big Spring area	48	Salinas valley
15	Rafael valley	49	Santa Ana valley
16	San Luis Obispo valley	50	Quien Sabe valley
17	Los Osos valley	51	Gilroy-Hollister valley
18	Rinconada valley	52	Needle Rock point
19	Pozo valley	53	Gilroy-Hollister valley
20	Chorro valley	54	West Santa Cruz terrace
21	Morro valley	55	West Santa Cruz terrace
22	Toro valley	56	Majors creek
23	Carrizo Plain	57	Soquel valley
24	Cayucos valley	58	West Santa Cruz terrace
25	Old valley	59	West Santa Cruz terrace
26	Villa valley	60	Gilroy-Hollister valley
27	Santa Rosa valley	61	Pajaro valley
28	San Simeon valley	62	Scotts valley
29	Arroyo de la Cruz valley	63	Felton area
30	San Carpoforo valley	64	Santa Cruz Purisima formation
31	Cholame valley	65	Ano Nuevo area
32	Salinas valley	66	Gilroy-Hollister valley
33	Lockwood valley	67	Pescadero valley
34	Salinas valley	68	Santa Clara valley

ATTACHMENT C: Definitions Related to Post-Construction Requirements

Bioretention – A Stormwater Control Measure designed to retain stormwater runoff using vegetated depressions and soils engineered to collect, store, treat, and infiltrate runoff. Bioretention designs do not include underdrains.

Biotreatment or Biofiltration Treatment – A Stormwater Control Measure designed to detain stormwater runoff, filter stormwater through soil media and plant roots, and release the treated stormwater runoff to the storm drain system. Biotreatment systems include an underdrain.

Discretionary Approval – A project approval which requires the exercise of judgment or deliberation when the MS4 decides to approve or disapprove a particular activity, as distinguished from situations where the MS4 merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations.

Dispersion – The practice of routing stormwater runoff from impervious areas, such as rooftops, walkways, and patios, onto the surface of adjacent pervious areas. Stormwater runoff is dispersed via splash block, dispersion trench, or sheet flow and soaks into the ground as it moves slowly across the surface of the pervious area.

Drainage Management Area (DMAs) – Following the low impact development principle of managing stormwater through small-scale, decentralized measures, DMAs are designated individual drainage areas within a Regulated Project that typically follow grade breaks and roof ridge lines and account for each surface type (e.g., landscaping, pervious paving, or roofs). Stormwater Control Measures for runoff reduction and structural facilities are designed for each DMA.

Equivalent Impervious Surface Area – is equal to *Impervious Tributary Surface Area* (ft²) + *Pervious Tributary Surface Area* (ft²), where *Impervious Tributary Surface Area* is defined as the sum of all of the site's conventional impervious surfaces, and *Pervious Tributary Surface Area* is defined as the sum of all of the site's pervious surfaces, corrected by a factor equal to the surface's runoff coefficient (see Attachment E for how to calculate).

Evapotranspiration (ET) – The loss of water to the atmosphere by the combined processes of evaporation (from soil and plant surfaces) and transpiration (from plant tissues).

Flow-Through Water Quality Treatment Systems – Stormwater Control Measures that are designed to treat stormwater through filtration and/or settling. Flow-through systems do not provide significant retention or detention benefits for stormwater volume control.

Groundwater Basins – Groundwater basin areas defined by the California Department of Water Resources (DWR) and used in the Central Coast Water Board Joint Effort for Hydromodification Control to identify groundwater receiving-water issues and areas where recharge is a key watershed process. DWR based identification of the groundwater basins on the presence and areal extent of unconsolidated alluvial soils identified on a 1:250,000 scale from geologic maps provided by the California Department of Conservation, Division of Mines and Geology. DWR then further evaluated identified groundwater basin areas through review of relevant geologic and hydrogeologic reports, well completion reports, court-determined adjudicated basin boundaries, and contact with local agencies to refine the basin boundaries.

