City of Boulder Planning and Development Services Center TEC - _____

Post-Construction Water Quality Design Form

Required for all applicable development sites per City of Boulder Design and Construction Standards, Chapter 7 – Stormwater Design

Revised June 2019

This form shall be completed by the Engineer and included as an appendix to preliminary and final drainage report submittals.

1. Project Size

Existing Impervious Area (ac):		**Proposed Impervious Area (ac):**	
Total Project/Lot Area (ac):		**Total Disturbed Area (ac):**	

2. Post-Construction Stormwater Quality Requirement Applicability

All applicable development sites shall implement post-construction stormwater quality management practices.
Applicable development site means (1) any new development or redevelopment site resulting in land disturbance of greater than or equal to one acre, including a site that is less than one acre that is part of a larger common plan of development or sale that would disturb or has disturbed one acre or more, or (2) any development site for which a stormwater detention pond is required under these Standards.

Applicability Definition[a] (Select One)		**Direction**
☐	Applicable Development Site: Greater than 1-acre of disturbance	Proceed to Section 3
☐	Applicable Development Site: Less than 1-acre of disturbance, detention required therefore water quality included	Proceed to Section 3
☐	Excluded Development Site (or portion thereof)	Proceed to Section 9

[a]Refer to D.C.S. Section 7.15(B) for applicable development site and waiver criteria.

3. Post-Construction Stormwater Quality Treatment Approach

Treatment Approach/s Used[a]		**Design Standard[b]**	**Treatment Area (ac)[c]**	**Number of SCMs**	**Direction**
☐	Full Infiltration	Runoff Reduction			Complete Section 4
☐	Partial Infiltration	WQCV			Complete Section 5
☐	No Infiltration	WQCV			Complete Section 6
☐	Alternative Design	Pollutant Removal			Complete Section 7
☐	Alternative Design	Constrained Site			Complete Section 8
☐	Excluded Development Site (or portion thereof)			N/A	Complete Section 9
	Development Site, Total:				The sum of the treatment areas must equal the total project/lot area listed in Section 1.

[a]Refer to D.C.S. Section 7.16 for treatment approach definitions and selection criteria.
[b]Refer to D.C.S. Section 7.15(C) for design standard definitions.
[c]Treatment area is defined as the drainage basin or collection of adjacent drainage basins for which a single treatment approach is applied. All portions of an applicable development site (total project/lot area) must be defined within a treatment area.

4. Full Infiltration – Runoff Reduction Criteria

Runoff Reduction Design Standard: SCMs are selected, designed, and constructed to infiltrate into the ground where site geology permits, evaporate, or evapotranspire a quantity of water equal to 60% of what the WQCV would be if all impervious area for the applicable development site discharged without infiltration.
None of the applicable development area may be excluded when using the Runoff Reduction Standard.

Design Criteria[a]	Yes	No
1. Preliminary infiltration feasibility screening has been completed and documented in the drainage report with a rational conclusion for full infiltration.	☐	☐
2. The Runoff Reduction Design Standard has been met for the treatment area.	☐	☐
3. Required sizing criteria for full infiltration has been achieved and documented in the drainage report.	☐	☐
4. Field infiltration test requirements have been met and documented in the drainage report.	☐	☐

SCM Name[b]	SCM Type[c]	Drainage Area (ac)	WQ Event Runoff Volume (ft^3)	WQ Event Infiltrated Volume (ft^3)	Percent Infiltrated (%)	Detention Storage (yes/no)
Treatment Area Not Routed to SCM:				0	0%	N/A
Total:						

[a]Refer to D.C.S. Section 7.16(D)(1) for full infiltration treatment approach criteria.
[b]SCM Name shall match drainage report and plan designation. Attach additional table if more than three SCMs are planned.
[c]SCM Type shall match USDCM Volume 3, Treatment BMP Factsheet nomenclature.

5. Partial Infiltration – WQCV Criteria

WQCV Design Standard: SCMs are selected, designed, and constructed to provide treatment and/or infiltration of the runoff from the entire treatment area for the 80th percentile, 0.6-inch, storm event. Evaluation of minimum drain time shall be based on the pollutant removal mechanism and functionality of the SCM(s) implemented. Consideration of drain time shall include maintaining vegetation necessary for operation of the SCM (e.g., wetland vegetation).
Up to 20 percent, not to exceed one acre, of the treatment area may be excluded when using the WQCV Standard if it is determined and documented that it is not practicable to capture runoff or implement a separate SCM before runoff drains to an offsite discharge point.

Design Criteria[a]	Yes	No
5. Preliminary infiltration feasibility screening has been completed and documented in the drainage report with a rational conclusion for partial infiltration.	☐	☐
6. The WQCV Design Standard has been met for the treatment area.	☐	☐
7. Required sizing criteria for partial infiltration has been achieved and documented in the drainage report.	☐	☐
8. Field infiltration test requirements have been met and documented or determined to be not applicable.	☐	☐
9. A portion of the treatment area (up to 20%, not to exceed one acre) has been excluded.	☐	☐
10. An explanation for the impractical treatment of the excluded area has been documented in the drainage report.	☐	☐

SCM Name[b]	SCM Type[c]	Drainage Area (ac)	WQCV (ft^3)	Detention Storage (yes/no)
Treatment Area Excluded:			N/A	N/A
Total:				

[a]Refer to D.C.S. Section 7.16(D)(2) for partial infiltration treatment approach criteria.
[b]SCM Name shall match drainage report and plan designation. Attach additional table if more than three SCMs are planned.
[c]SCM Type shall match USDCM Volume 3, Treatment BMP Factsheet nomenclature.

