Significant Changes to the Storm Water BMP Guidance Manual			
Category	**Description**	**Current Program Requirement**	**Proposed Program Requirement**
Thresholds	Tier threshold consistency	Thresholds vary by land use, parcel location, whether Planning Commission review is required or not.	Thresholds are the same for all land uses, parcel locations, and whether Planning Commission review is required or not.
Thresholds	Tier 1 threshold	Tier 1 threshold: 0 sq. ft. new/replaced impervious area for most projects and 1-499 for other projects.	Tier 1 threshold: projects proposing 1-499 sq. ft. new/replaced impervious area.
Thresholds	Tier 2 threshold	Tier 2 threshold: 1-499 sq. ft. new/replaced impervious area for most projects and 500-3,999 sq. ft. for other projects.	Tier 2 threshold: projects proposing 500-1,999 sq. ft. new/replaced impervious area.
Thresholds	Tier 3 threshold	Tier 3 threshold: 500+ ft. new/replaced impervious area for most projects and 4,000 for other projects.	Tier 3 threshold: projects proposing 2,000-14,999 sq. ft. new/replaced impervious area.
Thresholds	Tier 4 threshold	N/A	Tier 4 threshold: projects proposing 15,000+ sq. ft. new/replaced impervious area.
Requirements	Requirements for Tier 1 projects	No requirements - installation of BMPs is voluntary.	Tier 1 projects must install at least one Basic BMP (non-volumetric).
Requirements	Requirements for Tier 2 projects	Tier 2 projects must install at least one Basic BMP (non-volumetric).	Tier 2 projects are required to install BMPs that will to capture and treat an area and volume of runoff equivalent to the total area and runoff volume of the new and/or replaced impervious area (between 500 and 1,999 square feet). The treated area is not required to be the new/redeveloped impervious area – another impervious location on the project site may be selected for treatment.
Requirements	Requirements for Tier 3 projects	Tier 3 projects are required to identify and demonstrate the use of appropriate site design, basic BMPs, and/or storm water runoff BMPs to meet the City's storm water runoff requirements (i.e., pollutant treatment, runoff volume, and peak discharge rates) for the entire project site.	Tier 3 projects are required to identify and demonstrate the use of appropriate site design, basic BMPs, and/or storm water runoff BMPs to meet the City's storm water runoff requirements (i.e., pollutant treatment, runoff volume, and peak discharge rates) for the entire project site. However, five percent (5%) of the impervious area on each parcel is exempt from the Tier 3 treatment requirement.
Requirements	Requirements for Tier 4 projects	N/A	These projects must retain/prevent offsite discharge from all storm events up to and including the 95th percentile 24-hour rainfall event, which is currently 2.4" for Santa Barbara. Projects are required to retain the 1.2", 24-hour rainfall event for all replaced impervious area and the 2.4", 24-hour rainfall event for all new impervious areas. In addition, compliance must be achieved through optimizing infiltration. Compliance for retention of the remaining volume must be achieved via storage, rainwater harvesting and/or evapotranspiration. When Tier 4 retention requirements are not feasible due to site constraints, offsite compliance within the same watershed as the proposed development is allowed.
Requirements	Exemptions list	Refer to Appendix J in the Guidance Manual.	Refer to Appendix J in the Guidance Manual. Many changes made to this list and exemptions reordered.
Requirements	Infiltration of storm water	Required for Tier 3 projects proposing a net increase in impervious area.	Infiltration is required for Tiers 2, 3, and 4 unless it is not feasible due to contamination, high ground water, soils with insufficient infiltration rates, slopes, or other safety concern identified in writing by a licensed geotechnical engineer. If the site is determined to be inappropriate for infiltration by the geotechnical engineer, a supporting letter and soils report (including infiltration testing results) must be provided, and non-infiltration BMPs shall be used to meet storm water requirements.
Requirements	Infiltration testing locations	Encourage testing where BMPs are proposed.	Require testing where BMPs are proposed for Tier 3 and Tier 4 projects.