Impervious Surface – A hard, non-vegetated surface area that prevents or significantly limits the entry of water into the soil mantle, as would occur under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for purposes of determining whether the thresholds for application of Performance Requirements are exceeded. However, for modeling purposes, open, uncovered facilities that retain/detain water (e.g., retention ponds, pools) shall be considered impervious surfaces.

Land recycling – The reuse of abandoned, vacant, or underused properties for redevelopment or repurposing

Landscaped Areas – Areas of soil and vegetation not including any impervious surfaces of ancillary features such as impervious patios, BBQ areas, and pools.

Large River – A river draining 200 square miles or more.

Low Impact Development (LID) – A stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation, and transpiration by emphasizing conservation, use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design.

Ministerial Approval – A project approval which involves little or no personal judgment by the MS4 as to the wisdom or manner of carrying out the project and only involves the use of fixed standards or objective measurements.

Native Vegetation – Vegetation comprised of plant species indigenous to the Central Coast Region and which reasonably could have been expected to naturally occur on the site.

Net Impervious Area – The sum of new and replaced post-project impervious areas, minus any reduction in total imperviousness from the pre-project to post-project condition: *Net Impervious Area = (New and Replaced Impervious Area) – (Reduced Impervious Area Credit)*, where *Reduced Impervious Area Credit* is the total pre-project to post-project reduction in impervious area, if any.

New Development – Land disturbing activities that include the construction or installation of buildings, roads, driveways and other impervious surfaces. Development projects with pre-existing impervious surfaces are not considered New Development.

Percentile Rainfall Event (e.g., 85th and 95th) – A percentile rainfall event represents a rainfall amount which a certain percent of all rainfall events for the period of record do not exceed. For example, the 95th percentile rainfall event is defined as the measured rainfall depth accumulated over a 24-hour period, for the period of record, which ranks as the 95th percentile rainfall depth based on the range of all daily event occurrences during this period.

Permeable or Pervious Surface – A surface that allows varying amounts of stormwater to infiltrate into the ground. Examples include pasture, native vegetation areas, landscape areas, and permeable pavements designed to infiltrate.

Pre-Project – Stormwater runoff conditions that exist onsite immediately before development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development.

Project Site – The area defined by the legal boundaries of a parcel or parcels of land within which the new development or redevelopment takes place and is subject to these Post-Construction Stormwater Management Requirements.

Rainwater Harvest – Capture and storage of rainwater or stormwater runoff for later use, such as irrigation (without runoff), domestic use (e.g. toilets), or storage for fire suppression.

Receiving Waters – Bodies of water, surface water systems or groundwater that receive surface water runoff through a point source, sheet flow or infiltration.

Redevelopment – On a site that has already been developed, construction or installation of a building or other structure subject to the Permittee's planning and building authority including: 1) the creation or addition of impervious surfaces; 2) the expansion of a building footprint or addition or replacement of a structure; or 3) structural development including construction, installation or expansion of a building or other structure. It does not include routine road maintenance, nor does it include emergency construction activities required to immediately protect public health and safety.

Replaced Impervious Surface – The removal of existing impervious surfaces down to bare soil or base course, and replacement with new impervious surface. Replacement of impervious surfaces that are part of routine road maintenance activities are not considered replaced impervious surfaces.

Retention Tributary Area – The entire project area except for undisturbed areas, planted areas with native, drought-tolerant, or LID appropriate vegetation that do not receive runoff from other areas, and impervious surface areas that discharge to infiltrating areas that will not produce runoff or create nuisance ponding. The Drainage Management Areas are smaller Retention Tributary Areas that cumulatively make up the Retention Tributary Area for the entire site.

Routine Road Maintenance – includes pothole and square cut patching; overlaying existing asphalt or concrete pavement with asphalt or concrete without expanding the area of coverage; shoulder grading; reshaping/regrading drainage systems; crack sealing; resurfacing with in-kind material without expanding the road prism or altering the original line and grade and/or hydraulic capacity of the road.

Self-Retaining Areas – (also called "zero discharge" areas), are designed to retain some amount of rainfall (by ponding and infiltration and/or evapotranspiration) without producing stormwater runoff. Self-Retaining Areas may include graded depressions with landscaping or pervious pavement.

