

DEFINITIONS

IowaStormwater.Org

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| **28E Agreement:** Iowa code, Chapter 28Epermits state and local governments in Iowa to make efficient use of their powers by enabling them to provide joint services and facilities with other agencies and to co-operate in other ways of mutual advantage. |
| **Aerial Photography:** Taking of photographs of the ground from an elevated position. |
| **Agriculture:** Cultivation of [animals](http://en.wikipedia.org/wiki/Animals), [plants](http://en.wikipedia.org/wiki/Plant), [fungi](http://en.wikipedia.org/wiki/Fungi), and other life forms for [food](http://en.wikipedia.org/wiki/Food), [fiber](http://en.wikipedia.org/wiki/Fiber), [biofuel](http://en.wikipedia.org/wiki/Biofuel) and other products used to sustain human life. |
| **Aquatic Habitat:** Environment based in water that is natural for the life and growth of an organism. |
| **Basin:** The catchment area of a particular body of water, i.e. creek, river, stream, lake, ocean. |
| **Best Management Practices:** A term used in the [United States](http://en.wikipedia.org/wiki/United_States) and [Canada](http://en.wikipedia.org/wiki/Canada) to describe a type of practice that is used to control [water pollution](http://en.wikipedia.org/wiki/Water_pollution). |
| **Channel Protection Volume:** Provide 24 hours of extended detention of the runoff from a 1 year – 24 hour duration storm event to reduce bank full flows and protect downstream channels from erosive velocities and unstable conditions. Bank full flows are those which the flow stage of a river in which the stream completely fills its channel and the elevation of the water surface coincides with the bank margins. 1 year 24 hour duration storm\*

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| Northwest Iowa – 2.22 inches | North Central Iowa – 2.36 inches | Northeast Iowa – 2.32 inches |
| West Central Iowa – 2.48 inches | Central Iowa – 2.38 inches | East Central Iowa – 2.40 inches |
| Southwest Iowa – 2.76 inches | South Central Iowa – 2.50 inches | Southeast Iowa – 2.50 inches |

