DRAFT Table of Revisions Required by the Central Coast Water Board to
The City of Salinas Stormwater Development Standards (SWDS) for New Development
and Significant Redevelopment Projects, July 25, 2008 Revision

Prepared August 12, 2008

Acronyms:

BMP	Best Management Practice
IMP	Integrated Management Practice
LID	Low Impact Development
MEP	Maximum Extent Practicable

Ref. No.	SWDS Section	Required Revision
1	Section 1.4.6, Waivers for Providing Stormwater Management	Add the following underlined text: The City is currently in the process of developing Waiver Program for approval by the Regional Board. Upon approval, a detailed description of the Waiver Program will be presented as an additional appendix to these SWDS. <u>Until the Waiver Program is approved by the Regional Board, the City will not grant waivers of these SWDS.</u>
2	Section 1.5, *Stormwater Management*	Add the following underlined text: Overall, stormwater management practices for development shall rely on a "tiered" approach. The first tier shall be site design planning per Section 1.5.1 to avoid and preserve natural drainage features, minimize topography changes, maintain the same overall size of drainage areas that discharge to receiving waters. The second tier shall be site source control measures that minimize stormwater contamination and pollutant transport. The third tier shall be stormwater treatment controls using LID techniques (e.g. IMPs) consistent with the numeric criteria listed in section 1.5.3. <u>Full implementation of all three tiers is required for development approval.</u>
3	Section 1.5.3, *Numeric Criteria for Stormwater Management*	Add the following underlined text and remove the following strikethrough text: All applicable projects per the criteria listed in Section 1.4.1 shall be required to meet the following stated numeric requirements: 1. All new development projects shall direct runoff from 100% of the area of new impervious surfaces (equivalent to 0% Effective Impervious Area) into BMPs meeting the requirements of these standards. <u>Exceptions may be allowed for driveways when grade breaks are located to minimize the area draining to the street.</u> Plans for new development projects not meeting this requirement will only be approved if

Ref. No.	SWDS Section	Required Revision

		the applicant demonstrates, to the satisfaction of the City Engineer, that the full achievement of such is impracticable.
		
		2. All redevelopment projects shall direct runoff from a minimum of 95% of the area of new impervious surface area (equivalent to 5% or less Effective Impervious Area) into BMPs meeting the requirements of these standards. Plans for redevelopment projects not meeting this requirement will only be approved if the applicant demonstrates, to the satisfaction of the City Engineer, that the full achievement of such is impracticable.
		
		3. The project applicant shall <u>prepare an exhibit showing the entire site divided into discrete drainage areas and</u> demonstrate in submitted site stormwater control plans (SWCPs) that <u>for each discrete drainage area</u> ~~BMPs for runoff of impervious surfaces~~ either (1) <u>runoff from impervious areas produced by the first 0.6 inches of rainfall is detained and infiltrated</u> ~~from each specified drainage area~~ <u>or (2) runoff is routed to BMPs</u> meeting the requirements of these standards<u>.</u> ~~and are each~~ <u>All BMPs must be adequately</u> sized ~~to accommodate its shown designated drainage area~~ per the following numeric criteria:
		
		    A. All flow based BMPs shall be sized to, at minimum, the maximum flow rate of runoff from the designated specific drainage area using the 85th percentile hourly rainfall intensity multiplied by two. For the City of Salinas, this equates to a rainfall intensity of 0.22 inches per hour.
		
		    B. All volume based BMPs shall be sized, at minimum, for the volume of runoff produced from a 24 hour 85th percentile storm event. For the City of Salinas, this equates to a rainfall depth of 0.6 inches.
		
		    ~~C. All SWCPs shall incorporate LID strategies and associated BMPs to the maximum extent practicable (MEP). Other treatment control BMPs may be used to treat runoff of portions of redevelopment projects where there is to be no new or replaced impervious surfaces installed.~~
		
		4. For all new development and redevelopment projects <u>that result in an increase of one acre or</u> ~~greater~~ <u>more</u> of impervious surface<u>,</u> the project applicant shall demonstrate <u>post-project runoff rates and durations do not exceed pre-project runoff rates and durations where such increases could accelerate downstream erosion or harm beneficial uses.</u> ~~s,~~ <u>The project applicant may demonstrate compliance with this</u>

