Drainage and Stormwater Plan Review Checklist

Engineering - Stormwater
Phone # 218-299-5387

Date of Last Revision: January 2016

Site Plan Review

The purpose of this checklist is to provide for uniform, consistent review of plans submitted to the Engineering Division 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	
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 of no net increase from pre-project conditions for new development and a net reduction from pre-project conditions for redevelopment.

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.

Drainage Plan Requirement:	Approved	Provide Additional Information
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.)		

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 ☐		

*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.

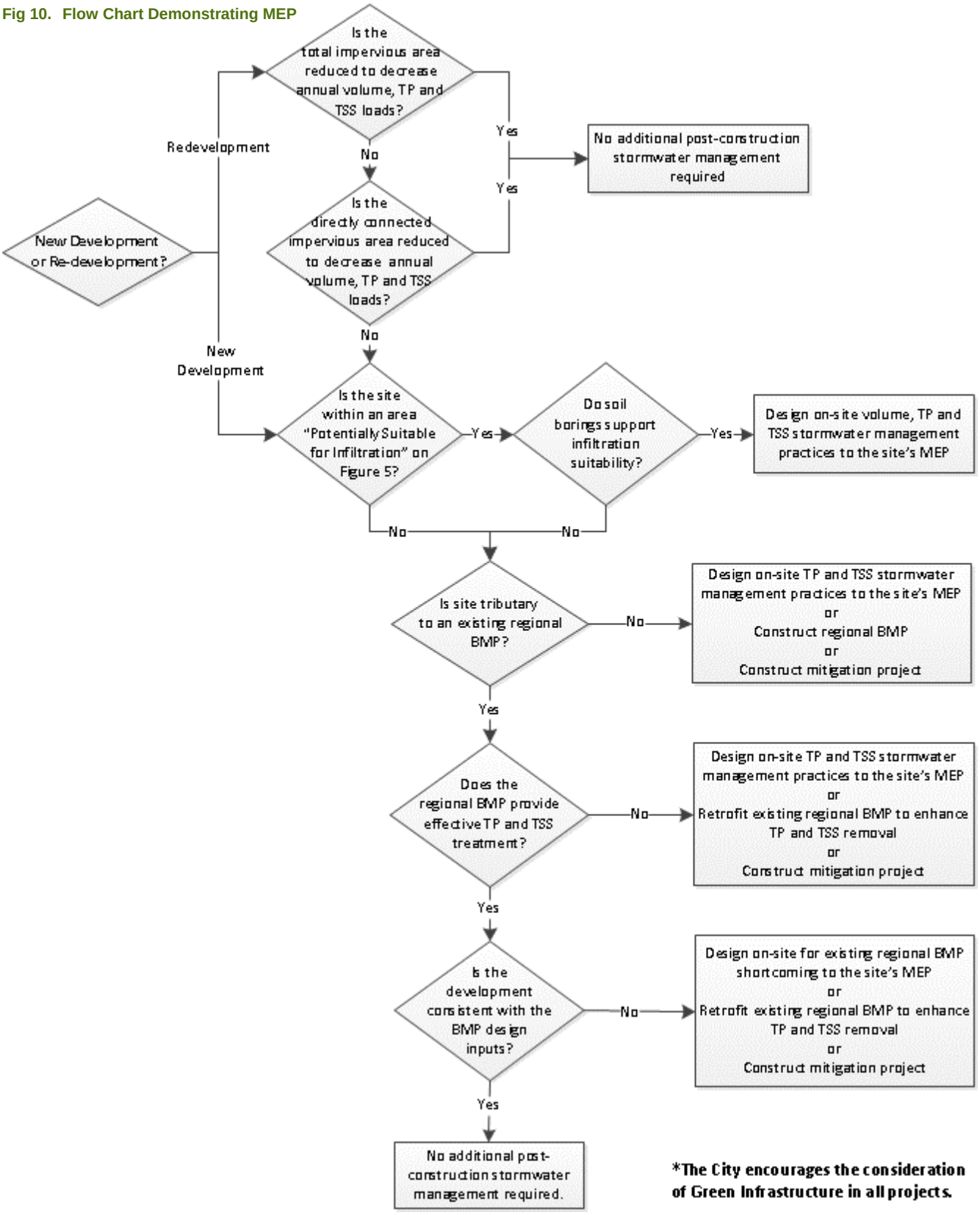
IV. <u>Sites with land disturbance of greater than or equal to one (1) acre, including projects less than one (1) acre that are part of a larger common plan of development or sale:</u>

