

Definitions—to be added to Chapter 85 of the Story County Land Development Regulations

“Best Management Practices” (BMPs) means actions taken to keep soil and other pollutants out of streams and lakes, designed to protect water quality and to prevent new pollution.

“Best Management Practices, Erosion Control” means BMPs that are designed to intercept precipitation and prevent movement of soil particles. Erosion control BMPs include staging construction work, minimizing total area disturbed, protecting existing vegetation, and temporarily or permanently stabilizing disturbed areas. Temporary erosion control stabilization BMPs may include compost blankets, temporary rolled erosion control products, erosion control mulching, surface roughening, temporary erosion control seeding, and grass channels. Permanent erosion control stabilization BMPs may include sodding and permanent seeding.

“Best Management Practices, Sediment Control” mean BMPs that are designed to capture soil particles after they have been dislodged and are carried from the site. Products designed for this include silt fences, filter socks, check dams and sedimentation ponds

“Best Management Practices, Stormwater Management” means the use of BMPs that are designed to reduce stormwater runoff, runoff pollutant loads, discharge volumes, and peak flow discharge rates that affect water quality and habitat.

“Buffer” means an area of land and/or a vegetative area of desirable trees, shrubs and herbaceous plants that exists and/or is established to separate different land uses or mitigate a risk associated with land use or structure.

“Channel Protection Volume” means the volume of runoff generated by a 1-year, 24-hour duration storm event to prevent habitat degradation and erosion that may cause downstream enlargement and incision due to increased frequency of bank-full and near-bank-full flows. See the Iowa Stormwater Management Manual for details on calculating the channel protection volume.

“Common Development Plan” means a contiguous area where multiple separate and/or distinct land disturbing activities may be taking place at different times, on different schedules, but under one proposed plan. One plan is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur or are proposed.

“Compaction” means the process by which the soil grains are rearranged to decrease void space and bring the grains into closer contact with one another and thereby increase the weight of solid material per cubic foot and decrease permeability.

“Concentrated Flow” means flow that gains speed and increases depth, forming small channels. There are two types of concentrated flow: shallow concentrated flow and channelized flow. Shallow concentrated flow forms small channels of water, from several inches to a foot in width. As these small rills of water come together, they form streams and eventually rivers; this is channelized flow.

“Curve Number (CN)” means an index that represents the runoff potential from a storm event for a specific land area for use in runoff prediction models. Curve numbers range from 0 to 100, with a smaller curve number representing low runoff potential and a higher curve number representing high runoff potential. The factors combined to determine the curve number include Hydrologic Soil Group (HSG); cover type, such as pavement, grass, bare soil, etc; treatment or a modification of cover type based on the management of the cover, such as contouring of agricultural lands, or mowing of urban parks; and hydrologic condition, representing the condition of cover type, including the density of plantings or degree of surface roughness. For the curve number to use in stormwater management BMPs, see the definition of pre-settlement condition and Table 85-3.

“Development” means any manmade change to improved or unimproved real estate including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations.

“Development, Cumulative” means development that occurs at different intervals of time on the same site or development that occurs different intervals of time or the same time on adjacent sites that are part of a common development plan.

“Disturbance, Land” means any grading, digging, cutting, scraping, or excavating of soil, placement of fill materials, paving, construction, substantial removal of vegetation, or any activity which bares soil or rock or involves the diversion or piping of any natural or man-made watercourse.

“Downstream Hydrologic Analysis” means an analysis performed to determine if there are any additional impacts in terms of peak flow increase or downstream flooding while meeting overbank and extreme flooding design. Such an analysis is recommended for larger sites (i.e., greater than 50 acres) to size facilities in the context of a larger watershed. The analysis is performed at the outlet(s) of the site, and downstream at each tributary junction to the point(s) in the conveyance system where the area of the portion of the site draining into the system is less than or equal to 10% of the total drainage area and in accordance with the Iowa Stormwater Management Manual.

“Extreme Flood Protection” means managing the effects of the 100-year, 24-hour storm event on the stormwater management system, boundaries of the 100-year floodplain, and adjacent property by controlling the peak discharge rate to pre-settlement rate. See the Iowa Stormwater Management Manual for details on the calculation of the rate.

