

Amendments to Chapter 88.05 of the Story County Land Development Regulations for Stormwater Management

5. Post-Construction Stormwater Management and Water Quality. Stormwater runoff increases nonpoint source pollution, flooding, siltation, stream temperatures, and streambank erosion. The following requirements shall apply to development in Story County to ensure site design minimizes the generation of stormwater runoff and maximizes pervious areas, provide a single, consistent set of performance goals that apply to all developments, protect functional values of all types of natural watercourses, protect life and property from dangers associated with flooding, maintain existing flow patterns, and promote infiltration and recharge of groundwater.
- A. Development that meets any of the following thresholds shall be required to submit a Stormwater Management Plan, in addition to other applicable development permit applications, prior to commencing development activities:
- (1) Development or cumulative development that disturbs an area one-acre or greater in size.
 - (2) Development that will result in the division of land into more than four development lots.
- B. Criteria for Stormwater Management. Developments required to submit a Stormwater Management Plan shall be designed, constructed, and maintained to achieve the purposes of this Ordinance, as stated above, and to prevent flooding, minimize stream channel impacts, and protect water quality in accordance with the following criteria for stormwater management. See the Iowa Stormwater Management Manual for details on the calculation of the criteria, as applicable.
- (1) All development required to submit a Stormwater Management Plan that develops or disturbs an area of one-acre to five acres shall meet the following criteria:
 - a. The site shall be designed to manage the water quality volume of a rainfall depth of 1.25 inches and corresponding recharge volume through infiltration-based BMPs or low impact development (LID) practices.
 - b. To protect stream channels, the site shall be designed to provide 24-hours of extended detention of the channel protection volume determined for the 1 year, 24-hour storm.
 - (2) All development required to submit a Stormwater Management Plan that develops or disturbs an area of five acres or more shall meet the following criteria:

- a. The criteria required for development of one to five acres, as detailed in the Story County Land Development Regulations Section 88.05(5)(B)(1).
 - b. The peak discharge rate from all storms from the 5-year to the 100-year, 24-hour event shall not be greater than pre-settlement discharge rates to protect from overbank and extreme flooding.
- (3) All developments requiring a Stormwater Management Plan shall implement LID practices to the fullest extent possible including minimizing the area developed, protecting existing natural resources, minimizing soil compaction and impervious cover, and completing soil restoration, native revegetation, and riparian buffer restoration.
- (4) The preferred conveyance strategy is to transport, wherever possible, untreated and treated runoff in conveyance facilities open to the atmosphere (e.g. swales, vegetated buffer strips, energy-dissipating structures, etc.), rather than through enclosed pipes, so as to decrease runoff velocity, allow for natural infiltration, allow suspended sediment particles to settle, and to remove pollutants.
- C. Contents of the Stormwater Management Plan. The Stormwater Management Plan shall include a site plan, narrative, and other attachments necessary to illustrate how runoff and associated water quality impacts resulting from the development is proposed to be managed meeting the requirements of this chapter and following the Iowa Stormwater Management Manual or other professionally accepted BMPs and/or through LID practices. It shall also:
 - (1) Be prepared by a licensed professional engineer (PE) or landscape architect.
 - (2) Identify pre-development and post-development land use, including on and off-site features that may affect or be impacted by the stormwater management requirements for the development. Features may include:
 - a. Proposed and existing site improvements including lot divisions, building footprints, easements, and other impervious surfaces or areas of land disturbance.
 - b. Existing soil conditions.
 - c. Existing site topography with contours at two-foot intervals. Light Detection and Ranging (LIDAR) contour maps may be requested from the Story County Planning and Development Department or a survey of the site's topography may be completed and submitted to determine slopes.

