

Redevelopment projects may have special considerations with regards to the total area required to be treated. Refer to Section 1.7.

1.4.2 Additional PDP Definitions

The County has not categorically identified additional PDP types or expanded any PDP definition beyond that described above.

1.4.3 Local PDP Exemptions or Alternative PDP Requirements

The MS4 Permit requires that more specific runoff treatment controls and hydromodification controls be incorporated into Priority Development Projects. These requirements only pertain to projects in the areas west of the Pacific/Salton Sea Divide. Projects located east of the Pacific/Salton Sea Divide are not considered Priority Development Projects.

As allowed by MS4 Permit Section E.3.b.(3) and WPO Section 67.811(b)(2), the County may exempt certain public or private projects from being defined as PDPs, or to apply alternative PDP requirements as follows:

- (A) New or retrofit paved sidewalks, bicycle lanes, or trails that meet the following criteria:
 - i. Designed and constructed to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas; OR
 - ii. Designed and constructed to be hydraulically disconnected from paved streets or roads [i.e., runoff from the new improvement does not drain directly onto paved streets or roads]; OR
 - iii. Designed and constructed with permeable pavements or surfaces in accordance with USEPA Green Streets Guidance (USEPA, 2008).
- (B) Retrofitting or redevelopment of existing paved alleys, streets or roads that are designed and constructed in accordance with the USEPA Green Streets Guidance (USEPA, 2008)

Additional clarification of the qualifying PDP exempt project elements and/or requirements is provided below.

- The re-alignment of existing paved roadways is permitted to comply with the green street performance standards, as deemed appropriate by the County.

Appendix K (Guidance on Green Infrastructure) provides guidance for implementing green street and other green infrastructure project features and types. Regardless of whether a project qualifies to utilize either of the exemption types above, applicants are encouraged to utilize Appendix K as a basis for designing and constructing low impact design and sustainable infrastructure features for their projects.

Both private and public projects may apply the Green Street Performance Standard (Appendix K) to portions of the project proposing Green Street Surfaces. If a project exclusively proposes Green Street Surfaces, then the entire project is a Green Street PDP Exempt Project. If a project proposes a mix of Green Street Surfaces and Non-Green Street Surfaces, then the project may apply 2 different performance standards to the project as described below.

Chapter 1: Policies and Procedural Requirements

- **Green Street Surfaces:** The following project surfaces are considered Green Street Surfaces and are eligible to use the Green Street Performance Standard.
 - Redeveloped streets, roads, alleys, driveways, sidewalks, bike lanes, and trails.
 - New sidewalks, bike lanes, and trails.
 - New, existing, or redeveloped DG areas, natural areas, landscaped slopes, brow ditches, and walls adjacent to the proposed Green Street improvements.
- **Non-Green Street Surfaces:** The following project surfaces are not considered Green Street Surfaces and must satisfy the PDP Performance Standard outlined in Chapter 2.
 - New streets, roads, driveways, and alleys.
 - New or redeveloped areas not identified as Green Street Surfaces (e.g. buildings, roofs, etc.)

Note: Additional requirements apply for comingling of flows discharging to a Green Street BMP. Refer to Section 7.3.4 for additional guidance.

An exemption or alternative to PDP requirements based on the above criteria may, at the County's discretion, modify the requirements for structural pollutant control and hydromodification control BMPs described in Chapters 5 and 6 of this Manual. However, projects are still minimally subject to applicable source control and site design requirements. See also Chapter 2, Table 2-1 for a description of applicable requirements and performance standards.

1.5 Determining Applicable Storm Water Management Requirements

MS4 Permit Provision E.3.c.(1)

Depending on project type and receiving water, different storm water management requirements apply.

New development or redevelopment projects that are not classified as PDPs or that are PDP exempt, based on Section 1.4, are called "Standard Projects." Source control and site design requirements apply to all projects including Standard Projects and PDPs. Additional structural BMP requirements (i.e. pollutant control and hydromodification management) apply generally to all PDPs, except for those that have been specifically exempted from hydromodification management requirements per WPO Section 67.811(b)(5)(B). Also note that projects that consist solely of redeveloping or retrofitting existing paved alleys, streets, and roads are exempted from PDP status under WPO Section 67.811(b)(2)(B). These projects must comply with the structural pollutant control, but not the hydromodification management, requirements of the MS4 Permit. The applicability of different storm water management requirements by project type, including references to applicable sections of this Manual, is summarized in Table 1-3.

