



## Storm Water Management Plan Checklist

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A storm water management plan/permit is required for all residential projects with three or more units, all commercial projects, and all industrial projects within the City limits and ETA. The City Engineer will not issue a storm water permit until the storm water management plan has been reviewed and approved by the City. The application for a storm water permit is separate from the site plan review application, but must be submitted in conjunction with the site plan review application. This checklist must be completed by the developer/engineer and submitted to the City with the storm water management plan.

### **Waiver Request:**

The developer may request that the City waive the submittal and review of a storm water management plan if the following conditions apply (as determined by the City Engineer):

The associated plat and its storm water management plan were approved within the past 24 months and the proposed site plan construction has not caused significant changes to the storm water management plan.

The disturbed area is less than 2,000 square feet and construction will not significantly change the drainage patterns or imperviousness.

Note that a waiver of the storm water management plan granted by the City is not a waiver of a storm water management permit, including, its permit fee requirements, or erosion control requirements.

### Storm Water Management Plan: Items to be included in the plan

Item		YES	NO	Page
1.	<b>Existing Conditions:</b> Does the storm water management plan include a map of existing conditions containing the following items?:			
A	Name, address, phone number, and email of the developer, owner, and engineer			
B	North Arrow			
C	Scale (plan view drawn at 1" = 50' or larger scale)			

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D	The section, township, and range of the project site and the location of the tract by an insert or other map at a scale sufficient to clearly identify the location of the property, and giving such information as: lot number, block number, street address, names and numbers of adjoining roads, railroads, utilities, subdivisions, towns, districts, and other identifying landmarks.			
E	Existing topography with a contour interval appropriate to the land, but not greater than 2 feet. All elevations must be provided in NAVD 1988 datum.			
F	Watershed boundary map illustrating the project site location as a subwatershed within the watershed of the larger or major drainage basin.			
G	<p>Delineation of streams, rivers, public waters, and wetlands located on or immediately adjacent to the site, and information including:</p> <ul style="list-style-type: none"> <li>● Depth of water</li> <li>● Description of vegetative cover found within the site</li> <li>● Description of general water quality (if applicable)</li> <li>● Classification given by state or federal agencies</li> </ul>			
H	<p>Delineation of existing drainage conditions, including:</p> <ul style="list-style-type: none"> <li>● Location and dimensions of existing storm water drainage systems and natural drainage patterns on and immediately adjacent to the site</li> <li>● Direction of flow, identifying those unaltered areas of the site where storm water collects or passes, and including areas where storm water flows onto the site and off site via overland flow)</li> <li>● Peak rate of flow leaving the site</li> <li>● Identification of downstream receiving streams, rivers, wetlands, or public ditches</li> </ul>			
I	<p>Description of the soils on the site, including</p> <ul style="list-style-type: none"> <li>● A map indicating the areas to be disturbed</li> <li>● Information on the suitability of the soils for the proposed project, including hydrologic soil group and hydraulic conductivity (if available)</li> <li>● Potential for erosion</li> <li>● Type of storm water management system proposed</li> <li>● Any remedial steps taken by the developer to render the soils suitable</li> </ul>			

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Item		YES	NO	Page
J	Depiction of the current extent of vegetative cover and a clear delineation of any proposed removal of vegetation.			
K	Description of the current land use of the area in which the site is located			
L	Depiction of the 10-year and 100-year floodplain, flood fringe and floodway, including water surface elevations shown in NGVD29 datum.			
M	Depiction of groundwater elevation data and the estimated ground water table in relation to surface contours.			
2. <b>Construction Site Plan:</b> Does the storm water management plan include a construction site plan showing the following items? (Note: a full site plan is required as a separate submittal to the City of Minot Engineering Department):				Page
A	Location and dimensions of all proposed land disturbing activities and any phasing or scheduling of those activities.			
B	Approximate locations of all temporary soil or dirt stockpile areas			
C	Location and description of all construction site erosion control measures necessary to meet the requirements of the Storm Water Management Ordinance (City of Minot Ordinances Ch. 28.1).			
D	Schedule of anticipated start and completion dates for each land disturbing activity, including the installation of erosion control measures			
E	Provisions for maintaining construction site erosion control measures prior to, during, and after construction, including a final seeding or stabilization plan.			
3 <b>Final Site Plan:</b> Does the storm water management plan include a final site plan (at the same scale as the Existing Conditions map) showing the following items?:				Page
A	Proposed final grading plan shown at contour intervals equivalent to the Existing Conditions map, or as required to clearly indicate the proposed changes relative to existing topography; contour intervals must be sufficient to delineate rear and side yard drainage from each parcel, and be no greater than two (2) feet (NAVD 1988 datum).			
B	Landscape plan, drawn to an appropriate scale, including dimensions and distances and the location, type, size, and description of proposed landscape materials which will be added to the site as part of development.			

