CHAPTER 28.1 -- STORM WATER MANAGEMENT

DIVISION 1

GENERAL PROVISIONS

Section 28.1-1. Purpose and Policy:

a) This chapter sets forth uniform requirements for storm water management systems within the City of Minot and its extraterritorial jurisdiction. In the event of any conflict between the provisions of this chapter and the provisions of another applicable law, the more restrictive standard shall prevail.

b) The objective of this chapter is to provide for adequate storm water system analysis and appropriate storm water system design as necessary to protect public and private property, water quality and existing natural resources.

c) The storm water management program provided for in this chapter includes all of the following elements:
   1) Regulation of development through the issuance of storm water plans and permits.
   2) Establishment of storm water management criteria for public underground storm sewers, artificial and natural open channel drainage systems, storm water detention and retention ponds, and private storm water drainage systems discharging into the public system.
   3) Monitoring and compliance mechanism.

Section 28.1-2. Definitions:

For the purpose of this chapter, the following terms, phrases, and words, and their derivatives, shall have the meaning as stated in this section. When consistent with the context, words used in the present tense include the future tense. Words in plural number include the singular number, and words in the singular number include the plural number. The word "shall" is always mandatory and the word "may" is always permissive.

*Base flood* means the flood having a one percent chance or probability of being equaled or exceeded in any given year (i.e. 100-year flood).

*Best management practices* means measures designed to—
   1) prevent pollutants from leaving a specific area; and
   2) reduce or eliminate the introduction of pollutants; and
   3) protect sensitive areas; and
   4) prevent the interaction between precipitation and pollutants.

*BMP’s* means best management practices.

*Control measure* means a practice or combination of practices to control soil erosion and attendant pollution, see also best management practices.
Erosion means any process that wears away at the surface of the land by the action of water, wind, ice, or gravity.

Extraterritorial jurisdiction means the area outside of the City limits over which the zoning authority of the City may be extended under state law, and over which it has in fact been extended by ordinance.

Flood fringe means that portion of the flood plain outside of the floodway.

Flood plain means the areas adjoining a water course or water basin that have been or may be covered by a base flood.

Floodway means the channel of the water course, the bed of water basins, and those portions of the adjoining flood plains that are reasonably required to carry and discharge floodwater and provide water storage during a base flood.

Hydric soils means soils that are saturated, flooded, or covered by water long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile.

Hydrophytic vegetation means macrophytic plant life growing in water, soil, or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content.

In lieu fee means a fee which the City of Minot will accept in lieu of requiring that a storm water management plan incorporate certain features, improvements, or facilities.

Land Disturbing Activity means any manmade change of the land surface including removing vegetative cover, excavating, filling, grading, mining, dredging, and drilling, but not including agricultural activities such as planting, growing, cultivating and harvesting of crops, growing and tending of gardens, and harvesting trees.

Local detention means detention provided to serve only the developing area in question and no areas outside of the development boundaries.

Outlet means any outlet including storm sewers and combined sewer overflows into a watercourse, pond, ditch, lake or other body of surface or groundwater.

Person means any individual, corporation, partnership or any other entity, public or private, capable of owning, occupying or developing land.

Retention facility means a natural or manmade structure that provides for the storage of all or a portion of storm water runoff by means of creating a permanent pool of water (e.g., wet pond).

Runoff means the rainfall or snowmelt, water flowing over the ground surface and into open channels, underground storm sewers, and detention or retention ponds.
Sediment means solid material or organic material that, in suspension, is being transported or has been moved by air, water, gravity, or ice, and deposited at another location.

Site means the area included in the legal description of the parcel of land on which storm water alteration activities, either projected or ongoing, require the submission and approval of a storm water management plan pursuant to Section 28.1-21.

Storm sewer means a pipe or conduit for carrying storm waters, surface runoff, street and wash waters, and drainage, excluding sewage and industrial wastes.

Storm water alteration activities means activities which, either while being conducted, or upon completion, or both, will result in one or more of the following:
1) An increase in the flow or discharge, per unit of time, of storm water from a given property.
2) Degradation of storm water runoff quality.
3) Restriction of flow in any storm sewer system, open ditch or natural channel, storm water easement, water body, or wetland outlet.