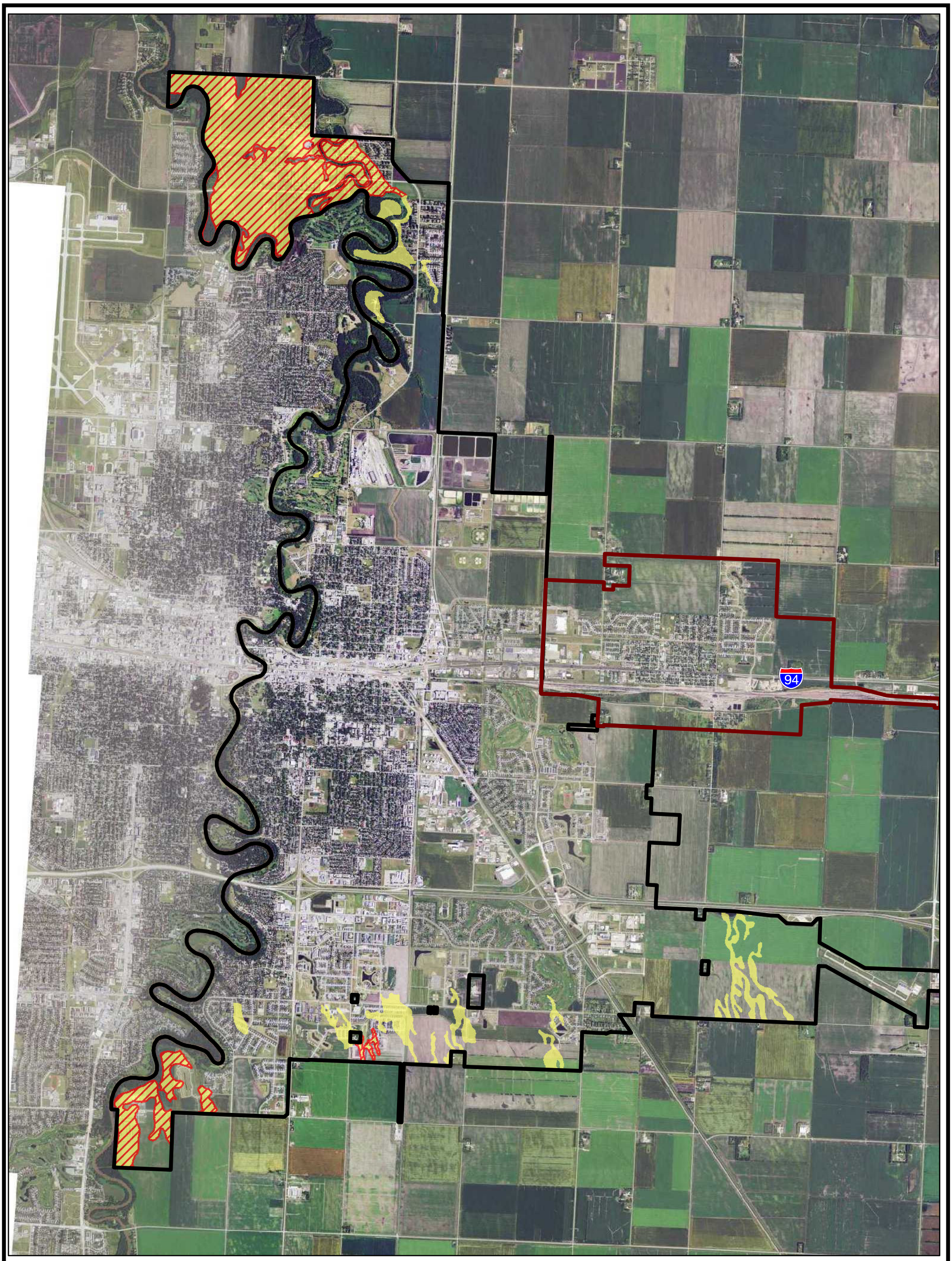
New Development: NO NET INCREASE FROM PRE-PROJECT CONDITIONS	**Approved**	**Provide Additional Information**
A. Stormwater discharge Volume, unless precluded by limitations of the MS4 permit Part III.D.5.a(3)(a)		
B. Stormwater discharge of Total Suspended Solids (TSS)		
C. Stormwater discharges for Total Phosphorus (TP)		
D. Design calculations for <u>pre-development</u> runoff (peak flows for 2-yr, 5-yr, 10-yr, 50-yr, and 100-yr events)		
E. Design calculations for <u>post-development</u> runoff (peak flows for 2-yr, 5-yr, 10-yr, 50-yr, and 100-yr events)		
F. Site drains to existing stormwater treatment facility?		
Yes ☐ If yes, skip G & H No ☐		
G. On-site treatment system location, dimensions, etc.		
H. Design calculations for proposed on-site treatment system		
Redevelopment Projects: A NET REDUCTION FROM PRE-PROJECT CONDITIONS	**Approved**	**Provide Additional Information**
A. Stormwater discharge Volume, unless precluded by limitations of the MS4 Permit Part III.D.5.a(3)(a)		
B. Stormwater discharges of TSS		
C. Stormwater discharges of TP		
D. Design calculations for pre-development runoff (peak flows for 2-yr, 5-yr, 10-yr, 50-yr, and 100-yr events)		
E. Design calculations for post-development runoff (peak flows for 2-yr, 5-yr, 10-yr, 50-yr, and 100-yr events)		
F. Site drains to existing stormwater treatment facility?		
Yes ☐ If yes, skip G & H No ☐		
G. On-site treatment system location, dimensions, etc.		
H. Design calculations for proposed on-site treatment system		

Comments:

Approved By:	Date:

Fig 10. Flow Chart Demonstrating MEP





0 0.5 1 Miles

N

Sources: City of Moorhead Comprehensive Plan, Clay County, MN

Current Moorhead City Limits
Current Dilworth City Limits
Potentially Suitable for Infiltration
Inflitration Excluded by Soil Borings

Figure 5: Inflitration Suitability

Scale:	Drawn by:	Checked by:	Project No.:	Date:	Sheet:
AS SHOWN	SMW		6019-056	1/13/2015	1 of 1

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