Ref. No.	SWDS Section	Required Revision
		requirement by either of the following methods: A. For each discrete drainage area, show runoff from impervious areas produced by the first 0.6 inches of rainfall is either (1) detained and infiltrated or (2) detained and allowed to infiltrate and/or seep away slowly, as occurs in a bioretention facility designed with a minimum 18 inches of soil, a design surface loading rate not exceeding 5 inches/hour, and a total volume (including surface detention, soil interstices, and subsurface storage) equal to the volume of runoff produced by the first 0.6 inches of rainfall on the drainage area tributary to the facility. B. Create computer continuous simulation of runoff in the pre-project and post-project condition using 30 years or more of local hourly rainfall data. Analyze the resulting hourly runoff flows to show peaks and durations of runoff from the development will not increase significantly, or alternatively, show any increases of peaks and durations of flow in waterways downstream of the development will not accelerate stream erosion or harm beneficial uses. ~~pre-project and proposed project hydrologic calculations using approved computer-based hydrologic modeling must show that the proposed project 100-year peak discharge is less than the pre-project 10-year peak discharge unless modeling of the project within the regional drainage system demonstrates no adverse impacts of alternative mitigation measures proposed by the applicant. For instance, if the applicant can show with accepted computer modeling of 5-, 20-, and 100-year design storm events that the project would result in no adverse impact to peak flows or its tributary regional storage areas; then the proposed project conditions would be acceptable.~~
4	Section 1.5.5, *BMP Implementation*	Add the following underlined text and remove the following strikethrough text: The BMPs selected for implementation for new development and significant redevelopment projects shall: 1. Have pollutant prevention and minimize the exposure of potential pollutants to rainwater (source control BMPs) as the first consideration in stormwater design. The applicant's Storm Water Control Plan shall identify each potential source within the project and incorporate corresponding source control BMPs into the project design, including the following: A. Interior floor drains, elevator shaft sump pumps, and

Ref. No.	SWDS Section	Required Revision
		parking garage floor drains will be plumbed to the sanitary sewer. B. Landscaping shall use pest-resistant plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions so as to minimize the need for fertilizers and pesticides. C. Pools, spas, ponds, decorative fountains, and other water features shall have a sanitary sewer cleanout located in an accessible area within 10 feet. D. Restaurants, grocery stores, and other food service operations shall have indoors or in a covered location outdoors, a floor sink or other area for cleaning floor mates, containers, and other equipment, plumbed to the sanitary sewer. E. Refuse areas will be covered, graded, and paved to prevent run-on and bermed to prevent runoff, and any drains within these areas will be plumbed to the sanitary sewer. F. All industrial processes and activities are to be performed indoors, and no processes may drain to the exterior or the storm drain system. G. Outdoor storage areas shall be covered, graded, and bermed to prevent run-on or run-off from the area. Storage of hazardous materials or hazardous wastes must be in compliance with local ordinances and the Hazardous Materials Management Plan for the site. H. Vehicle washing in non-residential areas shall be prohibited on-site unless an area designed for that purpose (that does not drain to the storm drain system) is provided. I. Fueling areas must be paved with Portland cement concrete or other equivalently smooth and impermeable surface and equipped with an overhanging roof or canopy that extends beyond grade breaks around the fueling area. J. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. K. Where fire sprinklers are blown down, a means must be provided to avoid discharge of fire sprinkler test water

Ref. No.	SWDS Section	Required Revision
		to storm drains.
		L. Boiler drain lines, condensate drain lines, rooftop mounted equipment, and drainage sumps may not discharge to storm drains.
		2. Be selected based on the type of developed site use, identified pollutants of concern and other pollutants expected to be on site in concentrations that may pose potential water quality concerns ~~(see BMP Design and Selection Matrices in Section 2.3)~~. A combination of appropriate source control BMPs and Low Impact Development treatment BMPs, when properly designed, are considered to address pollutants of concern.
		3. Be selected for maximum effectiveness in removing pollutants and achieving other principles and objectives of Low Impact Development. Treatment BMPs shall be selected in the following order of preference. If a less-highly-preferred BMP is used, the applicant's Storm Water Control Plan must document the infeasibility of all more-highly-preferred BMPs:
		A. Bioretention facilities designed with a minimum 18 inches of soil and a design surface loading rate not exceeding 5 inches per hour and fed by gravity.
		B. Capture of the design flow in a vault or sump and pumping to bioretention facilities.
		C. A sand or media filter with a maximum design surface loading rate of 5 inches per hour and a minimum media depth of 18 inches. The sand surface must be made accessible for periodic inspection and maintenance (for example, via a removable grating).
		D. A higher-rate surface biofilter, such as a tree-pit-style unit. The grading and drainage design should minimize the area draining to each unit and maximize the number of discrete drainage areas and units.
		E. A higher-rate vault-based filtration unit, such as those using cartridge filters.
		~~3. Manage stormwater treatment and volume to the MEP. All areas of the site to which these SWDS apply shall be treated using the IMPs presented in Section 3: of these standards. Unless otherwise shown to be impracticable and alternatives are approved by the City Engineer, IMPs shall designed to treat runoff from all site drainage areas to which these SWDS~~

Ref. No.	SWDS Section	Required Revision
		apply using the LID techniques. The Regional Board has determined that use of LID meets the MEP criteria for stormwater management. 4. Be designed and maintained with an engineered soil mix with minimum infiltration rate of 5.0 inches per hour and be engineered to accommodate overflow during larger storm events (e.g., storm events exceeding the design criteria for flow and volume-based BMPs discussed above). Refer to Section 4.3.5 for detailed bioretention system design criteria, including engineered soil mix specifications.

S:\Shared\Stormwater\Stormwater   Facilities\Monterey   Co\Municipal\Salinas   Phase   I Permit\Development   Standards\Board   Approval,   Sept 2008\Attch5,DRAFTTableofRequiredRevisionstoDevelopmentStandards.doc