





WATER QUALITY MANAGEMENT PLAN (WQMP) REVIEW CHECKLIST

Checklist to be utilized on WQMPs
submitted during the 2019 calendar year

The purpose of this checklist is to allow project proponents an opportunity to review their WQMP prior to submittal to ensure all items in this checklist are addressed. Additionally, it provides a uniform format for comprehensive and complete reviews of WQMPs. The completed checklist will be transmitted to the project applicant with the project WQMP. A copy of the completed checklist will be retained with the project case file.

For any requirements not satisfied (eg. Marked "No"), additional explanations are provided where applicable (*comments provided in red italics*).

Line items with the  icon are only required for Final WQMPs, and to be provided if available for the Preliminary WQMP.

Line items with the  icon denotes additional guidance is available to the plan reviewer.

WQMP Project Check Project Information

WQMP: Preliminary Final

City Project Number _____

Project Name _____

Project Address _____

Name/Number of Plan Checker _____

Name/Number of Plan Check Supervisor _____

First Review WQMP Received On: _____

Review Completed On: _____


Second Review WQMP Received On: _____

Review Completed On: _____

Third Review WQMP Received On: _____

Review Completed On: _____

Title, Owner's Certification and Table of Contents

WQMP REQUIREMENT	Requirement Satisfied?		
	Yes	No	N/A
Has an electronic copy (i.e. PDF) of the WQMP been provided for review? A PDF scan of the hard copy WQMP is not acceptable. The PDF shall be created from the original electronic source files (.docx, .dwg, etc.) to minimize file size, preserve digital quality, and allow for keyword search.			
If the project footprint includes work in the Right-of-Way (stand alone drive aprons exempted) then;			
<ul style="list-style-type: none"> Is the Right-of-Way Construction Permit (RCP) relative to Right-of-Way improvements properly referenced in the WQMP? 			
<ul style="list-style-type: none"> Are Right-of-Way Improvement Plans included and are they consistent with the WQMP? 			
If applicable, has the Preliminary WQMP and any comments on the Preliminary WQMP deferred to the Final WQMP been reviewed to ensure consistency with Final WQMP?			
Is this WQMP affected by a Master WQMP or similar Document that would affect the design or implementation of the BMPs and, if so, has it been provided and reviewed for consistency?			
Title Page			
Name of project			
Application (i.e. OTH number) and/or Tract Number			
Owner/Developer name, address, phone and email address			
Site address (or addresses) and planning area number			
Lot number(s) if site is a portion of a Tract			
Consulting/Engineering (WQMP preparer) firm name, address, phone and email address			
Date WQMP was prepared/revised			
Applicable Jurisdictional Information Shown 			
Owner's Certification			
<input checked="" type="checkbox"/> Is the Owner certification statement, in which the project owner acknowledges and accepts the provisions of the WQMP signed?			
Is the certification by the Engineer indicating their assurance that the WQMP complies with the permit requirements signed?			
Table of Contents			
Is a Table of Contents provided, including a list of all figures and attachments?			

Comments – Title, Owner's Certification and Table of Contents

Section 1 – Discretionary Permits & Water Quality Conditions

WQMP REQUIREMENT		Requirement Satisfied?		
		Yes	No	N/A
1.1	<input checked="" type="checkbox"/> Are the Discretionary Permit(s) relevant to WQMP preparation listed, if any?			
1.2	Is the address and/or the lot & tract/parcel map number describing the subject property provided?			
1.3	Are applicable conditions from watershed-based plans, such as WIHMPs and TMDLs provided? (<i>Currently Not Applicable</i>)			
1.4	If applicable, has the prior approved Preliminary WQMP been reviewed to confirm consistency of the Final WQMP? If there are any substantive differences, are they adequately explained?			