6. No Infiltration – WQCV Criteria

WQCV Design Standard: SCMs are selected, designed, and constructed to provide treatment and/or infiltration of the runoff from the entire treatment area for the 80th percentile, 0.6-inch, storm event. Evaluation of minimum drain time shall be based on the pollutant removal mechanism and functionality of the SCM(s) implemented. Consideration of drain time shall include maintaining vegetation necessary for operation of the SCM (e.g., wetland vegetation).
Up to 20 percent, not to exceed one acre, of the treatment area may be excluded when using the WQCV Standard if it is determined and documented that it is not practicable to capture runoff or implement a separate SCM before runoff drains to an offsite discharge point.

Design Criteria[a]	Yes	No
1. Preliminary infiltration feasibility screening has been completed and documented in the drainage report with a rational conclusion for no infiltration.	☐	☐
2. The WQCV Design Standard has been met for the treatment area.	☐	☐
3. Required sizing criteria for no infiltration has been achieved and documented in the drainage report.	☐	☐
4. A portion of the treatment area (up to 20%, not to exceed one acre) has been excluded.	☐	☐
5. An explanation for the impractical treatment of the excluded area has been documented in the drainage report.	☐	☐

SCM Name[b]	SCM Type[c]	Drainage Area (ac)	WQCV (ft^3)	Detention Storage (yes/no)
Treatment Area Excluded:			N/A	N/A
Total:				

[a]Refer to D.C.S. Section 7.16(D)(3) for no infiltration treatment approach criteria.
[b]SCM Name shall match drainage report and plan designation. Attach additional table if more than three SCMs are planned.
[c]SCM Type shall match USDCM Volume 3, Treatment BMP Factsheet nomenclature.

7. Alternative Design – Pollutant Removal Criteria

Pollutant Removal Design Standard: SCMs are selected, designed, and constructed to reduce the event mean concentration of total suspended solids (TSS) to a median value of 30 milligrams per liter (mg/L) or less from the entire treatment area for the 80th percentile, 0.6-inch storm event.
Up to 20 percent, not to exceed one acre, of the treatment area may be excluded when using the Pollutant Removal Standard if it is determined and documented that it is not practicable to capture runoff or implement a separate SCM before runoff drains to an offsite discharge point.

Design Criteria[a]	Yes	No
1. Physical site constraints or risk factors have been documented with a rational conclusion that no other treatment approach is feasible. This explanation has been provided to and approved by the Director of Public Works in the drainage report or via letter.	☐	☐
2. The Pollutant Removal Design Standard has been met for the treatment area.	☐	☐
3. TSS reduction metrics applicable to the proposed design have been documented in the drainage report.	☐	☐
4. A portion of the treatment area (up to 20%, not to exceed one acre) has been excluded.	☐	☐
5. An explanation for the impractical treatment of the excluded area has been documented in the drainage report.	☐	☐

SCM Name[b]	SCM Description[c]	Drainage Area (ac)	WQ Event Median Effluent TSS Concentration (mg/L)
Treatment Area Excluded:			N/A
Total:			

[a]Refer to D.C.S. Section 7.16(D)(4) for alternative design approach criteria.
[b]SCM Name shall match drainage report and plan designation. Attach additional table if more than three SCMs are planned.
[c]SCM Description shall include proprietary name and/or description of function.

8. Alternative Design – Constrained Site Criteria

Constrained Runoff Reduction Standard: SCMs are selected, designed, and constructed to infiltrate into the ground where site geology permits, evaporate, or evapotranspire a quantity of water equal to 30% of what the calculated WQCV would be if all impervious area for the applicable development site discharged without infiltration.

Constrained WQCV Standard: SCMs are selected, designed, and constructed to provide treatment and/or infiltration of the runoff from at least 50% of the treatment area, including at least 50% of the impervious area, for the 80th percentile, 0.6-inch storm event. Evaluation of minimum drain time shall be based on the pollutant removal mechanism and functionality of the SCM(s) implemented. Consideration of drain time shall include maintaining vegetation necessary for operation of the SCM (e.g., wetland vegetation).

Constrained Pollutant Removal Standard: SCMs are selected, designed, and constructed to reduce the event mean concentration of total suspended solids (TSS) to a median value of 30 mg/L or less for at least 50% of the treatment area, including at least 50% of the impervious area, for the 80th percentile, 0.6-inch storm event.

Design Criteria[a]	Yes	No
1. The site area has an existing impervious area greater than 35% and a proposed impervious area greater than 75%. The rationale for classification as a constrained site and explanation for the impractical treatment of the excluded area has been provided to and approved by the Director of Public Works in the drainage report or via letter.	☐	☐
2. The Constrained Runoff Reduction Standard has been met for the treatment area and applicable design criteria and SCM metrics have been recorded in Section 6.	☐	☐
3. The Constrained WQCV Standard has been met for the treatment area and applicable design criteria and SCM metrics have been recorded in Section 7 or 8, as appropriate.	☐	☐
4. The Constrained Pollutant Removal Standard has been met for the treatment area and applicable design criteria and SCM metrics have been recorded in Section 9.	☐	☐

[a]Refer to D.C.S. Section 7.16(D)(4) for alternative design approach criteria.

9. Excluded Development Site Documentation

The following exclusion is applicable to this project[a]:

☐	A. Pavement Management Sites	☐	E. Large Lot Single Family Residential Projects
☐	B. Roadway Redevelopment	☐	F. Land Disturbance Only Projects
☐	C. Existing Roadway Areas	☐	G. Stream Stabilization Projects
☐	D. Aboveground and Underground Utilities	☐	H. Sidewalk, Bicycle, and Multi-Use Paths

In the space below provide the rational for classifying the project or area of the project under this exclusion. Include project metrics and calculated areas as needed to support the justification.

[a]Refer to D.C.S. Section 7.15(B)(2) for exclusion criteria.