“Hotspot” means areas where land use or activities generate highly contaminated runoff, with concentrations of pollutants such as trace metals or hydrocarbons in excess of those typically found in stormwater. Examples of hotspots include gas stations, vehicle service and maintenance areas, salvage yards, material storage sites, garbage transfer facilities, and commercial parking lots with high-intensity use.

“Hydrologic Soil Group” means a Natural Resource Conservation Service (NRCS) designation given to different soil types to reflect their relative surface permeability and infiltrative capability. Designations consist of four classifications (A, B, C, and D) grouped according to soil infiltration rates from high infiltration rates in Group A to very low infiltration rates in Group D.

“Low-Impact Development (LID)” means practices that mimic or preserve natural drainage processes to manage stormwater through infiltration, evapotranspiration, surface storage, and increased

travel time of runoff. These practices include, but are not limited to, protection and restoration of open space and natural resources areas, minimizing soil compaction, reduction and disconnection of impervious surfaces, and encouraging infiltration and soil storage of runoff through grass channels, bioswales, bioretention cells and rain gardens.

“Overbank Flood Protection” means providing on-site stormwater detention to limit runoff peak flow rates from the 5-year, 24-hour storm event to pre-settlement rates to prevent downstream surcharge of conveyance systems and reduce overbank flooding. See the Iowa Stormwater Management Manual for details on the calculation.

“Peak Discharge Rate” means the maximum rate of stormwater flow at a particular location following a storm event, as measured at a given point and time in cubic feet per second (CFS).

“Post-development condition” means the extent and distribution of land cover types anticipated to occur after development activities are completed that impact runoff and infiltration.

“Pre-settlement condition” means, for stormwater design calculations, assuming the pre-development condition is a natural, undisturbed condition and the corresponding curve number is for a meadow in good condition for a site’s hydrologic soil group. A smaller curve number represents low runoff potential and a higher curve number represents high runoff potential Table 85-3 contains the curve numbers for a meadow in good condition for a given hydrologic soil group.

Table 85-3 Pre-Settlement Condition Curve Numbers by Hydrologic Soil Group	
Hydrologic Soil Group (HSG)	Meadow
A	30
B	58
C	71
D	78

Source: Iowa Stormwater Management Manual Chapter Three, Section Five.

“Staging” means stabilizing one part of the site before beginning development on another to minimize the time and amount of soil exposed and therefore the movement of soil.

“Stormwater” means storm runoff, snowmelt runoff, and surface runoff and drainage.

“Stormwater Best Management Practices, Infiltration-Based” means a natural or constructed feature (bed, trench, basin, well, etc.) that captures, temporarily stores, and infiltrates the design volume of water.

“Stormwater Infiltration” means the process by which rainfall and stormwater runoff flows from the land surface into and through the subsurface soil. Stormwater infiltration occurs when rainfall lands on pervious surfaces, when runoff flows across pervious surfaces, and when runoff is collected and directed to a stormwater infiltration Best Management Practice (BMP).

“Runoff” means that portion of the precipitation on a drainage area that is discharged from the area by flowing over the ground surface.

“Time of Concentration” means the time needed for water to flow from the most remote point in a watershed to the point of interest within the watershed. It is a function of topography, geology and land use within the watershed and is computed by summing all the travel times for consecutive components of the drainage conveyance system.

“Recharge Volume” means a portion of the water quality volume recharged to maintain existing groundwater recharge rates at development sites to preserve existing water table elevations, thereby maintaining the hydrology of streams and wetlands during dry weather. The volume of recharge that occurs on a site depends on slope, soil type, vegetative cover, precipitation, and evapotranspiration. See the Iowa Stormwater Management Manual for details on the calculation.

“Topsoil” means the upper layer of soil, the A-horizon, and for the purposes of restoration, shall meet standards for Soil Quality Management and Restoration in the Iowa Stormwater Management Manual.

“Watercourse” means any natural or improved stream, river, creek, ditch, channel, canal, conduit, gutter, culvert, drain, gully, or swale in which waters flow either continuously or intermittently.

“Water Quality Volume” means the runoff resulting from a rainfall depth of 1.25” (90% of the rainfall events in Iowa are of this depth or less) that is required to be captured and treated. By managing these storms, the majority of water volume will be treated and many of the “first flush” pollutants of concern will be effectively managed on-site. See the Iowa Stormwater Management Manual for details on the calculation.