Self-Treating Areas – are a portion of a Regulated Project in which infiltration, evapotranspiration and other natural processes remove pollutants from stormwater. The self-treating areas may include conserved natural open areas and areas planted with native, drought-tolerant, or LID appropriate vegetation. The self-treating area only treats the rain falling on itself and does not receive stormwater runoff from other areas.

Single-Family Residence – The building of one single new house or the addition and/or replacement of impervious surface associated with one single existing house, which is not part of a larger plan of development.

Stormwater Control Measures – Stormwater management measures integrated into project designs that emphasize protection of watershed processes through replication of pre-development runoff patterns (rate, volume, duration). Physical control measures include, but are not limited to, bioretention/rain gardens, permeable pavements, roof downspout controls, dispersion, soil quality and depth, minimal excavation foundations, vegetated roofs, and water use. Design control measures include but are not limited to conserving and protecting the function of existing natural areas, maintaining or creating riparian buffers, using onsite natural drainage features, directing runoff from impervious surfaces toward pervious areas, and distributing physical control measures to maximize infiltration, filtration, storage, evaporation, and transpiration of stormwater before it becomes runoff.

Stormwater Control Plan – A plan, developed by the Regulated Project applicant, detailing how the project will achieve the applicable Post-Construction Stormwater Management Requirements (for both onsite and offsite systems).

ATTACHMENT D: Hydrologic Analysis and Stormwater Control Measure Sizing Guidance

Project site conditions will influence the ability to comply with the Water Quality Treatment and Runoff Retention Performance Requirements. This Appendix provides the acceptable Stormwater Control Measure (SCM) sizing methodology to evaluate runoff characteristics. This guidance provides a simple event-based approach and a runoff routing approach. Both of these approaches are based on sizing for a single-event and avoid the necessity of using calibrated, continuous simulation modeling. The Permittee can allow project applicants to use a locally/regionally calibrated continuous simulation-based model to improve hydrologic analysis and SCM sizing.

1) Determination of Retention Tributary Area

Determining the Retention Tributary Area is the basis for calculating the runoff volumes subject to Performance Requirement Number 3. Retention Tributary Area should be calculated for each individual Drainage Management Area to facilitate the design of SCMs for each Drainage Management Area. The generic equation below illustrates how various portions of the site are addressed when determining the Retention Tributary Area. The Retention Tributary Area calculation must also account for the adjustments for Redevelopment Projects subject to Performance Requirement No. 3.

a) Compute the Retention Tributary Area, using the equation:

$$\text{Retention Tributary Area} = (\text{Entire Project Area}) - (\text{Undisturbed or Planted Areas})^* - (\text{Impervious Surface Areas that Discharge to Infiltrating Areas})^{**}$$

*As defined in Section B.4.d.iv.1.

** As defined in Section B.4.d.iv.2.

b) Adjustments for Redevelopment Project Retention Tributary Area – Where the Regulated Project includes replaced impervious surface, the following Retention Tributary Area adjustments apply:

- i) Redevelopment Projects outside an approved Urban Sustainability Area, as described in Section C.3. – The total amount of replaced impervious surface area shall be multiplied by 0.5 when calculating the Retention Tributary Area.
- ii) Redevelopment Projects located within an approved Urban Sustainability Area (Section C.3) – The replaced impervious surface areas may be subtracted from the Retention Tributary Area. The total amount of runoff volume to be retained from replaced impervious surfaces shall be equivalent to the pre-project runoff volume retained.

2) Determination of Retention Volume

a) Based on the Regulated Project's Watershed Management Zone, determine the Regulated Project's Runoff Retention Requirement (e.g., Retain 95th Percentile 24-hour Rainfall Event, or, Retain 85th Percentile 24-hour Rainfall Event).

b) Determine the 85th or 95th percentile 24-hour rainfall event:
Use either the methodology provided in Part I.D of the December 2009 Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects

under Section 438 of the Energy Independence and Security Act,⁹ or, rainfall statistics provided by the Central Coast Water Board, whichever produces a more accurate value for rainfall depth.