Comments – Section 1


Section 2 – Project Description

WQMP REQUIREMENT		Requirement Satisfied?		
		Yes	No	N/A
II.1: Project Description				
2.1	Does the project accurately identify its priority project development category(s)?			
2.2	Is sufficient detail provided about the proposed development that is not, otherwise, available on the plans and exhibits in Section 6?			
2.3	Are pre- and post-project condition impervious percentages, drainage patterns, and storm drain connections provided to understand the project's drainage conditions and hydrology?			
For Commercial and Industrial Projects:				
2.4	Is the Standard Industrial Classification (SIC) Code(s) which best describes the facilities operations provided?			
2.5	<input type="checkbox"/> Describes food preparation, cooking, and eating areas (specify location and type of area), if any?			
2.6	<input type="checkbox"/> Describes delivery areas and loading docks (specify location and design and if below grade and types of materials expected to be stored), if any?			
2.7	<input type="checkbox"/> Describes outdoor materials storage areas (describe and depict location(s), specify type(s) of materials expected to be stored), if any?			
2.8	<input type="checkbox"/> Describes activities that will be routinely conducted outdoors, if any?			
2.9	<input type="checkbox"/> Describes activities associated with equipment or vehicle maintenance and repair, including washing or cleaning, if any? Indicates number of service bays or number of fueling islands/fuel pumps, if applicable?			
For Residential Projects:				
2.10	<input type="checkbox"/> Range of lot and home sizes provided?			
2.11	<input type="checkbox"/> Describes all community facilities such as, laundry, car wash, swimming pools, jacuzzi, parks, open spaces, tot lots, etc., if any?			
II.2: Potential Stormwater Pollutants				
2.12	Does the project identify the potential stormwater or urban runoff pollutants reasonably expected to be associated with the project (see Table 2.1 of the TGD for reference)?			
II.3: Hydrologic Conditions of Concern				
2.13	Are Hydrologic Conditions of Concern (HCOC) identified (see TGD Appendix XVI)? http://www.ocwatersheds.com/gov/pw/watersheds/documents/wqmp/technical_guidance_document_(tgd)/technical_guidance_document_watershed_exhibits.asp			
2.14	If the project is determined to be in an HCOC susceptible area, are supporting 2-year pre- and post-development runoff volume, Tc, and flow rate calculations provided?			

WQMP REQUIREMENT		Requirement Satisfied?		
		Yes	No	N/A
2.15	Does the project adequately demonstrate that it is exempt or requires hydromodification (post-development does or does not exceed 5% pre-development)?			
II.4: Post Development Drainage Characteristics				
2.16	Is post-development drainage characteristics adequately described, including how runoff drains from the project site to downstream receiving waters?			
II.5: Property Ownership/Management				
2.17	<p>Describes ownership of all portions of project and site:</p> <ul style="list-style-type: none"> • If applicable, is all infrastructure proposed to be transferred to public agencies (City, County, Caltrans, etc.) properly identified? • <input checked="" type="checkbox"/> If applicable, is a homeowners or property owners association to be formed properly identified? • <input checked="" type="checkbox"/> If a homeowners or property owners association is being formed, will the association be involved in long term maintenance? 			

Comments – Section 2


Section 3 – Site Description



WQMP REQUIREMENT		Requirement Satisfied?		
		Yes	No	N/A
III.1: Physical Setting				
3.1	Identifies planning area or community name, if applicable?			
3.2	Is the site address (or vicinity map or cross streets) and site size to nearest tenth acre (only include acreage within project limits) provided?			
3.3	Is the zoning and land use designation identified?			
3.4	Is Hydrologic Soil Group(s) A, B, C, or D for the site correctly identified? http://ocwatersheds.com/gov/pw/watersheds/documents/wqmp/technical_guidance_document_(tgd)/technical_guidance_document_watershed_exhibits.asp			
III.2: Site Characteristics				
3.5	Is the Precipitation Zone (see TGD Appendix XVI or the website link above for reference) for the project site correctly identified?			
3.6	 Does the project identify site soil type, geology, and infiltration properties, including measured infiltration rates where LID BMPs are proposed (unless project is considered a Small Project, see TGD Table VII.2 for reference)?			
3.7	Are all groundwater and geotechnical conditions in terms of infiltration feasibility identified? Is GeoTracker information (https://geotracker.waterboards.ca.gov/) on past/present soil and groundwater contamination within a 250-foot radius of the project site provided?			
3.8	If present, is off-site run-on identified and does the project describe how it will be managed? If there are co-mingled flows, are they adequately treated by LID BMPs?			
3.9	Does the plan show existing underground utility, easements, and infrastructure information that may interfere with proposed storm drain systems or affect the feasibility of LID BMPs? <ul style="list-style-type: none"> If yes, do the constraints justify the selection of the LID BMPs proposed? 			
III.3: Watershed Description				
3.10	Is the watershed in which the project is located identified and the: <ul style="list-style-type: none"> Downstream receiving waters? 303(d) Listed Water Quality Impairments? (https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml) Applicable Total Maximum Daily Loads (TMDLs)? Pollutants of Concern for the Project? Environmentally Sensitive Areas? (<i>N/A to Anaheim</i>) 			


Comments – Section 3

Section 4 – Best Management Practices (BMPs)

