

Water Quality Management Plan (WQMP)

<Use for Private Development Projects in South Orange County>

Project Name:

Prepared for:

Insert Owner/Developer Name-then TAB.

Insert Address 1 then press ENTER to insert Address 2 or TAB to next field.

Insert City, State, ZIP-then TAB.

Insert Telephone-then TAB.

Prepared by:

Insert Consulting/Engineering Firm Name-then TAB.

Engineer: Insert Name-then TAB.

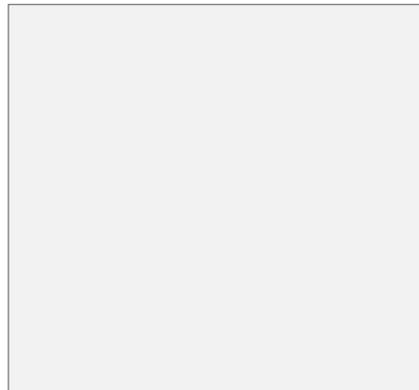
**Registration No. Insert Number-then
TAB.**

Insert Address-then TAB.

Insert City, State, ZIP-then TAB.

Insert Telephone-then TAB

Engineer's Seal



Prepared on:

Insert Date-then TAB.

Project Owner's Certification			
Permit/Application No.		Grading Permit No.	
Tract/Parcel Map No.		Building Permit No.	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract)			

This Water Quality Management Plan (WQMP) has been prepared for Owner/Developer Name by Consulting/Engineering Firm Name. The WQMP is intended to comply with the requirements of the local NPDES Stormwater Program requiring the preparation of the plan.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the current Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the San Diego Region (South Orange County). Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. An appropriate number of approved and signed copies of this document shall be available on the subject site in perpetuity.

Owner:		
Title		
Company		
Address		
Email		
Telephone #		
Signature		Date

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Guidance: Incorporate additional exhibits, reports, worksheets, and calculations, as needed.

Guidance: Highlighted text throughout the template provides guidance for use during WQMP preparation. Delete this guidance prior to submission of WQMP.

Section 1 Discretionary Permit(s) and Water Quality Conditions

Guidance: Refer to Section 2.1 in the Technical Guidance Document (TGD).

Project Information	
Permit/Application No.	Site Address or Tract/Parcel Map No.
Additional Information/ Comments:	
Water Quality Conditions	
Water Quality Conditions from prior approvals or applicable watershed-based plans	<p><i>Guidance: e.g. CEQA mitigation measures, previously approved Conceptual WQMP, Common Plan of development including regional BMPs, etc.</i></p> <p><i>List the conditions verbatim, and discuss any substantial differences between a previous approved Conceptual WQMP and this Final WQMP, if applicable. If regional BMPs apply, describe these here.</i></p> <p><i>Pollutants of concern identified in the Water Quality Improvement Plan do not need to be reiterated here. These are addressed in Section 3.4.</i></p>

Section 2 Project Description

Guidance: Refer to Section 2.2 of the TGD for guidance.

2.1 General Description

Guidance: The table below is intended to provide a brief summary of the project. I should be complemented with additional narrative and/or tables in Section 2.2 and 3.2 to describe the project and the features that influence stormwater management.

Description of Proposed Project				
Site Location	<i>Guidance: Project location, legal address, parcel number, and legal boundaries. Attach an exhibit showing the project location.</i>			
Project Area (ft ²): _____	Number of Dwelling Units: _____		SIC Code: _____	
Narrative Project Description:	<p><i>Guidance: This is intended to be a brief summary. Where more narrative is needed, include additional text, tables, and/or figures below this table and add subsections as appropriate.</i></p> <p><i>Describe the development type, proposed land uses, land cover and site activities, total added or replaced impervious area, design elements, any off-site improvements, etc. Focus on the attributes that make this a priority project (as defined in Section 1.2 of the TGD). Does not need to include pre-development conditions. May include an exhibit showing proposed land uses, conditions, etc., as needed (will be needed in subsequent sections of the template).</i></p>			
Project Area	Pervious		Impervious	
	Area (acres or sq ft)	Percentage	Area (acres or sq ft)	Percentage
Pre-Project Conditions				
Post-Project Conditions				

2.2 Post Development Drainage Characteristics

Guidance: Include a narrative, general description of drainage patterns and modifications due to grading/infrastructure. Describe how runoff will leave, and if applicable, enter the site. Possibly include an exhibit, as needed, depending on complexity of the site. Does not need Drainage Management Area breakdown or detailed drainage maps, etc. in this section. The more detailed drainage plan for the site is included in Section 4.