Some examples of storm water alteration activities include the stripping of vegetation from land preparatory to performing cut or fill operations thereon; building roads and parking lots; and altering the grade of land to increase the pitch thereof.

Storm water detention means the temporary storage of storm water runoff in ponds, parking lots, depressed grassy areas, roof tops, buried underground tanks, etc., used to delay and attenuate flow and for future or controlled release.

Storm water management permit means a permit issued by the City Engineer pursuant to Division 3.

Storm water management plan means a document provided for in Division 2.

Storm water management system means physical facilities that collect, store, convey, and treat storm water runoff in urban areas. These facilities normally include detention and retention facilities, streets, storm sewers, inlets, open channels, and special structures, such as inlets, manholes, and energy dissipaters.

Storm water retention means storage designed to eliminate or reduce the frequency of subsequent surface discharge. Wet ponds are the most common type of retention storage (though wet ponds may also be used for detention storage).

Structure means anything manufactured, constructed, or erected which is normally attached to or positioned on land, including portable and permanent structures, earthen structures, roads, parking lots, and paved storage areas.

Watercourse means the natural path for the flow of water where there is sufficient natural and accustomed runoff to form and maintain a distinct and defined channel, or an open channel.
facility that has been constructed for such purpose. This shall include any easements which have been obtained for the purposes of runoff conveyance.

*Watershed Master Plan* means a plan that an engineer/designer formulates to manage urban storm water runoff for a particular project or drainage area. It typically addresses such subjects as characterization of the existing and future site development, land uses and grading plan, peak flow rates of runoff, flow duration, runoff volumes for various return frequencies, locations, criteria and sizes of detention or retention ponds and conveyances, runoff control features, land parcels, easement locations, opinions of probable costs, measures to enhance runoff quality, salient regulations and how the plan addresses them, and consistency with secondary objectives such as public recreation, aesthetics, public safety, and groundwater recharge. This plan is either included as an integral part of a Storm Water Management Plan or it may be developed by the City Engineer and used to establish compliance criteria to regulate land development activities within a given watershed, provided the plan is reviewed and approved by the Planning Commission after allowing public comment.

*Wet pond* means a retention facility which includes a permanent pool of water used for the purposes of providing for the treatment of storm water runoff.

*Wetlands* means lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or when the land is covered by shallow water. Lands which meet all the following criteria are deemed to be wetlands:

1) They are comprised predominantly of hydric soils.
2) They are inundated and saturated by the surface or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.
3) They exhibit a prevalence of hydrophytic vegetation under normal circumstances.

Section 28.1-3. Scope of Chapter:

This chapter shall apply within the City and its extraterritorial jurisdiction.

Section 28.1-4. Waiver:

The City Engineer may waive any requirement of this chapter upon making a finding that compliance with the requirement will involve an unnecessary hardship, and the waiver of such requirement is not contrary to the objectives in Section 28.1-1. The City Engineer may impose conditions upon any waiver. For example, the City Engineer may require such dedication or construction, or agreement to dedicate or construct, as may be necessary to adequately meet the said standards and requirements.
Section 28.1-5. Mitigation Measures During Construction Activities:

Construction activities must comply with all of the following requirements (without regard as to whether such activities are specifically addressed by, or within the scope of, a storm water management plan or storm water management permit):

1) Water may not be discharged in a manner that causes erosion, sedimentation, or flooding on the site, on downstream properties, in the receiving channels, or any wetland. Consequently, water pumped from the site shall be treated by temporary sedimentation basins, grit chambers, sand filters, upflow chambers, hydrocyclones, soil concentrators or other appropriate controls as may be necessary to that end.

2) Waste and unused building materials (including garbage, debris, cleaning wastes, wastewater, petroleum based products, paints, toxic materials, or other hazardous materials) shall be properly disposed of off-site and shall not be allowed to be carried by runoff into a receiving channel, storm sewer system, or wetland.

3) A construction site shall have roads, access drives and parking areas of sufficient width, length and surfacing to prevent sediment from being tracked onto public or private roadways. Any material placed by vehicles or other construction equipment reaching a public or private road shall be removed (not by flushing) within twenty – four hours.