WQMP REQUIREMENT		Requirement Satisfied?		
		Yes	No	N/A
IV.1: Project Performance Criteria				
4.1	If applicable Watershed Infiltration and Hydromodification Master Plan (WIHMP) is available, does the project incorporate watershed specific criteria? (<i>Currently Not Applicable</i>)			
4.2	If Project is susceptible to HCOCs, is Section 7.II-2.4.2.2 of the Model WQMP (<i>North County Requirements</i>) transcribed, verbatim?			
4.3	Are the applicable LID performance criteria transcribed, verbatim, from Section 7.II-2.4.3 of the Model WQMP, including specific BMP approaches identified for any specific project features (such as EPA Green Streets)?			
4.4	If it is not feasible to meet LID performance criteria, are applicable treatment control BMP performance criteria transcribed, verbatim, from Section 7.II-3.2.2 of the Model WQMP, including calculations based on accepted criteria?			
4.5	Is the calculated LID design storm capture volume (DCV) provided, based on Orange County specific criteria?			
IV.2: Site Design and Drainage Plan				
4.6	Describes a site design and drainage plan that: <ul style="list-style-type: none"> Provides a narrative of site design practices utilized (i.e. HSCs that are not designed to meet numeric performance criteria); Provides a table of DMAs and shows LID BMP(s) proposed in each DMA; Provides calculations of Design Capture Volume (DCV) for each DMA; 			
4.7	If the project includes improvements within the City's ROW, are these areas addressed adequately and appropriately by BMPs following Public Works design guidelines and Green Street Standards? (see item 5.5 to ensure O&M will be accepted if applicable).			
4.8	Are LID BMPs designed as off-line systems, where feasible? Low flows are routed to the BMP, while high flows bypass the system.			
4.9	If LID BMP system is in-line (high and low flows are routed through the system), is the bypass/overflow outlet structure properly designed to convey the high flow storm event associated with the project (i.e. 10-, 25-, 50- year) and not cause resuspension of pollutants?			
IV.3: LID BMP Selection and Project Conformance Analysis				
4.10	Hydrologic Source Controls (if HSCs are proposed to meet retention criteria): Does the narrative and calculations of proposed HSCs show how they meet retention requirements? Are the results supported with the completion of Worksheet A from the TGD?			

WQMP REQUIREMENT		Requirement Satisfied?		
		Yes	No	N/A
Infiltration BMPs				
4.11	Has the Infiltration Feasibility Worksheet (Table 2.7 from TGD) been completed and included?			
4.12	Has the Summary of Groundwater-related Feasibility Criteria (Worksheet I from TGD) been completed and included?			
4.13	If Infiltration is feasible, is the selection of BMP type (INF) described, and do sizing calculations show adequate capacity and drawdown?			
4.14	Are volume storage components of the BMPs properly designed to retain the DCV (e.g. overflow drains are at correct heights, pervious pavement is not on a slope or is considered in volumetric calculation, planting soil is specified in detail if volume is claimed for engineered media)?			
	<ul style="list-style-type: none"> If Permeable Pavement (INF-6) is implemented, is the ratio of total tributary impervious area (including permeable pavement) to the area of the permeable pavement less than 4:1? If it is beyond 4:1, is this distance of sheet flow over the permeable pavement greater than 100 feet to 1 acre OR is there a subsequent surface drain inlet (i.e. open bottom trench drain) to ensure flows will not bypass? 			
4.15	Is adequate pretreatment provided relative to land use and anticipated pollutants, soil conditions and type of infiltration BMP? In all scenarios, PRE-2 (catch basin inserts) are <u>not</u> allowed for pretreatment of infiltration BMPs. General guidance is provided below.			
	<ul style="list-style-type: none"> No pretreatment is required if the infiltration BMP is receiving <u>only</u> runoff from roof runoff, sidewalks or landscape areas with non-erodible conditions (< 5% slope). 			
	<ul style="list-style-type: none"> For Surface Infiltration BMPs (INF-1, INF-2, INF-3, INF-4, and INF-6), no pretreatment is required as their design already includes pretreatment mechanisms. 			
	<ul style="list-style-type: none"> For Underground Infiltration BMPs (INF-7), pretreatment provides 50% TSS removal or greater (if land use deviates from what is specified above). TARP Certifications for this performance level, such as Washington TAPE Pretreatment GULD, or equivalent, are accepted. 			
	<ul style="list-style-type: none"> For Drywells (INF-5), pre-treatment guidelines [<i>pending</i>] in the TGD must be followed to ensure adequate removal of sediment and hydrocarbons. 			
4.16	<p> Class V Injection Well (i.e. drywells): If the infiltration facility qualifies as a Class V Injection Well (see link: http://water.epa.gov/type/groundwater/uic/class5/types_stormwater.cfm) has it been submitted to the EPA database for registration? (see link: https://www.epa.gov/uic/forms/underground-injection-wells-registration)</p>			