2.3 Property Ownership/Management

Guidance: Include a narrative describing the ownership of all portions of the site. State whether any infrastructure will transfer to public agencies or if a homeowners or other association will be formed to be responsible for long-term maintenance. Include an exhibit showing locations of different property ownership, as applicable.

Section 3 Site & Watershed Characterization

3.1 Site Conditions

Guidance: Refer to Section 2.3.1 of the TGD for guidance.

3.1.1 Existing Site Conditions

*Guidance: Include a narrative, tables, and exhibit(s) describing the **existing** condition of the site including any development that is currently in place prior to the proposed project. This information should address the following topics:*

- *Is the site developed or undeveloped in the existing condition, and to what extent?*
- *Describe the existing topography and drainage, including:*
 - *Slopes (especially areas with > 15% slope)*
 - *Elevation range*
 - *Terrain type*
 - *Existing drainage patterns*
- *Describe the area and types of any upstream areas draining to the site.*
- *Describe any sensitive environmental features on or near the site:*
 - *E.g. habitat, impaired surface waters, etc.*
- *Describe existing infrastructure on or near the site that will remain in place after the development such as:*
 - *Drainage infrastructure*
 - *Utilities*
 - *Roads*
- *Describe the existing land uses/land cover at the site including areas and imperviousness of each with a summary for the site. In addition to the narrative, include a summary table similar to the one below.*

Existing Land Uses				
Land Use Description	Total Area (acres)	Impervious Area (acres)	Pervious Area (acres)	Imperviousness (%)
Land use 1				
Land use 2				
Total				

3.1.2 Infiltration-Related Characteristics

Guidance: This section describes the factors affecting infiltration feasibility at the site and will be used in Section 4 of the template to categorize DMAs into Full Infiltration, Partial Infiltration, or No Infiltration. It is important that this section characterizes the site in a manner that supports overall site layout and BMP placement intended to maximize volume reduction of stormwater runoff. The narrative regarding development of the site plan and drainage plan (Section 4) should be able to refer to Section 3 to provide support for site layout and drainage planning decisions. Refer to Section 2.3.1.1 through 2.3.1.5 of the TGD for guidance.

Attach applicable geotechnical reports and/or other materials to support the following subsections.

3.1.2.1 Hydrogeologic Conditions

Guidance: Provide an exhibit and/or description of groundwater elevations at the site, areas of groundwater contamination and plumes, groundwater/surface water interactions, aquifers, applicable Groundwater Management Agency boundaries, and existing wells, as applicable. In addition, describe each applicable condition in a narrative, here. Reference surveys and studies of groundwater elevation, plume extents, etc., as needed, to determine the factors that could affect the feasibility of infiltration at the site. If the site lies within a Groundwater Management Agency Boundary, it is strongly encouraged to consult with agency as soon as possible in the project (See TGD Appendix C).

3.1.2.2 Soil and Geologic Infiltration Characteristics

Guidance: Level of detail needed in this section is dependent on if this is a Conceptual or Final WQMP.

Conceptual WQMP: Provide an exhibit of soil types, hydrologic soil groups, and any infiltration tests or boring log locations needed to support infiltration feasibility decisions. In addition, provide a narrative description of each of these as well as the depth to bedrock and estimated infiltration rates based on the soil type and infiltration rates. Purpose of the narrative/map is to determine how the soils and geologic conditions will affect the feasibility of infiltration of stormwater at the site.

Include an exhibit that identifies regions within the following estimated or measured infiltration rate categories based on the site investigation:

- Infiltration rate > 4 inch per hour – these areas have the highest potential for full infiltration BMPs.*
- Infiltration rate 0.6 to 4 inches per hour – these areas may support full infiltration BMPs, but conditions may be marginal and require more thorough analysis or contingency planning as part of BMP selection.*
- Infiltration rate 0.1 to 0.6 inches per hour – these areas may support incidental infiltration, but not likely full infiltration.*
- Infiltration rate less than 0.1 inches per hour – these areas likely do not support appreciable levels of incidental infiltration.*

Final WQMP: If Full Infiltration BMPs will be used, this section must include results of infiltration testing performed at the proposed BMP location(s). Attach the results of the tests.

