



# Drainage and Stormwater Plan Review Checklist

Engineering - Stormwater

Phone # 218-299-5387

Date of Last Revision: February 9, 2024

## Site Plan Review

The purpose of this checklist is to provide for uniform, consistent review of plans submitted to the Engineering Department for approval. In order to expedite review; owners, consultants, and/or contractors are encouraged to use this checklist as a guide in preparing plans. Incomplete plans will be returned for revision.

The City reviews, comments upon, and approves plans for the limited administrative purpose of determining whether there is reasonable assurance that site drainage is directed to appropriate stormwater facilities and does not adversely impact these facilities. This approval does not in any way relieve owners of responsibility, nor shall it make the City responsible, for any technical inadequacy in the proposed plan or improvements made. Although City staff attempts to ensure that site drainage does not adversely impact the proposed development site and/or adjacent sites, approval of a drainage plan does not guarantee that negative impacts will not occur.

### I. Site Description

A. Project Name:							
B. Location (address):							
C. Project Contact:							
Check one:		Owner:		Consultant:		Contractor:	
Phone:		Fax:		E-mail:			

### II. Stormwater Permits

Total site area:	Acres	Existing impervious area:	Acres
New Development	Acres	Redevelopment	Acres
Site area disturbed by construction:		Acres	See Note 1
Post-construction impervious area:		Acres	See Note 2
MPCA permit required (check one):	Yes	No	
Applicant notified they need an MPCA Permit.	Yes	Date:	
A. City of Moorhead ESC Permit	Permit #	ESC	
B. MPCA Construction Stormwater Permit	Permit #	C000	

- Note 1: MPCA General Permit No. MN R100001 (stormwater associated with construction activity) is required if construction involves:
- clearing, grading, and/or excavation that disturbs one (1) acre or more, or
  - clearing grading and/or excavation that disturbs less than one (1) acre but is part of a common plan of development which disturbs one (1) acre or more.
- Note 2: Post-construction stormwater management program requires the use of any combination of BMPs, with highest preference given to Green Infrastructure techniques and practices necessary to meet the MPCA MS4 permit requirements and City Ordinance.
- A stormwater maintenance agreement for Private BMPs will be recorded to the parcel or parcels.

### **III. Drainage Plan Requirements - All Sites**

Site elevations, as indicated below, must be provided. Elevations may be relative to an existing datum or may be relative to an arbitrary datum (e.g. low point in the system set to zero elevation). Elevations of existing stormwater system components (e.g. CBs) can be obtained from the Engineering Division. Site drainage shall not be directed onto adjacent property without written consent of the owner and/or an agreement between property owners. Sufficient information must be provided to demonstrate no adverse impact to adjacent property.

<b>Drainage Plan Requirement:</b>	<b>Approved</b>	<b>Provide Additional Information</b>
A. North arrow		
B. Street names		
C. Scale		
D. Location of nearest existing stormwater facility (e.g. CB, ditch, etc.) to accept drainage		
E. Elevation of nearest existing stormwater facility to accept drainage		
F. Top of curb (TOC) elevations		
G. Top of foundation (TOF) or finished floor (FF) elevations for all structures		
H. Finished site elevation grid (at no less than 100 ft intervals)		
I. Finished site high point (HP) elevations		
J. Finished site low point (LP) elevations		
K. Top of foundation (TOF) or finished floor (FF) elevations for buildings on adjacent lots (indicate if adjacent lot is vacant)		
L. Finished site general drainage patterns with arrows showing direction of flow		
M. On-site stormwater facilities if present or proposed (e.g. pipe size/slope/capacity, CB rim/invert elevations, etc.)		

\*Projects within 1 mile of an impaired water(s) are required to follow Appendix A, C.1 and C.2 of the MPCA Construction Stormwater Permit.

Comments:

Erosion/Sediment Control Plan Review:					Approved	Provide Additional Information
A. BMPs to minimize erosion						
• Mulch Seeding/Sod						
• Riprap						
• Soil Roughening (cat tracks)						
• Other						
B. BMPs to minimize the discharge of sediment and other pollutants						
• Construction Entrance						
• Sediment Logs						
• Silt Fence						
• Inlet Protection						
• Grass buffer						
• Sediment basin						
• Other						
C. BMPs for dewatering activities						
D. Site inspections and records of rainfall events (Note of plans)						
E. BMP maintenance						
F. Management of solid and hazardous wastes						
• Leakproof washout containment system						
• Material/Chemical storage						
G. Final stabilization						
Within 1 mile of the Red River?		*Yes		No		
G. Temporary sediment basin						
Within 1 mile of the Red River?		*Yes		No		

**IV. Sites with new impervious of greater than or equal to one (1) acre, including projects less than one (1) acre that are part of a larger common plan of development or sale:**