- c) Compute the Runoff Coefficient¹⁰ "C" for the area tributary to the SCMs, using the equation:

$$C = 0.858i^3 - 0.78i^2 + 0.774i + 0.04$$

Where "i" is the fraction of the tributary area that is impervious¹¹

- d) Compute Retention Volume:

Retention Volume for 95th Percentile 24-hr Rainfall Depth = C x Rainfall Depth_{95th} x Retention Tributary Area

or,

Retention Volume for 85th Percentile 24-hr Rainfall Depth = C x Rainfall Depth_{85th} x Retention Tributary Area

All rainfall directly incident to each SCM must be considered in determining runoff, including: tributary landscaping, impervious areas, pervious pavements, and bioretention features.

Note: For redevelopment projects located within an approved Urban Sustainability Area (Section C.3.), the total amount of runoff volume to be retained from replaced impervious surfaces shall be equivalent to the pre-project runoff volume retained.

3) Structural Stormwater Control Measure Sizing

The Permittee shall require the Regulated Project applicant to use structural SCMs that optimize retention and result in optimal protection and restoration of watershed processes, such as Structural Control Measures associated with small-scale, decentralized facilities designed to infiltrate, evapotranspire, filter, or capture and use stormwater, to address the volumes calculated in 2 (above). Where the Regulated Project is within a Watershed Management Zone where infiltration is required, Permittees must use SCM designs that optimize infiltration of the entire Retention Volume to minimize the potential need for off-site mitigation. Various resources provide design guidance for fully infiltrative SCMs including:

- The Contra Costa C.3 Manual
- The City of Santa Barbara LID BMP Manual
- The City of San Diego LID Design Manual, July 2011
- Central Coast LID Initiative Bioretention Design Guidance

- a) Calculate SCM Capture Volume – Calculate the required SCM Capture Volume, associated with the Regulated Project's Runoff Retention Requirement, by one of the following methods:

Method 1: Simple Method

⁹ USEPA, 841-B-09-00. http://www.epa.gov/owow/NPS/lid/section438/pdf/final_sec438_eisa.pdf

¹⁰ As set forth in WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998), pages 175-178 and based on the translation of rainfall to runoff using a runoff regression equation developed using two years of data from more than 60 urban watersheds nationwide.

¹¹ As defined in Post-Construction Requirements Attachment C.

SCM Capture Volume = Retention Volume for 95th Percentile 24-hr Rainfall Depth

or,

SCM Capture Volume = Retention Volume for 85th Percentile 24-hr Rainfall Depth

Method 2: Routing Method

Use a hydrograph analysis¹² to determine the SCM Capture Volume needed to retain the Retention Volume for 95th or 85th Percentile 24-hr Rainfall Depth calculated in 2 (above). The SCM Capture Volume shall be based on both the rate of flow from tributary areas into the SCM, and the rate of flow out of the SCM through infiltration into the underlying soil during the rain event. When conducting the hydrograph analysis, adhere to the criteria included in Table 1. The SCM shall be designed such that a single 95th or 85th Percentile 24-hr Rainfall Event will not overflow the SCM.

If the Retention Volume cannot infiltrate within 48-hours, a multiplier of 1.20 shall be applied to the SCM Capture Volume calculated through the routing method.

TABLE 1: Routing Method Criteria

Parameter	Criteria
Hydrograph Analysis Method	National Resources Conservation Service or Santa Barbara Urban Hydrograph
Pond Routing Method	Storage-indication, unless otherwise justified to be more correct based on site and storage conditions.
Infiltration Rate	Underlying soil saturated infiltration rate, as indicated by locally accepted data approved by the Permittee and/or by on-site testing, whichever is more accurate.
Rainfall Distribution	National Resources Conservation Service Type 1 ¹³ or based on local rainfall data
Time of Concentration	Permittee's current drainage and flood control standard
Time Increment	0.10 hour, unless otherwise justified to be more correct based on rainfall distribution

- b) Demonstration of Compliance – Permittees shall require Regulated Projects to demonstrate that site SCMs: a) will infiltrate and/or evapotranspire the Retention Volume or, b) will provide sufficient Capture Volume to retain the Retention Volume. Any outlet (i.e., underdrain) installed in a structural SCM shall be installed above the elevation of any portion of the structural SCM dedicated to Retention Volume storage.