3.1.2.3 Geotechnical Conditions

Guidance: Include an exhibit showing locations of collapsible soils, expansive soils, steep slopes, and liquefaction potential, as applicable. Provide a narrative description of each of these, and attach geotechnical reports, as needed, focused on if any geotechnical constraints to infiltration exist, and where, on the site.

3.1.2.4 Summary of Infiltration Opportunities and Constraints of Existing Site

Guidance: Summarize the infiltration opportunities and constraints based on the subsections above, including how these factors overlay one another. This should be prior to overlaying this information with proposed site development activities.

3.2 Proposed Site Development Activities

Guidance: Refer to Section 2.3.2 of the TGD for guidance. Include exhibit(s) showing the proposed development showing land uses, topography, drainage features, landscaping areas, grading/cut/fill,, etc. In addition, provide a supporting narrative describing the site development.

3.2.1 Overview of Site Development Activities

Guidance: Provide an overview of the type of development proposed, how the overall characteristics of the site will be changed with development, how development will interface with adjacent parcels, etc.

3.2.2 Project Attributes Influencing Stormwater Management

The intent of this section is to detail the attributes of the project that influence stormwater management decisions, such as site design BMPs, source control BMPs, infiltration feasibility and BMP selection, etc. Include, at least, the following:

- *Potential pollutant-generating activities at the site including*
 - *SICs*
 - *Materials/products to be used on site*
 - *Wastes to be generated*
 - *Delivery areas and loading docks*
 - *Vehicle maintenance or cleaning areas*
 - *Fueling areas*

- *What buildings will be on the site and how the buildings will be used*
- *Proposed landscaping*
- *How existing drainage patterns will be preserved/ how they will be affected by grading, cut, and fill*
- *Proposed slopes*
- *Locations of run-on and run-off from the site*
- *Describe how any existing environmentally sensitive features will be preserved*
- *Describe the proposed land uses/land cover at the site including areas and imperviousness of each with a summary for the site. In addition to the narrative, include a summary table similar to the one below.*

Proposed Land Uses				
Land Use Description	Total Area (acres)	Impervious Area (acres)	Pervious Area (acres)	Imperviousness (%)
<i>Land use 1</i>				
<i>Land use 2</i>				
Total				

3.2.3 Effects on Infiltration and Harvest and Use Feasibility

Guidance: Summarize how the proposed site development activities influence the infiltration opportunities and constraints identified in Section 3.1.2.4. How do factors such as cut/fill, traffic circulation, building placement constraints, underground infrastructure, emergency vehicle access, etc. influence locations where infiltration could be feasible. How do project attributes influence potential feasibility of harvest and use BMPs?

3.3 Receiving Waterbodies

Guidance: Refer to Section 2.3.3 of the TGD for guidance. Include a map showing how the run-off from the site will be conveyed including connections to existing storm drains and discharges to receiving waterbodies. Include a narrative describing all downstream waterbodies to and including the ocean. List associated 303(d) listings and TMDLs for all downstream waterbodies. Determine if the project discharges directly to an environmentally sensitive area (See Section 2.3.4.4 of the TGD).

3.4 Stormwater Pollutants or Conditions of Concern

Guidance: Refer to Section 2.3.4 of the TGD for guidance on expected pollutants of concern for different land uses, activities, and project types and determining Primary Pollutants of Concern and other Pollutants of Concern. If any land use in the DMA is expected to generate these pollutants, then it is an expected pollutant from the DMA.