Requirements	Infiltration testing rate assumption	Not included in Guidance Manual.	If the simple infiltration test described in Chapter 2 was successful, a design infiltration rate of 0.05 inches per hour may be assumed for sizing Tier 2 BMPs. In addition, for Tier 3 projects proposing a net reduction in impervious area that choose not to perform infiltration testing described in Chapter 4, a design infiltration rate of 0.05 inches per hour may be assumed for sizing Tier 3 BMPs.
Requirements	Percolation testing	Current policy does not allow percolation testing.	Guidance Manual expressly allows percolation testing for Tier 2 projects, and prohibits percolation testing for Tier 3 and Tier 4 projects. Percolation testing measures the downward progression and the lateral progression of water through the soil (i.e., the bottom surface area and the sidewalls), while an infiltration rate measures the speed of water progressing downward into the soil (i.e., only the horizontal surface area)
Requirements	Types of professionals acceptable for demonstrating compliance	For some Tier 3 single-family residential projects, an architect or other design professional may produce the analysis, dependent on City staff approval (i.e., a licensed Civil Engineer is not required).	For Tier 2, Tier 3, and Tier 4 projects, hiring a Civil Engineer to demonstrate compliance with the requirements is recommended. However, an architect or other design professional may produce the analysis.
Requirements	Amount of impervious area required to be tributary to proposed storm water treatment BMPs for Tier 3 projects	For Tier 3 projects, all impervious area on the entire parcel must be tributary to proposed BMPs.	For Tier 3 projects, 95% of impervious area on the entire project site (i.e., parcel) must be tributary to proposed BMPs. Five percent of all impervious area is exempt (i.e., not required to be tributary to storm water treatment BMPs).

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Category	**Description**	**Current Program Requirement**	**Proposed Program Requirement**
Requirements	Calculating the volume reduction requirement for Tier 3 and Tier 4	Refer to Appendix C in the Guidance Manual.	For Tier 3 projects: • To calculate the volume difference between the pre- and post-development conditions for the 25-year, 24-hour storm event, subtract the calculated pre-development volume from the calculated post-development volume. • To calculate the volume generated from a one-inch, 24 hour storm event, from the entire project site, estimate 0.623 gallons per sq. ft. of impervious area for all impervious area within the project site. Determine which volume is the larger of the two methods. The larger volume is the design volume reduction, that shall be retained on-site. Refer to Appendix C in the Guidance Manual. For Tier 4 projects: • To calculate the volume generated from a 2.4-inch, 24 hour storm event, from the entire project site, estimate 0.75 gallons per sq. ft. for all replaced impervious area on site, and estimate 1.5 gallons per sq. ft. for all new impervious areas within the project site. Then add the two totals together to determine the design volume reduction that shall be retained on site.
Requirements	Calculating the treatment volume for infiltration BMPs	Refer to Appendix C in the Guidance Manual.	To calculate the volume generated from a one-inch, 24 hour storm event, from the entire project site, estimate 0.623 gallons per sq. ft. of impervious area for all impervious area within the project site.
Requirements	BMP sizing worksheets	Refer to Appendix D in the Guidance Manual.	Bioretention, sand filter, infiltration BMP, and permeable pavement worksheets received significant updates. New worksheets include: bioinfiltration and biofiltration. Tier 4 sizing requirement added to retention BMP worksheets.
Requirements	Impervious area acceptable treatment methods	BMPs described in Chapter 5 and Chapter 6.	Additional option added. For Tier 2 projects, providing natural/vegetated/mulched treatment area totaling at least 25% of tributary impervious surface area is acceptable. Runoff must be able to "access" the entire treatment area to ensure maximum infiltration. The proposed treatment area must have a slope less than 7%, and be at least 18" wide. For Tier 3 and Tier 4 projects, this method may be used for impervious walkways (up to a maximum of 6' wide) only. Impervious areas meeting these requirements will be considered treated but must be counted as impervious area for Tier threshold determination.