 WQMP REQUIREMENT		Requirement Satisfied?		
		Yes	No	N/A
4.17	 City Water Utility Well Permit: If a well (typically stormwater infiltration well) is proposed, has the requirement for a Well Permit (https://ca-anaheim.civicplus.com/DocumentCenter/View/4066) been conveyed to applicant?			
4.18	Because infiltration systems can be adversely impacted by sediment in construction phase runoff, a physical barrier shall be included in the grading plans which will preclude any runoff or solids from entering the infiltration system during the construction phase. Has the Grading Plans identified the location, type and timing of the proposed physical barrier on the plans? This may include a removable plug or equivalent feature that remains in place until the site is operational. The plans shall also include the following Note: “During the construction phase of this project, the infiltration system shall be physically separated/protected from runoff and/or any other material/liquid/debris.” Has this note been identified on the Grading Plans?			
Evapotranspiration, Rainwater Harvesting BMPs (ONLY required if entire DCV not met through above BMPs)				
4.19	Has TGD Feasibility Worksheet J and supporting calculations been completed?			
4.20	Has the selection, suitability and sizing information, with applicable calculations, of Harvest-and-Reuse (HU) BMPs been provided?			
4.21	If Evapotranspiration/Harvesting BMPs are infeasible to treat the LID DCV, has documentation been provided as to how much DCV can be met and why it is not feasible to meet the full volume with evapotranspiration/ harvest BMPs, infiltration BMPs, or a combination of them?			
Biotreatment BMPs (ONLY required if entire DCV not met through above BMPs)				
4.22	Has the selection, suitability and sizing information, with applicable calculations, of Biotreatment (BIO) BMPs been provided? <ul style="list-style-type: none"> Proprietary Biotreatment (BIO-7) shall comply with a minimum 80% TSS removal. TARP Certifications for this performance level, such as Washington TAPE <u>Basic GULD</u>, or equivalent, are accepted. 			
4.23	If Biotreatment BMPs are infeasible to treat LID DCV, has documentation been provided as to how much DCV can be met and why it is not feasible to meet the full volume with biotreatment BMPs, evapotranspiration/ harvest BMPs, infiltration BMPs, or a combination of them?			
Hydromodification Control BMPs (if required)				
4.24	Has the selection, suitability and sizing information, with applicable calculations, of Hydromodification Control BMPs been provided?			
4.25	If infeasible, is narrative and supporting documentation and calculations provided?			

 WQMP REQUIREMENT		Requirement Satisfied?		
		Yes	No	N/A
Source Control, Treatment Control, and Other BMP Details				
4.26	Regional/Sub-Regional LID BMPs (if available and DCV not met through above BMPs): Are regional/sub-regional LID BMPs in which the project will participate in adequately described?			
4.27	Treatment Control BMPs Has the selection, suitability and sizing information, with applicable calculations, of Treatment (TRT) BMPs been provided? <ul style="list-style-type: none"> Treatment BMPs shall comply with a minimum 80% TSS removal. TARP Certifications for this performance level, such as Washington TAPE <u>Basic GULD</u>, or equivalent, are accepted. 			
4.28	If the project impacts an off-site catch basin within the City's Right of Way, does design include the implementation of "full capture systems" within the catch basin(s) that are designed to treat the 1-year, 1-hour storm event? https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/trash_implementation/a1_certified_fcd.pdf			
4.29	Non-Structural Source Control BMPs: Does the project properly prescribe non-structural source control BMPs and include valid explanations for those that are not used? Are implementation responsibilities identified and description of each prescribed BMP provided as well?			
4.30	Structural Source Control BMPs: Does the project properly prescribe structural source control BMPs include valid explanations for those that are not used? Are implementation responsibilities identified and description of each prescribed BMP provided as well?			
4.31	Are proper and accepted terminology, consistent with CASQA or other industry standards, used to describe all structural BMPs?			
4.32	If applicable, does the project lists and appropriately calculates any applicable Water Quality Credits?			
4.33	If applicable, does the project describe an alternative compliance plan including obligations and proposed alternative compliance measures?			