- d. Natural and artificial watercourses, wetlands, floodplains, lakes, existing stormwater storage facilities, woodlands, native vegetation, or other natural resources.
 - e. Proposed or existing drinking water wells, septic systems/drain fields, public wellheads and wellhead protection areas, hot spots, and areas with shallow bedrock.
- (3) Identify the proposed stormwater management BMPs or LID practices selected for the site, their location, landscaping and stabilization to prevent their impairment, and sufficient engineering analysis to show that the proposed BMPs are capable of achieving the criteria for stormwater management in Section 88.05(5)(B) and that they are designed in accordance with the Iowa Stormwater Management Manual, or other professionally accepted methods. This analysis shall include, but is not limited to, curve numbers and runoff volumes and rates for a design storm pre-settlement and post-development with the selected stormwater management BMPs.
 - (4) Describe the maintenance procedures required for each selected practice and the party responsible for maintenance and their contact information if different from the property owner or permit applicant. Such maintenance procedures shall keep the stormwater management BMPs or LID practices functioning in an effective manner.

D. Inspections and Responsibility.

- (1) In no instance shall the acceptance the Stormwater Management Plan by Story County be construed as approval of the design, design methods, design calculations, detention facilities plan, construction, or concurrence by Story County that all design criteria have been satisfied. Story County shall not be liable for damages resulting from stormwater runoff or discharge of stormwater detention facilities.
- (2) An inspection for compliance with submitted Stormwater Management Plan shall be conducted by Planning and Development Staff as part of the required final inspection for a zoning permit or if no zoning permit is required, after BMPs have been installed.
- (3) Any amendments or changes to a Stormwater Management Plan shall be communicated to the Planning and Development and submitted as part of an amended plan to prior to their implementation on-site. All amendments shall comply with the requirements of this chapter.

E. Exemptions. The following exemptions to the Stormwater Management Plan requirement may apply; however, such uses shall not be exempt from adopted Floodplain Management Ordinance (codified in Chapter 80 of this Code of Ordinances) or other State or Federal requirements.

- (1) Agricultural. Except to the extent required to implement Section 335.2, Code of Iowa, the Stormwater Management Plan requirement shall not apply to development that is primarily adapted, by reason of nature or area, for use for agricultural purposes, while so used.
- (2) County Engineer. The County Engineer shall not be required to submit a Stormwater Management Plan for the maintenance and/or construction of public roads and public road right-of-way.
- (3) Maintenance of Legally Established Development. The maintenance of development that has legally occurred prior to the adoption of this Ordinance (Ord. 27x), shall not be counted towards the threshold for submitting a Stormwater Management Plan of one-acre disturbed or cumulative one-acre disturbed if the footprint of the maintenance work is within or the same area as that previously disturbed.
- (4) Infiltration of Water Quality Volume. When infiltration of the Water Quality Volume is infeasible due to the natural or existing physical characteristics of a site the recharge volume shall be achieved to the maximum extent practicable and the site shall be designed to remove 80 percent of Total Suspended Solids from the stormwater runoff through a combination of BMPs. Site limitations may include the size of the drainage area, shallow bedrock or shallow soil depth to groundwater (less than two feet), being within 250 feet of a private well or 1,000 feet of a municipal well, being within 50 feet up-gradient or 10 feet down-gradient of basement foundations, being within 50 feet of septic systems/drain fields, being within NRCS Group D (with a minimum infiltration rate less than .52 inch/hour), or where hotspots or contaminated soil make infiltration-oriented BMPs hazardous. The site limitations shall be identified in the Stormwater Management Plan along with the selected BMPs and their sizing/calculations in accordance with the Iowa Stormwater Management Manual.
- (5) Waiver of Overbank and Extreme Flooding Criteria. The overbank and extreme flooding criteria in Section 88.05(5)(B)(2)(b) shall be waived if it is demonstrated through a Downstream Hydrologic Assessment that:
 - a. There will be no increase in the total peak discharge from the developed site during the storm events up to the 100-year, 24-hour event.
 - b. The structural BMPs required to meet these criterion increase the peak flows at the outlet or tributary junctions.