Requirements	Maintain existing flow patterns	Not included in Guidance Manual.	Projects must maintain the existing flow patterns in order to avoid concentration of storm water flow to adjacent private parcels.
Requirements	Runoff tributary to BMPs proposed to meet the volume reduction and peak runoff discharge rate requirements.	Not included in Guidance Manual.	Only storm water from impervious surfaces tributary to storm water runoff BMPs may be counted toward meeting the volume reduction and peak runoff discharge rate requirements (i.e., tributary runoff from landscaping and other permeable surfaces will not satisfy volume reduction and peak runoff discharge rate requirements).
Requirements	Bioretention	Minimum ponding depth not specified, gravel layer optional, and underdrain locations not clearly identified.	Minimum ponding depth specified as 3 inches (6 inches preferred), 1 foot deep gravel layer required, and underdrains, if allowed, must be placed between the soil and gravel layer.
Requirements	Vegetated swale	Minimum length and residence time stated as 100 feet or at least 10 minutes of residence time, and gravel layer optional.	Minimum length and residence time stated as 100 ft. and at least 10 minutes residence time, and a 6 inch gravel layer is required.
Requirements	Infiltration BMP - dry well	Maximum of 10 feet deep.	Maximum depth removed.
Requirements	Cisterns	Pre-treatment is not addressed. The size required varies based on precipitation and usage. Due to the intricacies involved in considering a variable storage capacity, cisterns may only be sized to meet the volume reduction requirement using a continuous simulation model with a long-term precipitation record.	Pre-treatment for sediment and debris is required. Also, cisterns must capture the volume required per Appendix C calculations.
Requirements	Planter box	Minimum ponding depth not specified, gravel layer optional, and underdrain locations not addressed.	Minimum ponding depth specified as 3 inches (6 inches preferred), 1 foot deep gravel layer required, and underdrains, if allowed, must be placed between the soil and gravel layer.
Requirements	Green roofs	Soil depth range 2-6 inches and gravel drainage layer optional. Considered permeable.	6 inch soil depth minimum and required 2 inch gravel layer. Green roof area is not considered pervious since there is no infiltration (i.e, no connection to the soil) - rather they are considered self-treating with no additional treatment required. However, if the applicant can demonstrate that the green roof has sufficient capacity to retain the design storm volume (i.e, 1"/24 hrs.), the area of the green roof will be considered permeable.

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Category	**Description**	**Current Program Requirement**	**Proposed Program Requirement**
Requirements	Proprietary devices	Proprietary devices are required to be selected to have high or very high treatment effectiveness for the primary pollutants of concern, performance report from independent third party not required, and antimicrobial coatings are not addressed. Sizing is based on information from manufacturers.	Proprietary devices must treat for all pollutants of concern (sediment, petroleum hydrocarbons, nutrients, metals, bacteria, and pesticides), and they may not contain antimicrobial products or coatings. In addition, performance shall be demonstrated with certification by established stormwater technology assessment programs (Washington State Department of Ecology's Technology Assessment Protocol – Ecology (TAPE) Program and Rhode Island Department of Environmental Management Technology Assessment Program (TAP)) or additional third-party reviewed testing if products do not have both certifications. Also, sizing is based on worksheets provided in the Guidance Manual.
Requirements	Permeable pavement	Guidance Manual does not address filter fabric, impermeable liners, minimum gravel depth below pavers, maximum ratio of impervious flatwork tributary to permeable pavement BMP, pretreatment, underdrains for porous asphalt, underdrain location related to volume reduction assumption, and joint sizing requirements.	Filter fabric and impermeable liners are not allowed on the bottom of infiltration BMPs; gravel depth below permeable pavement is required as 2 inches minimum for walkways and patios and 12 inches for vehicular areas; minimum pretreatment is required for all runoff from all impervious flatwork areas and must be evenly distributed across the permeable pavement; underdrains are not allowed for porous asphalt; volume reduction through infiltration is assumed for elevated underdrains only for the area between the invert of the underdrain and the subgrade; and joint sizing requirements. Additional construction considerations are also included: • For interlocking permeable pavers that will support vehicles, the selected product must be designed for permeable installations (i.e., no conventional pavers installed with spacers). • For interlocking permeable pavers that will support vehicles, the joint width between the pavers must be at least 3/8", unless the pavers themselves are proven to be sufficiently permeable to meet all storm water requirements. • The subbase ASTM #2 stone layer shall be compacted in 4-6" lifts. This is an ICPI specification to prevent shifting and settling. • All base material shall be specified as washed, open graded (no sand or soil), crushed (angular) aggregate. • The compaction percentage of the subgrade/native soil shall be determined by the project Engineer (typically this is around 90% - up to a maximum of 95%).