Pollutants or Conditions of Concern				
Pollutant	Expected from Proposed Land Uses/ Activities (Yes or No)	Receiving Waterbody Impaired (Yes or No)	Priority Pollutant from WQIP or other Water Quality Condition? (Yes or No)	Pollutant of Concern (Primary, Other, or No)
Suspended-Solids				
Nutrients				
Heavy Metals				
Bacteria/Virus/Pathogens			Yes	Primary
Pesticides				
Oil and Grease				
Toxic Organic Compounds				
Trash and Debris				
Dry Weather Runoff			Yes	Primary

If the project has multiple DMAs, and they drain to different receiving waterbodies or have different pollutants generated, repeat this table for each DMA, as needed. Provide narrative justifying any deviation from the TGD guidance for expected pollutants or else just refer to the TGD.

3.5 Hydrologic Conditions of Concern

Guidance: Determine if streams located downstream from the project area are determined to be susceptible to hydromodification impacts. Refer to Section 2.3.5 and Appendix N.7 of the TGD for guidance. This section does not need to determine whether hydromodification controls are needed to address the HCOC; it simply determines whether HCOCs need to be considered as part of Section 6 of the template. If the project has multiple points of compliance (POCs) or discharges to different waterbodies, repeat this section as needed for each point of compliance (See Section 5.2.1.1 of the TGD on determining points of compliance).

Does a hydrologic condition of concern exist for this project? *(Select Yes or No and provide justification/descriptions in the box below. Attach exhibits, as necessary, showing the necessary features to demonstrate that an HCOC does not exist. The exhibit could include, as applicable, the drainage pathway between the site and the Ocean (or lake/reservoir), the protection type in all downstream conveyances, WMAA areas exempt from hydromodification requirements, and critical sediment yield areas. If the exhibit includes all of the information needed to support the selected box, a narrative description is not required.*

- No – An HCOC does not exist for this receiving water because *(select one)*:
- Project discharges directly to a protected conveyance (bed and bank are concrete lined the entire way from the point(s) of discharge to a receiving lake, reservoir, embayment, or the Ocean
 - Project discharges directly to storm drains which discharge directly to a reservoir, lake, embayment, ocean or protected conveyance (as described above)
 - The project discharges to an area identified in the WMAA as exempt from hydromodification concerns
- Yes – An HCOC does exist for this receiving water because none of the above are applicable.

Repeat this checklist for each different receiving water to which the project would discharge.

3.6 Critical Course Sediment Yield Areas

(NOTE: Only complete this section if hydromodification criteria apply to the site, otherwise note this section as “not applicable.”)

Guidance: Identify whether there are potential critical coarse sediment yield areas on the site. Refer to Appendix N.8 for initial mapping. If a potential critical coarse sediment yield area is identified on the project site, refer to the HMP for guidance on how to assess whether the area is actually a critical coarse sediment yield area. Include appropriate documentation in this section.

Note, critical coarse sediment provisions do not apply to redevelopment of an existing developed site.

Section 4 Site Plan and Drainage Plan

Guidance: This section describes the division of the site in the drainage management areas (DMAs) with their associated BMP locations, the attributes of each DMA (especially their infiltration feasibility categorization), and how all applicable site design BMPs and source control BMPs were incorporated. See Section 2.4 of the TGD for guidance.

4.1 Drainage Management Area Delineation

Guidance: Include an exhibit or exhibits with a drainage map showing the DMAs, the associated proposed BMP locations for each DMA, the site design BMPs, areas of potential pollutant generation, impervious and pervious areas, any sensitive environmental features and their protections, and infiltration rates, if applicable.

Include a narrative describing how the drainage and site plan was developed. Include, at a minimum, the following information:

- *Provide rationale and methodology for how the site was divided into DMAs and how BMP placement was selected*
- *Describe how DMAs and BMP sites were located to maximize retention and site BMPs where infiltration is most feasible, to the extent practicable*
- *Describe any overriding factors affecting drainage and BMP location at the site.*

This section should carefully reference the applicable findings and summaries from Section 3 that influence site design and DMA planning. This narrative should present a technically and logically defensible basis for the site layout and justify that it maximizes retention with consideration of identified constraints.

4.2 Overall Site Design BMPs

Describe the site design BMPs that were incorporated at an overall site level (i.e., at a larger scale than the DMAs below). Provide a narrative for the following items. If a site design BMP was not used, then explain why it was not applicable. All applicable site design BMPs are required to be used.