TABLE 7-2. Determination of Appropriate Maintenance Mechanism(s)

Increased risk, complexity, cost or other maintenance factors				
(Private Responsibility)			(Public Responsibility)	
	Category One	Category Two	Category Three	Category Four
Summary	Privately owned, privately maintained. Simple maintenance. See Section 7.3.1	Privately owned, privately maintained. More complex ownership & maintenance. See Section 7.3.2	Privately owned, publicly maintained. See Section 7.3.3	Publicly owned and usually publicly maintained. See Section 7.3.4
Importance of Maintenance	Minimal maintenance; inherent in BMP or property stewardship. Annual verification of maintenance will be required minimally.	More significant maintenance than first category. Need to make sure private owners maintain. County ability to step in & perform maintenance	Warrants County to assume responsibility, with funding related to project	County responsibility for maintenance
Typical BMPs	Easily maintained, such as usual landscaping on single lot.	May be larger drainage area or more complex maintenance than first category		Any County owned and maintained structural BMP.
Mechanisms	<ol style="list-style-type: none"> 1. Watershed Protection Ordinance¹⁰ requirement [section 67.812(a)&(b)], with code enforcement 2. Nuisance abatement with costs charged back to property owner 3. Condition in ongoing permit such as a Major Use Permit (if project has MUP) 4. Notice to new purchasers [67.812(e)] 5. Subdivision public report “white papers” to include notice of maintenance responsibility 		<ol style="list-style-type: none"> 1. Easement dedication to County 2. Inclusion into a watershed specific Community Facility District (CFD) or individual formation of benefit area/CFD or assessment district 3. County maintenance documentation 	<ol style="list-style-type: none"> 1. Land owned or dedicated to County 2. County maintenance documentation
	6. Recorded Maintenance Notification	6. Recorded Maintenance Agreement with covenant binding on successors		
Funding Source(s)	None necessary	None necessary	Start-up interim: Developer fee covering 24 months of costs Permanent: FCD Tax Assessment per FCD Act Sec 105-17.5 or District Assessment or Other	Funding source varies but must be in perpetuity. For example, gas tax for BMPs that treat road ROW, Transnet for CIP projects, Special funding (such as, inclusion into a watershed specific Community Facility District (CFD) or individual formation of benefit area/CFD or assessment district) or General funding for others.

- (D) Environmental documents showing that the facility can be adequately maintained per facility requirements;
- (E) Copies of any Resource agency permits associated with the private development; and
- (F) A permanent funding mechanism to ensure the perpetual maintenance of the facility.

Structural BMPs that are typical of this Category would be ones the County assumes responsibility for maintenance because there could be a large regional impact if there is a failure, and the maintenance is more complex (e.g., requires heavy equipment and specific knowledge for proper maintenance).

Responsibility for maintenance remains with the developer until the County has officially accepted it and signed off the Certificate of Completion letter.

Category 3 Mechanisms to Assure Maintenance:

- (A) Dedication of BMP to County for maintenance: The developer would be required to dedicate to the County all necessary easements for maintenance, including access, over the property on which the BMP is located, unless the County already owns the property, as in the case of the County Road Right-Of-Way. This could be an immediate dedication, or for cases where the County would not want to assume responsibility for the facility for some time (e.g., until after construction is completed), then an Irrevocable Offer of Dedication (IOD) could be used instead.
- (B) County Maintenance Documentation: Where the County has assumed maintenance responsibility, internal County program documentation would memorialize the required maintenance.

Funding:

Under the authority of the County the primary funding mechanism will normally be a special assessment by inclusion into a watershed-specific Community Facility District (CFD); through the formation of an individual CFD or through special tax via an Assessment District. The assessment will be collected with property tax.

Because this primary funding mechanism may require substantial amount of time to establish and collect assessments, a developer deposit is required to cover the initial maintenance period of 2 years.