Definition	Impervious Surface definition	Decomposed granite not included.	Decomposed granite included.
Definition	Maintenance of Paving definition	In-kind material not explained. Subgrade disturbance not addressed.	Applies to work on a parcel (see new definition). Includes emergency repair or reconstruction of a road or parking lot damaged by natural or man-made disasters. In-kind material clarified - resurfacing with different, but similar, types of paving material is allowed. Note that work involving disturbance to the subgrade (e.g., grading or compaction) does not qualify as maintenance of paving. Clarification added stating that it is intented for maintenance and repair only - not redesign and reconstruction. Also, truncated dome panels are now included in the definition.
Definition	New Development definition	Applies to work on a lot that requires a building permit.	Applies to work on a parcel (see new definition).
Definition	Parcel definition	Not included in Guidance Manual.	A lot or parcel of developed or undeveloped land, excluding abutting public right-of-way.
Definition	Pollutants of Concern definition	Selected BMPs must treat storm water for pollutants based on land use and designated Clean Water Act 303(d) listings of local water bodies.	Selected BMPs must provide treatment for trash, nutrients, bacteria, metals, sediment, hydrocarbons, and pesticides.
Definition	Predevelopment definition	The existing land use condition prior to the proposed development activity.	The existing land use condition prior to the proposed development activity or the condition of a property when it was purchased, whichever is more recent.
Definition	Project Site definition	Large parcels not addressed.	Definition modified to clarify case-by-case basis and include parcels larger than 2 acres - Project Site: For new development or redevelopment on private parcels less than 2 acres, the project site is determined by the boundaries of the parcel. For new development or redevelopment on public property, privately owned parcels larger than 2 acres, and public improvements, the project site is determined on a case-by-case basis considering the following:land use, project size, disturbed area, and proposed new/redeveloped impervious area.
Definition	Public Facility definition	Included in Guidance Manual.	Definition removed since not referenced in Manual.

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Category	**Description**	**Current Program Requirement**	**Proposed Program Requirement**
Definition	Public Improvement definition	Not included in Guidance Manual.	Public improvements include: • new and reconstructed streets, roadways, curbs, gutters, sidewalks, parkways, medians, bicycle paths, drainage facilities, and similar improvements in the public right of way; • addition of travel lanes, curbs, gutters, parkways, bicycle paths, or sidewalks; widening or extension of impermeable area of a public right of way; and • bridge replacement projects. Public improvements do not include work in the public right of way: • to construct, maintain, repair, or replace a subsurface pipeline, conduit, wire, or similar utility facility and like-kind replacement of the impervious surface; or • to maintain and repair roadways, curbs, gutters, sidewalks, parkways, medians, bicycle paths, drainage facilities, and similar improvements, including reconstruction as part of maintenance and
Definition	Redevelopment definition	Applies to work on a lot that requires a building permit.	Applies to work on a parcel (see new definition).
Definition	Reroofing definition	Not included in Guidance Manual.	Definition added to Appendix A - Reroofing: Repair and/or maintenance of existing framing, decking, flashing, underlayment, and roofing material (e.g., shingles, tiles, metal). Increased roof area, and/or changes to the pitch or design of the roof are not considered reroofing.