4) The construction contractor, including the general contractor and all subcontractors, shall be required to control oil and fuel spills and chemical discharges to prevent such spills or discharges from entering any watercourse, sump, sewer system, water body, or wetland.

5) To the extent not already addressed in the foregoing paragraphs, construction operations must include erosion and sedimentation control measures meeting accepted design criteria, standards and specifications contained in the Storm Water Design Standards Manual, or in Article IV (Excavations and Water Runoff Control) of Chapter 9 (Buildings and Housing) of the City of Minot Code of Ordinances, whichever is the more restrictive.

Section 28.1-6. Contaminating or Degrading Storm Waters Prohibited:

No person shall dispose of or make use of material amounts of—

1) fertilizer, or other substances which can degrade the quality of storm waters, such as, for example, chemicals (fertilizers, herbicides, pesticides, etc.), or petroleum based products (gasoline, oil, fuels, solvents, paints, etc.); or

2) grass clippings, leaves, or other vegetative materials, on impervious surfaces or within storm drainage systems, natural or manmade watercourses, wetlands, or wetland buffer areas, except as may be incidental to ordinary mowing or weed control within such areas.

DIVISION 2

STORM WATER MANAGEMENT PLAN

SUBDIVISION A — IN GENERAL

Section 28.1-21. Storm Water Management Plan; When Required; Exceptions:

Submission and approval of a storm water management plan shall be required for premises prior to undertaking any storm water alteration activities thereon, or prior to final plat approval of a subdivision thereof, whichever is earlier.

a) Subdivision (a) shall not apply to any of the following:
   1) Storm water alteration activities on any part of a subdivision that is included in a plat that has been approved by the City Council and recorded with the County Recorder on or before the effective date of this chapter;
   2) Storm water alteration activities on individual lots or properties located within a subdivision or plat for which a Storm Water Management Plan has already been approved or in areas included within a Watershed Master Plan area;
   3) Storm water alteration activities involving the construction of a single-family or a two-family dwelling, as long as such construction affects less than one acre of land;
   4) Storm water alteration activities on a parcel for which a building permit has been approved on or before the effective date of this chapter;
   5) Any land disturbance activity not associated with building construction that will affect less than one acre of undeveloped land;
   6) Any utility service line installations affecting less than one acre; or
   7) Emergency work to protect life, limb, or property.
   8) Activities which the City Engineer determines will only have a de minimus effect on the amount of storm water flow, the quality of storm water flow, and the capacity of any existing or planned storm water system. In making such determination the City Engineer shall examine not only the particular activities being considered for de minimus treatment, but also the cumulative effect of all other similar and related activities reasonably likely to occur in the future.

b) A Storm Water Permit may still be required for any of the activities listed in Subsection (a) as determined by the City Engineer.

c) No person shall engage in storm water acceleration activities if approval of a storm water management plan in respect to such activities is required under subsection (a), unless such approval is excused under subsection (b) or waived under Section 28.1-4.

Section 28.1-22. Application; Application Fee; Application Review Process:

a) A written application for approval of a storm water management plan shall be filed with the City Engineer.

b) Two sets of legible copies of the drawings and required information shall be submitted. Plans shall be prepared to a scale appropriate to the site of the project and suitable for performing the review.
c) The application shall be accompanied by a processing and approval fee. In the case of complex applications or regional storm water facilities, which require additional staff review time, a secondary fee schedule will be used. Fees under this subsection shall be established by the City Council.

d) The City Engineer shall approve, approve with conditions, or deny the application for approval of the storm water management plan.

e) In passing judgment on a proposed storm water management plan, the City Engineer shall consider the fidelity of the plan to the principles and procedures set forth in Subdivision B.

f) Before taking final action on an application under this section the City Engineer shall publish (at the applicant’s prepaid expense), a notice informing those persons who may have an interest in the proposed storm water management plan that they may inspect the plan at the City Engineer’s office, and submit written comments thereon, which comments, if submitted prior to a date specified in the notice, shall be considered by the City Engineer in reviewing the plan.

