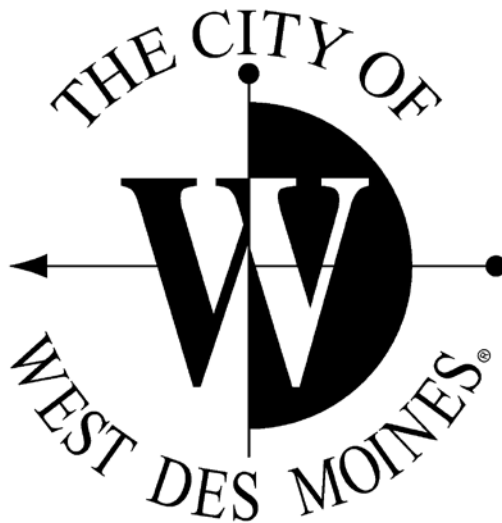


# **STORM WATER** **MANAGEMENT PLAN**

(Minor & Major Modifications, Final Plats, Site Plans,  
Permitted Conditional Use Permits, Specific Plans within the Town Center Overlay District,  
and Site Plans within the Town Center Overlay District)



Public Works Department  
4200 Mills Civic Parkway  
West Des Moines, IA 50265-0320  
515-222-36480 (phone)  
515-273-0603 (fax)  
[www.wdm.iowa.gov](http://www.wdm.iowa.gov)

Additional copies of this application and the appropriate "project submittal requirements"  
can be found on the City's website: <http://wdm.iowa.gov>

City Of West Des Moines  
**STORM WATER MANAGEMENT PLAN REQUIREMENTS**

Required with the submittal of:

- Specific Plans within the Town Center Overlay District;
- Site Plans within the Town Center Overlay District;
- Final Plats;
- Permitted Conditional Use Permits;
- Site Plans;
- Major Modifications; and
- Minor Modifications (only needed for projects that increase or modify existing impervious surfaces).

The following are guidelines intended to assist the Design Engineer in the development of a Storm Water Management Plan (SWMP); they are not intended to be all inclusive and additional information or details may be required. It is the Design Engineer's responsibility to assure that the SWMP developed for the proposed project is valid, feasible, and functional. Additionally, it is the design engineer's responsibility to familiarize him/herself with all applicable WDM design standards to assure that storm water management proposed is in compliance with said design standards. The SWMP must be certified by a Professional Engineer licensed in the State of Iowa.

The intent of a Storm Water Management Plan is to demonstrate **in detail** how storm water runoff will be managed in compliance with current City of West Des Moines design standards. The storm water management plan should define specifically what storm water management methods or facilities will be used and where they will be located. Calculations supporting the proposed management methods will need to be included in the SWMP document.

If the development proposals is for a site in which either a MSWMP or a SWMP has already been completed, the SWMP for the development proposal under review must illustrate alignment with the previously submitted and approved management plan. For example: the SWMP for a site plan development proposal would need to be in alignment with the management plan submitted in conjunction with the subdivision plat. It will be necessary for the design engineer to provide detailed calculations to illustrate compliance to the previously approved management plan.

Your Storm Water Management Plan should be bound in a loose leaf plastic binder and **must** include the following:

**A. Cover Sheet which includes:**

1.  Name of project.
2.  Identification of the enclosed documentation as 'Storm Water Management Plan'.
3.  Date.
4.  Space for insertion of project number once assigned by the City.
5.  Name and contact information of consulting firm and engineer preparing the Master Storm Water Management Plan.
6.  Engineer's Professional Certification (final copy signed in contrasting ink).

**B. Table of Contents**

**C. Project Description Page which includes:**

1.  A description of existing site conditions.
2.  A description of existing site drainage patterns.
3.  Description and details of the proposed development.
4.  Description and explanation of storm water analysis utilized (computer generated hydrographs, etc.).
5.  A summary of the proposed storm water management plan which outlines how it is in compliance with current West Des Moines design standards. The summary should indicate how key parameters (allowable developed release rates, detention/culvert freeboard requirements, etc.) contained within the WDM design standards are being accommodated and met.

**D. Calculations, including as applicable:**

1.  Allowable site release rates.
2.  Runoff hydrographs.
3.  Storm water detention volume requirement.
4.  Storm water detention volume proposed.

5.  Outlet control calculations (orifice, weir, etc.).
6.  Critical design elevations (high water detention elevation, etc.).
7.  Pipe capacity calculations.
8.  Swale/ditch conveyance capacity calculations including analysis of high water levels, velocities, etc.
9.  Supporting calculations for proposed erosion control/energy dissipation measures including calculations verifying adequacy of proposed erosion control/energy dissipation measures for storm sewer/pond outlets, culvert inlets and outlets, swales/ditches, etc.

**E. Existing Drainage Contour Map** which illustrates and labels drainage patterns, basins, swales/ditches, creeks, rivers, streams, etc., and any other relevant on-site or off-site information.

**F. Proposed Drainage Contour Map** which illustrates and labels drainage patterns, areas for which storm water detention will be provided, conveyance methods (pipes, swales, etc.), detention areas, post development drainage patterns, and any other relevant on-site or off-site information.

**G. Project Summary identifying:**

1.  Method(s) of proposed storm water management.
2.  Key design conclusions.
3.  Discussion of how the proposed management methods comply with current WDM design standards.
4.  Post development storm water impacts to adjacent private properties.
5.  Mitigation measures for any potential impacts.

As of the writing of these guidelines (January 2004), the City of West Des Moines utilizes the **Des Moines Metro Design Standards**. Please contact a development review engineer within the Public Works Department to confirm that these standards are still being utilized for storm water management.