Minimize Impervious Area - narrative

Maximize Natural Infiltration Capacity- narrative

Preserve Existing Drainage Patterns and Time of Concentration- narrative

Disconnect Impervious Areas- narrative

Protect Existing Vegetation and Sensitive Areas- narrative

Revegetate Disturbed Areas - narrative

Soil Stockpiling and Site Generated Organics- narrative

Firescaping- narrative

Water Efficient Landscaping- narrative

Slopes and Channel Buffers- narrative

4.3 DMA Characteristics and Site Design BMPs

Guidance: Create a subsection for each DMA. Ensure the exhibits provided for Section 4.1 of the template show sufficient detail to match the narrative below or provide additional exhibits for each DMA, as needed. For each DMA, provide a narrative with the following information:

- Location of the DMA on the site and included areas
- Area of the DMA (total area, impervious area, pervious area)
- Significant topographic features and general drainage patterns
- Location of outlet/structural BMP of the DMA (or statement that the DMA is self-retaining)
- Describe how the placement of structural BMPs sought to maximize the feasibility of retention BMPs by avoiding areas of infeasibility to the extent possible and placing infiltration BMPs at the locations with the greatest infiltration feasibility.
- Land uses and pollutant-generating activities in the DMA
- Describe how site design BMPs were incorporated at the DMA level (see HSC fact sheets in TGD Appendix G.1). Justify the exclusion of any of these site design BMPs that were not included.
- Use Worksheet 1 (and supporting worksheets 2 and 3, as needed) to assign the DMA and BMP locations to an infiltration feasibility category: Full Infiltration, Partial Infiltration, or No Infiltration. Attach filled out worksheets. Use the information collected in Sections 1-3 of the template, such as:
 - Hydrogeologic constraints
 - Soil types and infiltration rates
 - Geotechnical constraints
- Potential harvested stormwater demand and feasibility (not required if DMA is assigned to Full Infiltration category). See Appendix F for calculation.
- Harvest and Use Requirement - required to consider harvest and use if Full Infiltration is not used and there is sufficient demand for harvested water such that the entire DCV can be captured and used within 48 hours. This is expected to be very rare, if ever, the case.

This information is normally associated with a DMA level and should be documented independently for each DMA in subsections. Where a group of DMAs share the majority of properties (i.e., multiple drainage areas within a parking lot for example), consolidation of WQMP subsections may be appropriate.

4.3.1 DMA A

4.3.2 DMA B

4.3.3 DMA C

Add new subsections for each DMA.

4.3.X DMA Summary

Once all DMAs have been described, include a summary table for the DMAs similar to the one below:

Drainage Management Areas				
DMA (Number/Description)	Total Area (acres)	Imperviousness (%)	Infiltration Feasibility Category (Full, Partial, or No Infiltration)	Hydrologic Source Controls Used
e.g. DMA 1, North Section	4.6	75	Partial Infiltration	Impervious area dispersion Permeable paver walkways

4.4 Source Control BMPs

Guidance: Source Control BMPs can be described on a project basis rather than by each DMA. Use Section 6 of the TGD for guidance. Fill out the two tables below and include brief reason why any were not applicable. Add a brief narrative describing how each included source control BMPs will be implemented.

Non-structural source control BMPs should be documented in the site O&M plan with responsibility identified and applicable tracking forms to demonstrate that these BMPs are being implemented.

Structural source control BMPs should be identified in project plans. The site O&M plan should assign responsibility for inspecting and ensuring structural source control BMPs remain in place and functional.