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C	<p>Drainage plan for the proposed condition, including:</p> <ul style="list-style-type: none"> <li>● Sub-basins, including curve number and drainage area</li> <li>● Location and dimensions of proposed storm water drainage systems and natural drainage patterns on and immediately adjacent to the site</li> <li>● Direction of flow, identifying those unaltered areas of the site where storm water collects or passes, and including areas where storm water flows onto the site and off site via overland flow</li> <li>● Direction of flow and elevation from the rear and side yard of each parcel</li> <li>● Peak rate of flow leaving the site</li> </ul>			
D	Proposed site, alignment, and intended use of any structures to be erected on the site.			
E	Existing and proposed impervious areas and a clear delineation and tabulation of all areas which shall be paved or surfaced, including description of surfacing materials to be used.			
F	<p>Easements provided for drainage, including:</p> <ul style="list-style-type: none"> <li>● Areas of flow or detention inundated during the 100-year storm event, including identification of the water surface elevation and overflow routes</li> <li>● Areas provided for access to storm water management features</li> <li>● Off-site flowage easements (upstream and downstream)</li> </ul>			
G	The 100 Year Floodplain and floodplain easements			
H	Additional information pertinent to this particular project which, in the opinion of the developer, is necessary for the review of this project.			
4. <b>Narrative Analysis:</b> Does the storm water management plan include a narrative analysis addressing the following items?:				
A	Pre- and post-development hydrologic and hydraulic analysis.			
B	Erosion and sedimentation control use prior to, during, and after construction.			
C	Protective measures for proposed and existing structures, and water quality concerns.			
D	Feasibility of on-site infiltration to reduce runoff volume and address water quality concerns.			

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Item		YES	NO	Page
E	<p>Discussion of how the storm water management plan applies or observes the principles of Subdivision B of the City of Minot Ordinance Ch. 28, which includes the following topics:</p> <ul style="list-style-type: none"> <li>● City of Minot Storm Water Design Standards Manual</li> <li>● Planning preferences for storm water management</li> <li>● Capacity considerations</li> <li>● Floodplain considerations</li> <li>● Water quality considerations</li> <li>● Operation maintenance and inspection considerations</li> </ul>			
<b>5. Operations and Maintenance Plan:</b> Items to include in the plan				
A	An inspection schedule for all storm water management facilities, Acknowledging the City's right to inspect all storm water management facilities.			
B	Description of and schedule for regular maintenance.			
C	Criteria for determining the need for non-regular maintenance			
D	Clear definition of the party responsible for inspections and maintenance.			
E	A letter of acknowledgement or maintenance agreement signed by the developer or agent who will perform the planned maintenance activities.			
F	Discussion of the access considerations for all permanent storm water management facilities.			
G	A signed agreement acknowledging the developer's responsibility to provide final grading plans to all property owners in the development.			

### Site Imperviousness Summary:

	Pervious Area (square feet)	Impervious Area (square feet)	Total Area (square feet)
Existing Conditions			
Proposed Conditions			
Change (i.e., proposed minus existing)			

What is the area of land-disturbing activity (if less than total)?

Square Feet

Notes:

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Site Hydrologic Modeling Summary:

Existing Conditions				
Storm Event	Peak Flow (cfs) by Discharge Location*			
	Discharge 1	Discharge 2	Discharge 3	Discharge 4
5-Year, 24-hour				
10-Year, 24-hour				
100-Year, 24-hour				

Proposed Conditions				
Storm Event	Peak Flow (cfs) by Discharge Location*			
	Discharge 1	Discharge 2	Discharge 3	Discharge 4
5-Year, 24-hour				
10-Year, 24-hour				
100-Year, 24-hour				

\* if there are multiple discharge locations from the project site

The storm water management plan, including all maps, drawings, specifications, and narrative analyses, reports, and computations, must be submitted under the seal and signature of a Professional Engineer registered in the State of North Dakota.

Have all items of the storm water management plan been signed by a Professional Engineer registered in the State of North Dakota?

YES	NO
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