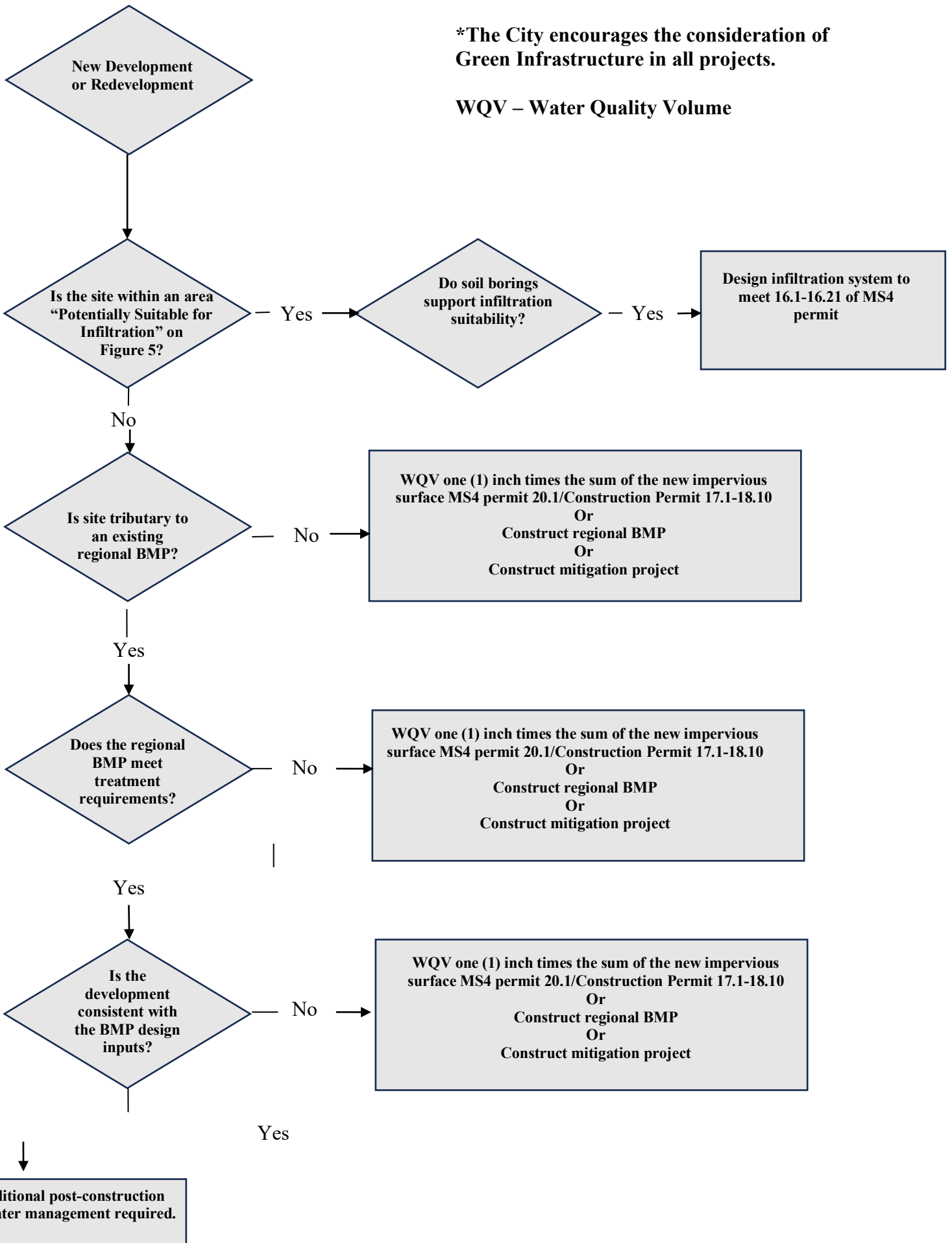
New Development and Redevelopment:	Approved	Provide Additional Information
A. Infiltration MS4 Permit 16.1-16.21 design parameters Unless prohibited by MS4 Permit 20.9		
- Infiltration Basin		
- Infiltration trench		
- Rainwater gardens		
- Bioretention w/o underdrains		
- Swales with impermeable check dams		
- Natural depressions		
B. Filtration MS4 Permit 17.1 – 17.11 design parameters		
- Sand Filters with underdrains		
- Biofiltration Areas		
- Swales using underdrains with impermeable check dams		
- Underground Sand Filters		
C. Wet Sediment Basin MS4 Permit 18.1 design parameters		
- Water Quality Volume (WQV) must be calculated as one (1) inch times the sum of the new impervious surface MS4 permit 20.6. Volume reduction practices for WQV must be considered first, unless prohibited by the MS4 permit 20.9		
- Minimum pond depth of 3 ft. plus sediment storage. City Ordinance		
- Design calculations for <u>pre-development</u> runoff (peak flows for 2-yr, 5-yr, 10-yr, 50-yr, and 100-yr events)		
- Design calculations for <u>post-development</u> runoff (peak flows for 2-yr, 5-yr, 10-yr, 50-yr, and 100-yr events)		
D. On-site treatment system location, dimensions, etc.		
E. Legal Maintenance Agreement		
F. Stormwater BMP Operational Plan		
G. Stormwater Inspection and Maintenance Plan		
H. Site drains to existing stormwater treatment facility?		
Yes <input type="checkbox"/> If yes, skip G & H		
No <input type="checkbox"/>		
I. Off-site treatment (Mitigation) MS4 permit 20.20		
J. Payment received and used in accordance with MS4 permit 20.14		
Yes <input type="checkbox"/>		
No <input type="checkbox"/>		

Comments:

Approved By:	Date:
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**\*The City encourages the consideration of Green Infrastructure in all projects.**

**WQV – Water Quality Volume**





**Figure 5: Infiltration Area Map**