¹² HydroCAD is an example of a commonly used and widely accepted program for performing hydrograph analyses and design of stormwater infrastructure. HydroCAD is based on U.S. Department of Agriculture Soil Conservation Service's (now National Resources Conservation Service) TR-55: Urban Hydrology for Small Watersheds.

¹³ The National Resources Conservation Service developed standard 24-hour rainfall distributions for hydrograph analyses. These rainfall distributions were intended to represent intensities associated with shorter duration storms, ranging from durations of 30 minutes to 12 hours. The National Resources Conservation Service Type 1 storm applies to the California West Coast, including the Central Coast Region. The Type 1 rainfall distribution was derived using National Oceanic Atmospheric Administration Atlas 2 rainfall statistics for the 1-year through 100-year storm.

- c) Compliance with Water Quality Treatment Performance Requirement – Permittees shall require Regulated Projects that propose to use the retention-based structural Stormwater Control Measures to also meet the Water Quality Treatment Performance Requirement, to demonstrate, in the Stormwater Control Plan, that the Water Quality Treatment Performance Requirement is being fully met.

ATTACHMENT E: Ten Percent Adjustment to Retention Requirement – Calculation Instructions

Where technical infeasibility, as described in Section C.1.c., prevents full on-site compliance with the Runoff Retention Performance Requirement, on-site retention of the full Retention Volume per Section B.4.d.vi. is not required and the Regulated Project is required to dedicate no less than ten percent of the Regulated Project's Equivalent Impervious Surface Area to retention-based Stormwater Control Measures. The Water Quality Treatment Performance Requirement is not subject to this adjustment, i.e., mitigation to achieve full compliance is required on- or off-site.

Calculating Ten Percent of a Project's Equivalent Impervious Surface Area

The area of the project that must be dedicated to structural SCMs to waive off-site compliance with the Runoff Retention Requirement is equal to ten percent of the project's Equivalent Impervious Surface Area, defined as:

$$\text{Equivalent Impervious Surface Area (ft}^2\text{)} = (\text{Impervious Tributary Surface Area (ft}^2\text{)}) + (\text{Pervious Tributary Surface Area (ft}^2\text{)})$$

Impervious Tributary Surface Area is defined as the sum of all of the site's conventional impervious surfaces. When calculating Impervious Tributary Area:

- Do include: concrete, asphalt, conventional roofs, metal structures and similar surfaces
- Do not include: green roofs

Pervious Tributary Surface Area is defined as the sum of all of the site's pervious surfaces, corrected by a factor equal to the surface's runoff coefficient. When calculating Pervious Tributary Surface Area:

- Do include surfaces such as: unit pavers on sand; managed turf¹⁴; disturbed soils; and conventional landscaped areas (see Table 1 for correction factors).

Example:

Project Site includes 500 ft² of unit pavers on sand.

$$\text{Pervious Tributary Surface Area} = 500 \text{ ft}^2 \times C = 50 \text{ ft}^2$$

Where C = Correction Factor for unit pavers, 0.1, from Table 1.

- Do not include: Infiltration SCM surfaces (e.g., SCMs designed to specific performance objectives for retention/infiltration) including bioretention cells, bioswales; natural and undisturbed landscape areas, or landscape areas compliant with the Model Water Efficient Landscape Ordinance (California Code of Regulations, Title 23. Waters, Division 2. Department of Water Resources, Chapter 2.7.), or a local ordinance at least as effective as the Model Water Efficient Landscape Ordinance.

¹⁴ Managed Turf includes turf areas intended to be mowed and maintained as turf within residential, commercial, industrial, and institutional settings.