7.3.4 Category Four

Category 4 Structural BMPs are on County property and are typically maintained by the County. This includes proposed BMPs that are recognized from the beginning as deserving of public ownership and maintenance (e.g., serving a public need and benefit larger in scope than an individual development project or are on County-owned roads). In addition, BMP's in publicly initiated projects are included under this category. Category 4 Mechanisms to Assure Maintenance:

1. Dedication of BMP to County: The developer would be required to dedicate the BMP (and the property on which it is located and any necessary access) to the County. This could be an immediate dedication, or for cases where the County would not want to assume responsibility for the facility for some time (e.g., until after construction is completed), then an IOD could be used instead.

2. County Maintenance Documentation: Internal County or Flood Control District maintenance program documentation, such as a Maintenance Acceptance Memorandum would memorialize the required maintenance and illustrate the Department's concurrence with accepting the responsibility to maintain. Maintenance responsibility does not transfer until the project is complete and a Certificate of Completion letter signed.
3. Encroachment, Maintenance and Removal Agreement (EMRA): If Structural BMPs are constructed on County property, the responsible County department (generally DPW Transportation) may elect to enter an EMRA that would permit the developer/owner to maintain the BMP. Some requirements that will be considered include: the ultimate owner is already involved in the development process and; they have the means to do the maintenance on the County property. It is at the full discretion of the responsible County department if they wish to enter an EMRA. This department will be requiring proof of proper maintenance of the BMP at least annually.

Funding:

The County funds the maintenance of public roadway infrastructure within the County maintained system of streets via the Road Fund which includes revenue from the State Gas Tax. State law prohibits the use of Gas Tax for maintenance of facilities that treat flow from outside the County maintained road network. Given the legal constraints on these funds, private property infrastructure including BMPs designed to treat stormwater flows originating from private property, cannot be maintained by the County's Road Fund. Commingled stormwater flow (from inside and outside of the County maintained road network) for treatment using BMPs within County maintained streets is allowed provided that 1) commingling is necessary given the field conditions, and 2) there is a dedicated permanent funding source established to maintain at least that portion of the associated infrastructure necessary to treat private flows in perpetuity. Funding mechanisms may include the formation of a special district such as a Community Facilities District, an HOA, or other similar mechanism. The maintenance mechanism and any required agreement are subject to review and approval at the discretion of the Director, Department of Public Works. Note, BMPs accommodating commingled flow located within public maintained streets that will be maintained using a perpetual funding source other than the State Gas Tax is exempt from this requirement.

7.3.5 No Maintenance Guarantee Required

Only Significant Site Design BMPs (SSD-BMPs) may not require Category 1, 2 3 or 4 agreements. However, since Significant Site Design BMPs (SSD-BMPs) replace Structural BMPs they need some level of maintenance oversight. Due to their simple design and integrated approach to landscaping, the oversight is less stringent. It is recommended that the Developer use the Notification Letter templates provided in the Development Resources website under the submittals tab.

K.2.1 Green Streets Performance Standard

This section builds on text from Section 1.4.3 providing more detailed guidance on compliance with the performance standard for Green Street PDP Exempt projects (herein referred to as Green Street projects).

Green Street projects must provide stormwater treatment for the volume of runoff associated with the project's net increase in impervious area. Compliance with this standard may be demonstrated at the project-scale, meaning there is no obligation to treat runoff from each discrete segment of new impervious area. Green Street projects are encouraged to achieve compliance through treatment of runoff from any combination of land uses including existing/proposed surfaces, onsite/offsite surfaces, pervious/impervious surfaces. As summarized below, Green Street compliance can be demonstrated through determination of the following 1) Required Treatment Volume, 2) Provided Treatment Volume, and 3) Comparison of Required and Provided Treatment.

Note: When a project has both Green Street and Non-Green Street Surfaces, it is recommended to keep Green Street Surfaces hydraulically separated from Non-Green Street Surfaces to simplify demonstration of satisfying the two different performance standards. If combining of flows is necessary, the applicant must work with the County reviewer to appropriately document compliance. Specific requirements must be coordinated with the County reviewer and may include elements including but not limited to providing multiple models/calculations/exhibits, providing weighted calculations, providing additional narrative, and attending additional meetings.

1) REQUIRED TREATMENT VOLUME

Project proponent must calculate a single water quality runoff volume associated with the net increase in impervious area across the entire project site. This calculation should exclude runoff volumes associated with existing/replaced impervious areas within the project footprint, as treatment is not mandated for these areas. Supporting exhibits delineating new impervious areas, existing/replaced impervious areas, and removed impervious areas must be provided as needed to support this determination.