Section 28.1-23. Conditional Approval of a Storm Water Management Plan:

A conditional approval of a storm water management plan as authorized by Section 28.1-22(d) may include one or more of the following conditions:

1) The posting of security, such as a bond, to ensure the timely and sequentially correct performance of particular activities contemplated by the plan.

2) The acquisition, dedication, or conveyance to the City of Minot (or any combination of these) of certain lands or easements, or interests therein.

3) The payment or provision of security for future payment of an in lieu fee.

Section 28.1-24. Storm Water Management Plan — Components:

A storm water management plan shall contain as much of the following data, elements, and sub-elements as the City Engineer shall require:

1) A map of existing conditions at the site and at immediately adjacent areas, showing:

   A) The name, address and phone number of the applicant, the section, township and range, a north arrow, date and scale of drawing, and number of sheets.

   B) 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 the lot and block number, street address, the names and numbers of adjoining roads, railroads, utilities, subdivisions, towns, and districts or other defining landmarks.

   C) The existing topography with a contour interval appropriate to the topography of the land, but in no case having a contour interval greater than two feet.

   D) A watershed boundary map illustrating the project site location as a subwatershed within the watershed of the larger or major drainage basin.

   E) A delineation of streams, rivers, public waters and the presence or absence of wetlands located on and immediately adjacent to the site, including depth of water, a general description of vegetative cover found within the site, a statement
of general water quality, if applicable, and any classification given to the water body by state or federal agencies.

F) The location and dimensions of existing storm water drainage systems and the natural drainage patterns on and immediately adjacent to the site delineating in which direction and at what rate storm water is conveyed from the site, identifying the receiving stream, river, public ditch, or wetland, and setting forth those areas of the unaltered site where storm water collects or passes.

G) A description of the soils on the site, including a map indicating soil types of the areas to be disturbed, containing information on the suitability of the soils for the type of development proposed, potential for erosion, the type of storm water management system proposed, and any remedial steps to be taken by the developer or their contractor to render the soils suitable.

H) A depiction of the current extent of vegetative cover and a clear delineation of any vegetation proposed for removal.

I) A description or indication of the current land use of the area in which the site is located.

J) A depiction of the 100-year flood plains, flood fringes, and floodways.

2) A site construction plan showing:
   A) Locations 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 this ordinance.
   D) a schedule of anticipated starting and completion dates for each land disturbing activity, including the installation of construction site erosion control measures needed to meet the requirements of this ordinance.
   E) provisions for maintaining the construction site erosion control measures prior to, during, and after construction.

3) A final site plan on the same scale as the map of existing conditions showing:
   A) the proposed final grading plan shown at contours at the same interval as provided above or as required to clearly indicate the relationship of the proposed changes to existing topography and remaining features.
   B) a 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 the development.
   C) a drainage plan of the developed site delineating the direction and at what rate storm water runoff will be conveyed from the site and setting forth the areas of the site where storm water will be collected.
   D) the proposed size, alignment, and intended use of any structures to be erected on the site.
   E) a clear delineation and tabulation of all areas which shall be paved or surfaced, including a description of the surfacing material to be used.
   F) any other information pertinent to the particular project which, in the opinion of the applicant, is necessary for the review of the project.

4) A narrative analysis discussing:
   A) pre and post development hydrologic and hydraulic analysis.
Section 28.1-25. Sign-Off by Professional Engineer:

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


SUBDIVISION B — PRINCIPLES AND PRACTICES

Section 28.1-41. Storm Water Design Standards Manual:

The storm water design standards manual, as adopted and amended by the City of Minot, is adopted herein by reference thereto. The manual contains the principal standards and design criteria for developing an effective and acceptable storm water management plan. The manual contains:

1) Details about the contents of a storm water management plans which are additional to those set forth in this Chapter;

2) Criteria for hydrologic evaluations, the design of storm water management system facility components, water quality protection standards, instructions for the development of an erosion and sedimentation control plan, and requirements for easements and right-of-way.

3) A discussion of operation and maintenance requirements, standard forms to be used, and standard construction details adopted by the City.