TABLE 1: Correction Factors¹⁵ for Use in Calculating Equivalent Impervious Surface Area

Pervious Surface	Correction Factor
Disturbed Soils/Managed Turf (dependent on original Hydrologic Soil Group)	A: 0.15 B: 0.20 C: 0.22 D: 0.25
Pervious Concrete	0.60
Cobbles	0.60
Pervious Asphalt	0.55
Natural Stone (without grout)	0.25
Turf Block	0.15
Brick (without grout)	0.13
Unit Pavers on Sand	0.10
Crushed Aggregate	0.10
Grass	0.10

¹⁵ Factors are based on runoff coefficients selected from different sources: Turf and Disturbed Soils from *Technical Memorandum: The Runoff Reduction Method*. Center for Watershed Protection & Chesapeake Stormwater Network. p.13, April 18, 2008.

http://town.plympton.ma.us/pdf/land/scheuler_runoff_reduction_method_techMemo.pdf. All other correction factors from *C.3 Stormwater Handbook, Santa Clara Valley Urban Runoff Pollution Prevention Program, Appendix F*, p. F-9., May 2004.

http://www.sanjoseca.gov/planning/stormwater/pdfs/appendices_files/Appendix_F_Final.pdf

ATTACHMENT F: Calculating Off-Site Retention Requirements When Less Than 10 Percent of the Project Site Equivalent Impervious Surface Area is Allocated to Retention-Based Structural Stormwater Control Measures

The following instructions demonstrate how to determine the Off-Site Retention Requirements when a Regulated Project subject to the Runoff Retention Performance Requirement, cannot allocate the full 10% of the project site's Equivalent Impervious Surface Area¹⁶ to retention-based Stormwater Control Measures (SCMs).

STEP A. Potential Off-Site Mitigation Retention Volume

First calculate the Potential Off-Site Mitigation Retention Volume, which represents the additional volume of runoff that would have been retained on-site, had the full 10% of Equivalent Impervious Surface Area been dedicated to retention-based SCMs.

Equation A:

Potential Off-Site Mitigation Retention Volume = (the portion of the 10% Equivalent Impervious Area not allocated on-site) X (the On-Site Retention Feasibility Factor)

Where:

- *The portion of the 10% Equivalent Impervious Surface Area not allocated on-site* is that portion not allocated to on-site structural retention-based SCMs. For example, if 10% of Equivalent Impervious Surface Area is 1,000 ft² and only 8% (800 ft²) is allocated to retention-based SCMs, the remaining 2% (200 ft²) is the value inserted in the equation.
- *The On-Site Retention Feasibility Factor* is the ratio of Design Retention Volume¹⁷ managed on-site (ft³), to actual area (ft²) allocated to structural SCMs. This establishes the site's retained volume:area ratio, expressed as cubic feet of retained runoff volume per square foot of area. For example, if a project is able to infiltrate 3,500 ft³ of runoff over an 800-ft² area, this ratio of 3,500:800, or 4.38, is the On-Site Retention Feasibility Factor.

STEP B. Actual Off-Site Mitigation Retention Volume

Next, determine the Actual Off-Site Mitigation Retention Volume, which may be less than the Potential Off-Site Mitigation Retention Volume. The Actual Off-Site Mitigation Retention Volume is the lesser of the volume calculated in Equation A, and the remaining portion of the Design Retention Volume, calculated per Attachment D, not controlled on-site. There are two possible outcomes when the Runoff Retention Performance Requirement is not met on-site and less than 10% of the site's Equivalent Impervious Surface Area is allocated to retention-based SCMs:

- Potential Off-Site Mitigation Retention Volume is the Actual Off-Site Mitigation Retention Volume
- Remaining Design Retention Volume represents Actual Off-Site Design Retention Mitigation Volume

¹⁶ Calculate Equivalent Impervious Surface Area using guidance in Post-Construction Requirements Attachment E

¹⁷ Calculate Design Retention Volume using guidance in Post-Construction Requirements Attachment D, or equivalent method. Final Design Retention Volumes should reflect the applicant's demonstrated effort to use non-structural design measures to reduce the amount of runoff (e.g., reduction of impervious surfaces) as required by the Post-Construction Requirements' LID Development Standards (Section B.4.d).