2) PROVIDED TREATMENT VOLUME

Project proponent must calculate the total volume of stormwater runoff treated through site design elements and/or structural BMPs proposed by the project. Completion of this step requires consideration of all surfaces draining to proposed treatment elements (existing/proposed, onsite/offsite, pervious/impervious areas draining to BMPs).

Project proponent must provide treatment through use of “Conventional” treatment elements where feasible but may also be permitted to use “Alternative” treatment elements upon demonstration of infeasibility.

Appendix K: Guidance on Green Infrastructure

Conventional Treatment Elements: Elements that utilize conventional retention and/or biofiltration designs that are consistent with the County BMPDM¹⁰. Use of these elements may achieve Green Street compliance and are eligible to generate alternative compliance credits if implemented sufficiently. [*Examples: tree wells, dispersion areas, biofiltration basins (lined or unlined), bioretention basins, infiltration basins (vegetated or non-vegetated), pervious pavements without impermeable liners.*]

Alternative Treatment Elements: Elements that provide filtration for anticipated pollutants at medium to high efficacy and provide significant pore storage capacity. Use of these elements may achieve Green Street compliance but are typically not eligible¹¹ to generate alternative compliance credits. [*Examples: vegetated swales, non-vegetated filtration BMPs (sand filters, biofiltration soil media, pervious pavements with impermeable liners and underdrains), detention basins, wet ponds, proprietary filtration devices with significant pore storage capacity.*]

Treatment Elements lacking significant pore storage such as filter fabrics, debris racks, filter baskets, CDS units, hydrodynamic separators or similar devices may not be classified as either of the two categories above.

3) COMPARISON OF REQUIRED AND PROVIDED TREATMENT

Project proponent must demonstrate that the provided treatment volume is greater than or equal to the required treatment volume. This may be demonstrated at the project-scale, meaning there is no obligation to demonstrate treatment for each discrete segment of new impervious area. The pages that follow present a standard calculation template for demonstrating Green Street compliance as well as several calculation examples.

¹⁰ Minimum retention requirements waived for Green Streets.

¹¹ If project proponent desires to bank credits through use of Alternative Treatment Elements, more detailed guidance outlined in the Regional Water Quality Equivalency must be referenced.

Appendix K: Guidance on Green Infrastructure

Table K.2-1 : Green Street Performance Standard Calculations

Item	Value	Description
Required Treatment Volume	1 Land Use of Net Impervious Area	Transportation <i>Per project drawings.</i>
	2 Total Net Impervious Area ¹²	ft ² <i>Per project drawings.</i>
	3 85 th Percentile Rainfall Depth	in. <i>Determine per BMPDM Appendix B.1.</i>
	4 Runoff Coefficient	0.90 <i>Value of 0.90 applies to new impervious areas.</i>
	5 Required Treatment Volume	ft ³ <i>(Line 2 × Line 3 × Line 4) / 12</i>
Provided Treatment Volume	6 Land Use of Treated Area ¹³	<i>Per project drawings.</i>
	7 Land Use Factor ¹⁴	<i>Determine per Note 14 below.</i>
	8 Conventional Treatment Volume ¹⁵	ft ³ <i>Determine per Note 15 below.</i>
	9 Alternative Treatment Volume	<i>Determine per supplemental applicant calculations.</i>
	10 Final Treatment Volume	ft ³ <i>Line 7 × (Line 8 + Line 9)</i>
Result	11 Is Project Green Street Compliant?	<i>Compliant if Line 10 ≥ Line 5. Otherwise, non-compliant.</i>
	12 Optional Credit ¹⁶	<i>(Line 7 × Line 8) – Line 5</i>

¹² The Net Increase in Impervious Area should **not** reflect any work occurring within existing impervious areas.

¹³ Classify drainage area into following land use types (may use more than one) agriculture, commercial, education, industrial, multi-family residential, orchard, rural residential, single family residential, transportation, open space.

¹⁴ If Land Uses from Lines 1 and 6 match, use a value of 1.0. Otherwise, refer to Regional Water Quality Equivalency Guidance for determination of appropriate Land Use Factor.