Non-Structural Source Control BMPs				
Identifier	Name	Check One		Reason Source Control is Not Applicable
		Included	Not Applicable	
N1	Education for Property Owners, Tenants and Occupants	<input type="checkbox"/>	<input type="checkbox"/>	
N2	Activity Restrictions	<input type="checkbox"/>	<input type="checkbox"/>	
N3	Common Area Landscape Management	<input type="checkbox"/>	<input type="checkbox"/>	
N4	BMP Maintenance	<input type="checkbox"/>	<input type="checkbox"/>	
N5	Title 22 CCR Compliance (How development will comply)	<input type="checkbox"/>	<input type="checkbox"/>	
N6	Local Industrial Permit Compliance	<input type="checkbox"/>	<input type="checkbox"/>	
N7	Spill Contingency Plan	<input type="checkbox"/>	<input type="checkbox"/>	
N8	Underground Storage Tank Compliance	<input type="checkbox"/>	<input type="checkbox"/>	
N9	Hazardous Materials Disclosure Compliance	<input type="checkbox"/>	<input type="checkbox"/>	
N10	Uniform Fire Code Implementation	<input type="checkbox"/>	<input type="checkbox"/>	
N11	Common Area Litter Control	<input type="checkbox"/>	<input type="checkbox"/>	
N12	Employee Training	<input type="checkbox"/>	<input type="checkbox"/>	
N13	Housekeeping of Loading Docks	<input type="checkbox"/>	<input type="checkbox"/>	
N14	Common Area Catch Basin Inspection	<input type="checkbox"/>	<input type="checkbox"/>	
N15	Street Sweeping Private Streets and Parking Lots	<input type="checkbox"/>	<input type="checkbox"/>	
N16	Retail Gasoline Outlets	<input type="checkbox"/>	<input type="checkbox"/>	

Structural Source Control BMPs				
Identifier	Name	Check One		Reason Source Control is Not Applicable
		Included	Not Applicable	
S1	Provide storm drain system stenciling and signage	<input type="checkbox"/>	<input type="checkbox"/>	
S2	Design and construct outdoor material storage areas to reduce pollution introduction	<input type="checkbox"/>	<input type="checkbox"/>	
S3	Design and construct trash and waste storage areas to reduce pollution introduction	<input type="checkbox"/>	<input type="checkbox"/>	
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	<input type="checkbox"/>	<input type="checkbox"/>	
S5	Protect slopes and channels and provide energy dissipation	<input type="checkbox"/>	<input type="checkbox"/>	
	Incorporate requirements applicable to individual priority project categories (from SDRWQCB NPDES Permit)	<input type="checkbox"/>	<input type="checkbox"/>	
S6	Dock areas	<input type="checkbox"/>	<input type="checkbox"/>	
S7	Maintenance bays	<input type="checkbox"/>	<input type="checkbox"/>	
S8	Vehicle wash areas	<input type="checkbox"/>	<input type="checkbox"/>	
S9	Outdoor processing areas	<input type="checkbox"/>	<input type="checkbox"/>	
S10	Equipment wash areas	<input type="checkbox"/>	<input type="checkbox"/>	
S11	Fueling areas	<input type="checkbox"/>	<input type="checkbox"/>	
S12	Hillside landscaping	<input type="checkbox"/>	<input type="checkbox"/>	
S13	Wash water control for food preparation areas	<input type="checkbox"/>	<input type="checkbox"/>	
S14	Community car wash racks	<input type="checkbox"/>	<input type="checkbox"/>	

Section 5 Low Impact Development BMPs

Guidance: This section describes the type, size, and design features of the LID BMP for each DMA and demonstrates that they meet the LID performance standard. This template assumes on-site LID BMPs. If regional BMPs or alternative compliance methods are used, then adaptation of this template is needed. See Section 2.5 and Section 4 of the TGD as well as applicable sizing methods in Appendix E and BMP fact sheets in Appendix G of the TGD for guidance.

5.1 LID BMPs in DMA 1

Repeat as needed for each DMA. Attach worksheets, exhibits, and design drawings, as needed to demonstrate conformance of the BMPs with applicable criteria.

Briefly describe

- *The infiltration feasibility category from Section 4 of the template.*
 - *In conceptual WQMP, may use “envelope” of categorization contingent upon additional infiltration tests or other information that may affect the infiltration feasibility*
- *Harvest and use status from Section 4 of the template*
 - *State if it is required (rare), feasible (demand exists, but it is not required), or not feasible (insufficient demand)*
- *If any space constraints that could affect the ability to meet sizing criteria*
 - *See Section 4.2.4 of the TGD for guidance.*

5.1.1 Hydrologic Source Controls for DMA 1

List and describe the HSCs implemented in the DMA. Include an exhibit showing them. See Section 4.3.1 of the TGD and relevant fact sheets for HSCs in Appendix G.1 of the TGD. If no HSCs are provided, explain how volume reduction and retention was maximized without them or why they were not applicable to this DMA.