Comments – Section 4

Section 5 - Inspection/Maintenance Responsibility for BMPs

WQMP REQUIREMENT		Requirement Satisfied?		
		Yes	No	N/A
5.1	Is the Operation and Maintenance Matrix completed with all source control BMPs, LID, Treatment, and Pre-treatment BMPs selected for the project? Is the O&M Plan and specific O&M Fact Sheets/Guides for LID or Proprietary BMPs included as an attachment?			
5.2	Does the O&M Plan identify an appropriate mechanism for the long-term operation and maintenance, including funding?			
5.3	Does the O&M Section identify the entity (or entities) responsible for the long-term inspection and maintenance of all Source Control BMPs and any Treatment Control BMPs, including name, title, company, address, and phone number.			
5.4	Does the O&M Plan prescribe appropriate minimum frequencies for inspection and maintenance of BMPs to ensure their continued effectiveness?			
5.5	In order to ensure that the current owner recognizes that upon sale or transfer of property, the Notice of Transfer of Responsibility must be completed, is this form included in the Attachments (see Exhibit D in link below)? https://www.anaheim.net/DocumentCenter/View/222/NPDES-Water-Quality-Control-PDF			
5.6	<input checked="" type="checkbox"/> Is the Project subject to cross-lot drainage?			
5.7	<ul style="list-style-type: none"> Have the involved property owners established the rights and responsibilities documentation (i.e. Cross Lot Drainage Agreements) and agreement demonstrating shared responsibility to maintain treatment control BMP? (see link) 			

Comments – Section 5

Section 6 – WQMP BMP Plan

WQMP REQUIREMENT		Requirement Satisfied?		
		Yes	No	N/A
6.1	Has an 11" by 17" plot plan been included? (see prior comments in Section 4 regarding deficiencies)			
6.2	Do all figures, maps, plot plans, etc. have a legend, including a North arrow and scale?			
6.3	Are BMPs labeled and is enough detail provided to allow a Site Manager the ability to understand what is in place and how it operates and is maintained?			
6.4	<input checked="" type="checkbox"/> Are locations of roof downspouts identified to ensure runoff from buildings are appropriately routed as depicted by the DMAs?			
6.5	Does the plot plan provide the following minimum information? <ul style="list-style-type: none"> • Project location; • Site boundary and easements, if any; • Drainage delineations (DMAs) and flow information, including storm drain facilities; • Drainage connections, <input checked="" type="checkbox"/> including roof drain locations; • Paved (i.e. parking) versus landscaped surfaces; • BMP cross section details; • Structural Source Control BMP locations; and • GIS Coordinates of LID/Treatment/Hydromodification BMPs; 			
6.6	<input checked="" type="checkbox"/> Is the project grading plan consistent with WQMP plot plan?			

Comments – Section 6

Section 7 – Educational Materials

WQMP REQUIREMENT		Requirement Satisfied?		
		Yes	No	N/A
7.1	Are all applicable educational materials that will be used by the project identified, including reference to Orange County Watershed websites where the brochures or BMP fact sheets can be found (do not include brochures as an Attachment in the WQMP)?			

Comments – Section 7



WQMP Completion and Approval Process

The Plan Checker will review the WQMP as many times as necessary to ensure that the WQMP meets the minimum City and County requirements. Once the WQMP plan check is complete, the Plan Checker will ensure the following items have been executed (if applicable).

WQMP Completion and Approval Checklist (Internal Use Only)

WQMP REQUIREMENT	Requirement Satisfied?	
	Yes	N/A
Plan Checker has contacted NPDES Coordinator via phone to discuss WQMP approval and has obtained a stamped cover page to return to project applicant. Voicemail is not an acceptable form of contact.		
Projects with focused Infiltration BMPs: OCWD Coordination has been completed and infiltration BMPs have been accepted by the agency. Focused Infiltration BMPs are defined as all infiltration BMPs with the exception of permeable pavement, bioretention without underdrains and self-treating areas.		
Projects with BMPs in Public Right-of-Way: WQMP includes an Attachment indicating the public agency's intent to accept the Treatment Control BMPs as designed. Public Works Operations Department has been contacted and Operations ROW BMP Acceptance Memo has been signed and approved.		
Projects with Cross-Lot Drainage from multiple parcels to sub regional treatment control BMP(s): WQMP includes an Attachment of the executed and approved rights and responsibilities documentation (i.e. Cross Lot Drainage Agreements) and agreement demonstrating shared responsibility to maintain treatment control BMP(s).		
Completed By:		
Signature:		
Date:		