Section 28.1-42. Planning Preferences:

The narrative analysis component of the storm water management plan shall discuss whether the plan incorporates the following preferences in storm water management and control, or why such preferences were deemed to be not appropriate:

1) The natural infiltration of precipitation and runoff on-site, if suitable soil and geological conditions are available, using to that purpose as much natural or vegetated area on the site as possible, while minimizing impervious surfaces, and directing runoff to vegetated areas rather than onto adjoining streets, storm sewers and ditches.

2) The use of natural topography and land cover such as wetlands, ponds, natural swales and depressions as they exist before development to the degree that they can accommodate the additional water flow without compromising the integrity or quality of these natural features.
3) The use of storm water detention facilities.
4) The use of storm water retention facilities.

Section 28.1-43. Capacity Considerations:

The storm water management plan shall consider:

1) The hydraulic capacities of downstream natural channels, reaches, storm sewer systems, and streets, in order to determine whether they have sufficient conveyance capacity to receive and accommodate post-development runoff discharges and volumes without causing:
   A) channel erosion;
   B) increased property damage; or
   C) any increase in the established base flood plain elevation.

2) The adequacy of any outlet used as a discharge point.

3) The requirement that in no circumstances shall the 50-year developed peak flow exceed the 50-year existing peak flow (except as specifically allowed by the City Engineer).

Section 28.1-44. Operation, Maintenance, and Inspection Considerations:

Insofar as a storm water management plan calls for permanent improvements on private property which are part of a storm water management system, due regard shall be paid to:

1) The desirability of a design which minimizes the need for maintenance; and
2) the right of the City Engineer to inspect such improvements from time to time and, to that end, the need of a legal right of access to them, such as by easements or other property interests.

Section 28.1-45. Construction Plans and Specifications:

When the construction of improvements called for in a storm water management plan are of sufficient magnitude and consequence to, in his judgment, so warrant, the City Engineer shall require that such plan include a drawing or drawings delineating the erosion and sedimentation management plan, including details of silt fences, storm drain inlet protection, erosion control facilities and other BMP’s. In addition the construction specifications shall contain technical provision describing erosion, sedimentation, and water control requirements to be utilized during and after construction, as well as define the entities responsible for the installation and maintenance of the BMP’s. See Section 28.1-41.

Section 28.1-46. Other Standards:

In the event that other standards, either state or federal, apply to matters within the scope of this subdivision, the more restrictive, or most restrictive, as the case may be, standard shall apply.
Section 28.1-47. Phasing Allowed:

On a case by case basis, and in the interest of economy and practicality, the City Engineer may allow a storm water management plan to be submitted and approved in phases, with such interim storm water alteration activities being performed in the interim between phases as allowed or required in the plan itself.

Section 28.1-48. Plan-Specific Enforcement Mechanisms:

On a case by case basis the City Engineer may require enforcement mechanisms specific to a particular storm water management plan, which may include without limitation any of the following:

1) The posting of security such as a performance bond, cash bond or letter of credit.
2) The use of the storm water management permit system provided for in Division 3.
3) The filing of a special assessment petition with the City to guarantee construction of storm water management facilities.
4) The withholding of building permits until the facilities are completed or otherwise guaranteed.

Section 28.1-49. In Lieu Fee:

The City Engineer, subject to the approval of the City Council, may approve a storm water management plan which provides for the payment of a specified in lieu fee instead of the provision for, and performance of, certain work which otherwise would form part of such plan. Typically, the in lieu fee would be applied to the cost of a regional storm management plan or project to which a sub-watershed drains. Notwithstanding the employment of such a fee, the plan may still provide for and require the dedication or retention of easements or other interest in land as may be necessary in the future for the full implementation of the plan.

Section 28.1-50 -- 28.1-60. Reserved.