*Credit is allowed to be taken for HSC contribution toward control of the DCV. Use **Worksheet 4** or equivalent together with the methodology from the applicable fact sheet for the HSC(s) (Appendix G of the TGD) to calculate the effective retention volume which can be used to decrease the size of downstream LID BMPs. If the retention volume from the HSC exceeds the DCV, the DMA is self-retaining, and no LID BMP is required. Describe the method here and document the effective retention depth from **Worksheet 4**. Attach the worksheet(s) used.*

5.1.2 Structural LID BMP for DMA 1

- *Describe the BMP **type** and how it meets volume reduction criteria*
 - *Select a BMP type corresponding to the infiltration feasibility category (See Sections 2.5.1 and 4.3 of the TGD). Select one of the BMPs of that type and enter it here.*
 - *State the BMP number (e.g. INF-4) from the fact sheets*
 - *Verify and document that the BMP type successfully treats the primary pollutants of concern with M or H level of effectiveness (See relevant fact sheet from Appendix G of the TGD).*
 - *If the DMA is self-retaining, state this here and do not provide further information.*

- If the BMP type is part of train (e.g. biofiltration with supplemental retention), describe the train (e.g. harvest and use cistern with proprietary biofiltration BMP downstream).
- If applicable, explain how selection of this BMP meets criteria for required harvest and use BMPs (will be very rare).
- If a space constraint is used to justify a modification of the BMP selection, then provide justification here.
- Describe the BMP **sizing** and demonstrate conformance
 - Based on the LID BMP type, select the **applicable sizing method** from Appendix E of the TGD and use this method, with the accompanying **worksheets** (5 through 11) to determine the required size of the relevant components (footprint, gravel depth, media/ponding depth, underdrain depth, etc.).
 - Describe the method used and how the BMP sizing meets the required criteria.
 - Attach the worksheets and any other design calculations (e.g. target footprint to address clogging, etc. used).
 - If space constraints are present that cannot be mitigated, explain the constraints here, why they cannot be mitigated, and how the sizing criteria were met to the maximum extent practicable.
- Describe the BMP **design** and demonstrate conformance
 - Describe the BMP design
 - Include conceptual schematics for the Conceptual WQMP and design drawings for the Final WQMP
 - Compare the design to the criteria in the relevant fact sheet in Appendix G of the TGD for the BMP type, or justify any deviations from the fact sheet
 - If the LID BMP will be designed to address hydromodification requirements, explain how the adjustments to the BMP will not impair the functionality of the LID BMP
 - Describe contingency built into design in case of failure or in case of changing circumstances based on additional data collection. If additional data collection is needed, specify what data will be collected.

5.2 LID BMPs in DMA 2

Repeat Section 5.1 as needed for each DMA

5.X Summary of LID BMPs

Guidance: Provide a table summarizing LID BMP selection and sizing. Demonstrate that the BMPs shown in the project plans conform to the required LID selection and sizing criteria. The format of this table may vary depending and should faithfully summarize the information presented in the previous subsection.

Section 6 Hydromodification BMPs

Guidance: This section is only needed if an HCOC exists based on Section 3.5 of the template. Delete if no HCOC exists. Refer to Section 2.6 and Section 5 of the TGD for guidance.

6.1 Points of Compliance

Include an exhibit showing the point(s) of compliance (POC) for the project and justify in a short narrative the identification of POC(s). See Section 5.2 for guidance in defining the POC(s).

6.2 Pre-Development (Natural) Conditions

Include an exhibit showing the site in the pre-developed (natural) condition. Identify land cover, slopes, drainage patterns, soils, and critical coarse sediment yield areas. Include a narrative supporting the exhibit here. Focus is on those features necessary to create the hydrologic model the site in the pre-developed condition (Section 6.4 of the template below). This can refer to exhibits included in Section 3 if they are adequately detailed to support the selection of pre-development input parameters for the SOHM model.

6.3 Post-Development Conditions and Hydromodification BMPs

Include an exhibit showing the site after the proposed development, organized by the tributary area to each POC. If the area draining to the POC does not differ significantly from that draining to the DMA, this can be the same exhibit (and can also be the same as the one showing the POCs from Section 6.1 of the template). Describe the site features affecting hydrologic modeling, including land cover, slopes, drainage patterns, soils, LID BMPs, and hydromodification BMPs. Include a narrative supporting this exhibit.