¹⁵ Conventional Treatment Volume may be determined by subtracting the project’s total “Deficit of Effectively Treated Stormwater” from the project’s total Design Capture Volume. These values can be found in Version 2.0 of the County of San Diego Automated Control Worksheet on Line 48 of the BMP Performance Tab and Line 26 of the DCV Tab respectively.

¹⁶ Optional credit is only applicable to public Green Street projects.

<p>Geomorphic Landscape Unit (GLU)</p>	<p>Classifications that provide an estimate of sediment yield based upon three factors: geology, hillslope, and land cover. GLUs are developed based on the methodology presented in the SCCWRP Technical Report 605 titled “Hydromodification Screening Tools: GIS-Based Catchment Analyses of Potential Changes in Runoff and Sediment Discharge” (SCCWRP, 2010).</p>
<p>Green Street Surfaces</p>	<p>Project surfaces eligible for the Green Street Performance Standard. include redeveloped streets, roads, alleys, driveways, sidewalks, bike lanes, and trails. This also applies to new sidewalks, bike lanes, and trails. Additionally, it covers new, existing, or redeveloped DG areas, natural areas, landscaped slopes, brow ditches, and walls adjacent to the proposed Green Street improvements.</p>
<p>Gross Pollutants</p>	<p>In storm water, generally litter (trash), organic debris (leaves, branches, seeds, twigs, grass clippings), and coarse sediments (inorganic breakdown products from soils, pavement, or building materials).</p>
<p>Harvest and Use BMP</p>	<p>Harvest and use (aka rainwater harvesting) BMPs capture and store storm water runoff for later use. These BMPs are engineered to store a specified volume of water and have no design surface discharge until this volume is exceeded. (See Section 5.3 for illustration and additional information).</p>
<p>Hungry Water</p>	<p>Also known as "sediment-starved" water, "hungry" water refers to channel flow that is hungry for sediment from the channel bed or banks because it currently contains less bed material sediment than it is capable of conveying. The “hungry water” phenomenon occurs when the natural sediment load decreases and the erosive force of the runoff increases as a natural counterbalance, as described by Lane’s Equation.</p>
<p>Hydraulic Head</p>	<p>Energy represented as a difference in elevation, typically as the difference between the inlet and outlet water surface elevation for a BMP.</p>
<p>Hydraulic Residence Time</p>	<p>The length of time between inflow and outflow that runoff remains in a BMP.</p>
<p>Hydrologic Soil Group</p>	<p>Classification of soils by the Natural Resources Conservation Service (NRCS) into A, B, C, and D groups according to infiltration capacity.</p>

Glossary of Key Terms

Non-Green Street Surfaces	Surfaces that are not eligible for the Green Street Performance Standard and must satisfy the PDP Performance Standard. These include new streets, roads, driveways, and alleys. Additionally, new or redeveloped areas not identified as Green Street Surfaces (e.g. buildings, roofs, etc.).
Operation and Maintenance (O&M)	Requirements in the MS4 Permit to inspect structural BMPs and verify the implementation of operational practices and preventative and corrective maintenance in perpetuity.
Pacific/Salton Sea Divide	The highest ridge of land in San Diego County which divides run off that drains west to the Pacific Ocean and run off that drain east to the Salton Sea. Also referred to as the Tecate Ridge. The area to the West is governed by Region 9 Water Quality Control Board and the area to the East is governed by Region 7.
Partial Infiltration	Infiltration of a storm water runoff volume less than the DCV.
Partial Retention	Partial retention category is defined by structural measures that incorporate both infiltration (in the lower treatment zone) and biofiltration (in the upper treatment zone).
PDP (Priority Development Project)	As defined by the MS4 Permit provision E.3.b, land development projects that fall under the planning and building authority of the Copermittee for which the Copermittee must impose specific requirements in addition to those required of Standard Projects. Refer to Section 1.4 to determine if your project is a PDP.
PDPs with only Pollutant Control Requirements	PDPs that need to meet Source Control, Site Design and Pollutant Control Requirements (but are exempt from Hydromodification Management Requirements).
PDPs with Pollutant Control and Hydromodification Management Requirements	PDPs that need to meet Source Control, Site Design, Pollutant Control and Hydromodification Management Requirements.