SUBDIVISION C – PERFORMANCE

Section 28.1-61. Storm Water Management Plan Compliance:

a) No person having the authority to do otherwise shall perform, or allow the performance, of acts which are contrary to or inconsistent with an approved storm water management plan, or fail to perform in good faith acts required by the plan.

b) An approved storm water management plan shall be considered a covenant running with the land, enforceable by injunctive action or otherwise by the City of Minot, or by persons directly affected by its performance or non-performance, or the public generally. The presence of this civil remedy shall not be construed as precluding a criminal remedy under subsection (a) or otherwise.
Section 28.1-62. Compliance With Other Requirements:

The contents of an approved storm water management plan shall not be construed as purporting to excuse:

1) requirements imposed elsewhere in this Zoning Ordinance or in the City of Minot Code of Ordinances; and

2) the obtaining of required permits from other governmental agencies having any jurisdictional authority over the work to be performed. (Typically, such agencies would include, but not limited to the Ward County Water Resource District, the Ward County Engineer's Office, the State Water Commission and State Engineer's Office, the North Dakota State Department of Transportation, the State Health Department, the State Historical Preservation Office, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, Federal Emergency Management Agency, and possibly others not listed here.)

Section 28.1-63. As-Built Plan:

Upon completion of all work under an approved storm water management plan, or more frequently as prescribed in the plan itself, the person or persons acting under the authority of such plan shall file with the City Engineer an “as-built” plan or plans to document any changes or material modifications to the original storm water management plan concept. If no significant or material changes occurred between the approved plan and final construction, the “as-built” plan need not be submitted to the City Engineer but must be retained and made available for inspection and copying by the City Engineer upon request.

Section 28.1-64. Right of Inspection and Access:

The City Engineer shall have the right of access, including the right of entry, and the right of inspection of all work being performed pursuant to a storm water management plan, and thereafter shall continue to exercise such rights to the extent so provided in the plan itself.

Section 28.1-65. Amendment of Storm Water Management Plan:

a) The City of Minot and any person subject to the obligations imposed by an approved storm water management plan may amend the plan at any time by written agreement.

b) The City of Minot, pursuant to its reserved police powers, may unilaterally, after it has provided reasonable notice and an opportunity to be heard, amend an approved storm water management plan if it initially attempts in good faith to achieve such amendment pursuant to subsection (a) and is unable to do so, and provided that the amendment is designed and intended to protect the public interest and does not impose undue burdens upon any private party who may have relied to its detriment upon the approved plan.

DIVISION 3

STORM WATER MANAGEMENT PERMIT

Section 28.1-81. Storm Water Management Permit; When Required and Nature Thereof:

a) As contemplated by section 28.1-48, a storm water management permit may be required as part of an approved storm water management plan.

b) The permit is designed to be used as an enforcement mechanism in those cases where ongoing, detailed, precise, and intensive control over activities affecting the discharge of storm water is desired. For example, such a permit may require monitoring of certain storm water retention facilities at stated intervals using protocols and procedures set forth in the permit.

c) The storm water permit shall specify the restrictions sought to be imposed thereby. A permit runs with the property it covers and is transferable to new successors in title in its entirety or by parcel, with each parcel being subject to the permit and any conditions which apply to that parcel.

d) The storm water permit shall state as part thereof its duration, and whether it is subject to renewal, and, if so, upon what terms and conditions.

Section 28.1-82. Amendment of Storm Water Management Permit:

a) The City of Minot and the permittee under a storm water management permit may amend the permit at any time by written agreement.

b) The City of Minot, pursuant to its reserved police powers, may unilaterally, after it has provided reasonable notice and an opportunity to be heard, amend a storm water management permit if it initially attempts in good faith to achieve such amendment pursuant to subsection (a) and is unable to do so, and provided that the amendment is designed and intended to protect the public interest and does not impose undue burdens upon the permittee.

Section 28.1-83. Enforcement of Storm Water Management Permit:

a) No permittee under a storm water management permit shall perform, or allow the performance, of acts which are contrary to or inconsistent with the storm water management permit, or fail to perform in good faith acts required by such permit.

b) An approved storm water management permit shall be considered a covenant running with the land, enforceable by injunctive action or otherwise by the City of Minot, or by persons directly affected by its performance or non-performance, or the public generally. The presence of this civil remedy shall not be construed as precluding a criminal remedy under subsection (a) or otherwise.

Section 28.1-84 to 28.1-100. Reserved.
(Supplement One)