Describe in detail all proposed hydromodification BMPs. Include design drawings in the Final WQMP and conceptual drawings for the Conceptual WQMP. Describe if the LID BMPs alone meet hydromodification requirements, if the LID BMP was altered to meet hydromodification requirements (and if so, how the alteration will not impact the ability of the LID BMP to provide retention/pollutant removal), or if a separate hydromodification BMP was used.

6.4 Measures for Avoidance of Critical Coarse Sediment Yield Areas

If potential critical coarse sediment yield areas are identified on the site (see Template section 3.6), describe all measures taken to identify and preserve any critical coarse sediment yield areas. Demonstrate that the project does not impact critical coarse sediment supply to receiving waters.

6.5 Hydrologic Modeling and Hydromodification Compliance

Describe the South Orange County Hydrologic Model (SOHM) development of the site in both the pre-development and post-development conditions. Document the necessary inputs for pre-development and post-development conditions. Include the SOHM summary report documenting conformance to applicable Flow Duration Control criteria. Include the model inputs and outputs as an attachment.

Provide a summary table documenting that the provided volume equals or exceeds the required volume

Provide a summary table documented key hydromodification BMP design parameters, including orifice diameters and elevation, weir diameters and elevations, etc.

Summarize any drawdown checks necessary to demonstrate that function of LID BMPs would not be impacted and extended standing water is avoided (drains in < 96 hours for vector control).

Section 7 Educational Materials Index

Guidance: Refer to the Orange County Stormwater Program (ocwatersheds.com) for a library of materials available. For the Conceptual WQMP, just the list below of educational materials to be provided is sufficient. For the Final WQMP, attach the educational materials applicable to the project in Attachment A. Other materials specific to the project may be included, as needed, and must be added to the table below and attached.

Educational Materials			
Residential Material (http://www.ocwatersheds.com)	Check If Applicable	Business Material (http://www.ocwatersheds.com)	Check If Applicable
The Ocean Begins at Your Front Door	<input type="checkbox"/>	Tips for the Automotive Industry	<input type="checkbox"/>
Tips for Car Wash Fund-raisers	<input type="checkbox"/>	Tips for Using Concrete and Mortar	<input type="checkbox"/>
Tips for the Home Mechanic	<input type="checkbox"/>	Tips for the Food Service Industry	<input type="checkbox"/>
Homeowners Guide for Sustainable Water Use	<input type="checkbox"/>	Proper Maintenance Practices for Your Business	<input type="checkbox"/>
Household Tips	<input type="checkbox"/>	Compliance BMPs for Mobile Businesses	<input type="checkbox"/>
Proper Disposal of Household Hazardous Waste	<input type="checkbox"/>	Other Material	Check If Attached
Recycle at Your Local Used Oil Collection Center (North County)	<input type="checkbox"/>		<input type="checkbox"/>
Recycle at Your Local Used Oil Collection Center (Central County)	<input type="checkbox"/>		<input type="checkbox"/>
Recycle at Your Local Used Oil Collection Center (South County)	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Maintaining a Septic Tank System	<input type="checkbox"/>		<input type="checkbox"/>
Responsible Pest Control	<input type="checkbox"/>		<input type="checkbox"/>
Sewer Spill	<input type="checkbox"/>		<input type="checkbox"/>
Tips for the Home Improvement Projects	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Horse Care	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Landscaping and Gardening	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Pet Care	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Projects Using Paint	<input type="checkbox"/>		<input type="checkbox"/>

Attachment A: Educational Materials

Guidance: Leave as placeholder in the Conceptual WQMP. In the Final WQMP, attach all relevant materials checked in Section 7 of the template.

Attachment B: Operations and Maintenance Plan

Guidance: Leave as placeholder in Conceptual WQMP. In Final WQMP, include the O&M Plan.

See Section 2.8 of the TGD for guidance on preparing an O&M Plan and the applicable BMP fact sheets in Appendix G of the TGD for specific maintenance activities and frequencies for each BMP type.

See separate O&M Plan Template.