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

"Best Management Practices" (BMPs) means ~~actions~~ any structural or non-structural measure ~~taken to keep soil and other pollutants out of streams and lakes~~, designed to protect water quality, control water quantity, and to prevent new pollution. Non-structural measures include schedules of activities, prohibitions of practices, maintenance procedures, treatment requirements, operating procedures, and other management practices to control site runoff, spillage or leaks, sludge or waste disposal, drainage from raw material storage, or measures that otherwise prevent or reduce the pollutant loading of receiving waters.

"Best Management Practices, Erosion Control" means BMPs that are designed to intercept precipitation and prevent movement of soil particles. Erosion control BMPs may include staging construction work, minimizing total area disturbed, protecting existing vegetation, and temporarily or permanently stabilizing disturbed areas.

"Best Management Practices, Sediment Control" means BMPs that are designed to capture soil particles after they have been dislodged and are carried from the site. Products designed for this may include silt fences, filter socks, filter berms, wattles, sediment basins, sediment traps, inlet protection, flocculants, floating silt curtains and other practices identified in the Iowa Statewide Urban Design and Specifications (SUDAS) Design Manual Chapter 7 Erosion and Sediment Control or other professionally accepted BMPs.

"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. Practices may include those identified in the Iowa Stormwater Management Manual or other professionally accepted BMPs.

"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 managing the volume of runoff generated by a 1-year, 24-hour duration storm event by capturing the runoff volume and slowly releasing it over a period of no less than 24-hours 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.

"Construction site" means a site or common plan of development or sale on which construction activity, including clearing, grading and excavating, results in soil disturbance. A construction site is considered one site if all areas of the site are contiguous with one another and one entity owns all areas of the site

"**Curve Number (CN)"** means an index for use in runoff prediction models that represents the runoff potential from a storm event for a specific land area. Curve numbers range from zero 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 pre-development curve number to use in stormwater design calculations, see the definition of pre-settlement condition.

"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.

"Disturbance, Land" means actions taken to alter the existing vegetation and/or underlying soil of a site, such as clearing, grading, site preparation (e.g., excavating, cutting, and filling), soil compaction, and movement and stockpiling of top soils.

"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.

"Environmentally Sensitive Area" means areas including wetlands, lakes, reservoirs, streams, and other areas as identified on the Restoration and Protection maps available on the Story County website under watershed planning.

"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, adjacent property, and

downstream facilities and property through detention controls and/or floodplain management. 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.

"Iowa Statewide Urban Design and Specifications" means the manual for public improvements, common urban design standards and construction specifications managed and maintained by the Institute for Transportation at Iowa State University

"Iowa Stormwater Management Manual (ISWMM)" means the manual collaboratively developed by the Iowa Department of Natural Resources (IDNR) and the Center for Transportation Research and Education (CTRE) at Iowa State University and updated by the Iowa Storm Water Education Program that contains the sizing criteria, design and specification guidelines and BMPs that address stormwater quality and quantity management.

"**Low-Impact Development (LID)**" means an approach to stormwater management that attempts to mimic pre-development conditions by compensating for losses of rainfall abstraction through infiltration, evapotranspiration, surface storage, and increased travel time to reduce excess 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 peak discharge control of the 5-year storm event such that the post development peak rate does not exceed the downstream conveyance capacity and/or cause 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 (58).

"Stabilization, Final" means an Erosion Control BMP where when all soil disturbing activities at the site have been completed, a uniform perennial vegetative cover with a density of 70%, sufficient

to preclude erosion, for the entire disturbed area of the permitted project has been established or equivalent stabilization measures have been employed or which has been returned to agricultural production. Permanent erosion control stabilization BMPs may include sodding and permanent seeding or other practices identified in the Iowa Statewide Urban Design and Specifications (SUDAS) Design Manual Chapter 7 Erosion and Sediment Control or other professionally accepted BMPs.

"Stabilization, Temporary" means an Erosion Control BMP where exposed soils or disturbed areas are provided temporary vegetative and/or non-vegetative protective cover to prevent erosion and sediment loss until either final stabilization can be achieved or until further construction activities take place to re-disturb an area. Temporary stabilization may include temporary seeding, geotextiles, mulches, vegetative filter strips and other techniques to reduce or eliminate erosion as identified in the Iowa Statewide Urban Design and Specifications (SUDAS) Design Manual Chapter 7 Erosion and Sediment Control or other professionally accepted BMPs.

"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, 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. Practices may include those identified in the Iowa Stormwater Management Manual or other professionally accepted BMPs

"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.

"**Unified Sizing Criteria"** means an integrated approach to managing stormwater runoff quality and quantity by addressing the adverse impacts of stormwater runoff from development. The intent is to comprehensively manage stormwater to remove pollutants and improve water quality, prevent downstream streambank and channel erosion, reduce downstream overbank flooding and safely convey and reduce runoff from extreme storm events.

"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.