Clarification	"Piecemealing" of projects to avoid storm water requirements	Consistent with Community Development policy. Impervious area is cumulative for two years after certificate of occupancy to prevent "piecemealing" of projects to avoid storm water requirements.	Guidance Manual expressly states proposed impervious area is cumulative for two years after certificate of occupancy to prevent “piecemealing” of projects to avoid storm water requirements.
Clarification	Removed impervious area may not be subtracted from proposed new/replaced impervious area for Tier determination.	Current policy mirrors the proposed change, but details are not included in the Guidance Manual.	When determining the square footage for a project Tier determination, removed impervious area will not be subtracted from new/replaced impervious area (not a “net” amount).
Clarification	BMPs installed on adjacent parcels	Current policy mirrors the proposed change, but details are not included in the Guidance Manual.	BMPs should be installed on the same parcel where the proposed work requiring storm water requirement compliance is occurring. If an applicant proposes installing BMPs on an adjacent property through a storm water easement and/or lot-tie agreement, the easement and/or lot-tie agreement must be approved and signed by all relevant parties (including the City), notarized, recorded at the County, and be reproduced on the plan sheets before a building permit can be issued.
Clarification	Appeal of waiver denial	Not included in Guidance Manual.	If a request for a waiver is denied, the applicant may appeal the denial to the Community Development Director.
Clarification	Storm water/hydrology report template	Not included in Guidance Manual.	Refer to Appendix B in the Guidance Manual. This template provided to applicants for guidance regarding what should be included in a storm water report for a Tier 3 or Tier 4 project.
Clarification	Volume reduction requirement - error correction	Currently, there is an error in the Guidance Manual with conflicting volume reduction requirements in Appendix C. In one location it requires calculation of: • The volume difference between the pre- and post-conditions generated from a one-inch, 24-hr storm event. In another location it requires calculation of: • The volume generated from a one-inch, 24-hour storm event, from all impervious area on the entire project site.	Retain on-site the larger of the following two volumes from the entire project site: • The volume difference between the pre- and post-development conditions for the 25-year, 24-hour design storm (for redevelopment, the pre-condition is the pre-development condition). • The volume generated from a one-inch, 24-hour storm event, from all impervious area on the entire project site.
Clarification	Roofs without gutters	Allowed for compliance with Tier 2.	Roofs without gutters included as a Basic BMP option (where appropriate) for compliance with Tier 1 and Tier 2 requirements. Also, see the "Impervious area acceptable treatment methods" section.
Clarification	Minimum areas for contained planter, removed impervious area, and soil amendments to comply with Tier 1	No minimum area.	To comply with Tier 1, at least 12 sq. ft. of contained planter area, removed impervious area, or amended soil area is required.
Miscellaneous	Site Conditions Maps	Refer to Appendix B in the Guidance Manual.	Removed. The maps are no longer useful or relevant.
Miscellaneous	Local Plant List	Refer to Appendix G in the Guidance Manual.	Plants list updated to comply with the City's Landscape Design Standards.
Miscellaneous	Waiver Form	Not included in Guidance Manual.	Waiver form included in Appendix L of the Guidance Manual.

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Category	**Description**	**Current Program Requirement**	**Proposed Program Requirement**
Miscellaneous	Maintenance statement	Not included in Guidance Manual.	Example statement included in Appendix I of the Guidance Manual: The proposed storm water BMPs, which include _____, _____, and _____, shall be maintained as described in Santa Barbara Municipal Code 22.87.030 in accordance with their approved specifications. Owner (Name and Title): _____ Signature: _____ Date: _____
Miscellaneous	BMP Selection Matrix - Pollutants of concern - Chapter 6	Table 6-1 describes treatment effectiveness for pollutants of concern from very low to very high (five point scale) for all BMP types included in Chapter 6.	Removed.
Miscellaneous	BMP Selection Matrix - Site Suitability - Chapter 6	Table 6-2 describes site suitability considerations and applicability of special design districts for all BMP types included in Chapter 6.	Now Table 6-1. Removed hydrologic soil group and applicability of special design district columns.