\*Rainfall Frequency Atlas of the Midwest, Table 3 |
| **Climate Change:** A significant and lasting change in the statistical distribution of [weather](http://en.wikipedia.org/wiki/Weather) patterns in the world over periods ranging from decades to millions of years. |
| **Comprehensive Plan:** A term used in the United States by [land use](http://en.wikipedia.org/wiki/Land_use) planners to describe a process that determines community goals and aspirations in terms of community growth and development. |
| **Critical Areas:** Floodplains, steep slopes, and environmentally sensitive areas such as wetlands and streams important for protecting water quality and reducing the impacts of floods. |
| **Deposition Zone:** An area where sediment is deposited by a stream. |
| **Detention Basin:** An excavated area installed downslope of a developed area used to collect runoff from impervious areas for a limited period of time and discharge to adjacent tributaries of [rivers](http://en.wikipedia.org/wiki/River), [streams](http://en.wikipedia.org/wiki/Stream), [lakes](http://en.wikipedia.org/wiki/Lake) or [bays](http://en.wikipedia.org/wiki/Bay). It is used to protect against [flooding](http://en.wikipedia.org/wiki/Flood) and in some cases downstream [erosion](http://en.wikipedia.org/wiki/Erosion). |
| **Ecosystem Benefits:** Value the natural environment (ecosystems goods and services) provides for survival such as breathable air, drinkable water, food for nourishment, flood control, and stable atmospheric conditions.**Ecosystem Goods:** Tangible, quantifiable items or flows, such as drinking water, trees for forestry, fish, and food. |
| **Ecosystem Services:** Ecosystem services are defined as the conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfill human life. |
| **Engineered Drainage:** A natural drainage system that has been altered through engineering practices. |
| **Environmentally Sensitive Areas:** An area which contains a natural feature typically protected by government regulations. These include endangered plant and animal species, excessive slopes, hydric soils, critical wildlife habitat, flood plains, floodways, historic properties, prairies and prairie remnants, savanna and savanna remnants, unstable landforms, wetlands, and woodlands. |
| **Erosion Control**: Practices that prevent soil being displaced from wind or rain. |
| **Extreme Flood Protection:** Manage the impacts of the extreme storm event through detention controls and/or floodplain management. |
| **Flood:** Overflowing of water out of normal stream banks or lake shores onto dry land not usually submerged, as a result of heavy rains. |
| **Flood Control:** Controlling the flow of water with practices such as detention basins and dams to minimize the occurrence of floods. |
| **Flood Plain:** The land area susceptible to inundation by water as a result of a flood. |
| **Gray Infrastructure:** Infrastructure such as roads and underground storm sewer pipes, typically designed to carry and deliver water to receiving streams. |
| **Green Infrastructure:** The interconnected network of plant and infiltration-based practices that captures and treats stormwater. |
| **Green Network:** The interconnected network of open spaces and natural areas, such as greenways, wetlands, parks, forest preserves and native plant vegetation, that naturally manages stormwater, reduces flooding risk and improves water quality. |
| **Hazard Mitigation:** Any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards such as floods. |
| **Hydrologic Unit Code:** Codes that are part of a U.S. Geologic Survey ([USGS) watershed classification system](http://water.usgs.gov/GIS/huc.html) that include a unique sequence of numbers to identify the area that drains to a stream segment between an upstream-downstream pair of points. A watershed is represented by a unique **8, 10 or 12-digit code.** |
| **Hydric Soils:** A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. Criteria for identifying hydric soils can be found in the U.S. Corps of Engineers Wetland Delineation Manual. A list of hydric soils is available at the Natural Resources Conservation Service (NRCS). |
| **Hydrology:** The science dealing with the occurrence, circulation, distribution, and properties of the waters of the earth and its atmosphere. |
| **Impaired Waters:** A body of water in Iowa that does not meet its designated use due to chemical (nitrogen, phosphorus), biological (e. coli) or physical (sediment) pollutants. Designated uses in Iowa include recreation, drinking water, and habitat for aquatic life. |
| **Impervious Surface:** An artificial non-porous surface that generates surface water runoff after rainfall. |
| **Infiltration:** The ability of water to enter the soil profile. |
| **Infiltration rate:** The amount of water that enters the soil profile, typically measured in inches per hour, in/hr. |
| **Iowa Smart Planning Principles:** Signed into law on April 26, 2010, as one of the three primary components of the Iowa Smart Planning Act contained in State Code Chapter 18B; Land Use-Smart Planning. It contains 10 principles that can be included in comprehensive land use plans to produce greater economic opportunity, enhance environmental integrity, improve public health outcomes, and safeguard Iowa’s exceptional quality of life. |
| **Iowa Stormwater Management Manual:** A manual of specific for Iowa of stormwater management practices to comprehensively manage stormwater for water quality and flood control. It was developed by the Iowa Stormwater Partnership in 2009. |
| **IOWATER:** A citizen-based, volunteer water quality monitoring program that includes training, water testing and database management managed by the Iowa Geological Survey, Water Monitoring & Assessment Section of the Iowa Department of Natural Resources. |
| **Land Use:** Theexploitation of land for agricultural, industrial, residential, recreational, or other purposes. |
| **Land Use Plan:** The [process](http://www.businessdictionary.com/definition/process.html) by which [lands](http://www.businessdictionary.com/definition/land.html) are evaluated and assessed to become a basis for [decisions](http://www.businessdictionary.com/definition/decision.html) involving land [disposition](http://www.businessdictionary.com/definition/disposition.html) and [utilization](http://www.businessdictionary.com/definition/utilization.html). This should involve [studies](http://www.businessdictionary.com/definition/study.html) on the [environmental effects](http://www.businessdictionary.com/definition/environmental-effect.html) of land use and its [impact](http://www.businessdictionary.com/definition/impact.html) on the community. |
| **Light Detection and Ranging or Laser Imaging Detection and Ranging** **(LiDAR):** An optical [remote sensing](https://en.wikipedia.org/wiki/Remote_sensing) technology that can measure the distance to, or other properties of, targets by illuminating the target with [laser](https://en.wikipedia.org/wiki/Laser) [light](https://en.wikipedia.org/wiki/Light) and analyzing the backscattered light. |
| **Low Impact Development:** A land planning and engineering design approach to managing stormwater runoff that mimics historic hydrology for water quality protection and flood control. |
| **Multi-Jurisdictional:** Individual jurisdictions working together in coordination to accomplish a common goal or provide a community service. |
| **Natural Area:** An area of unique scenic, historic, geologic or ecological value and of sufficient size and character to allow its maintenance in a natural condition by the operation of physical and biological processes, usually without direct human intervention. |
| **Natural Resources:** A resource occurring naturally within [environments](http://en.wikipedia.org/wiki/Natural_environment) that exist relatively undisturbed by mankind, in a [natural](http://en.wikipedia.org/wiki/Nature) form. |
| **Open Space:** An area of land or water that either remains in its natural state or is used for agriculture, free from intensive development for residential, commercial, industrial or institutional use. |
| **Ordinance:** A law made by a municipality or other local authority. |
| **Overbank Flood Protection:** Structural controls, such as detention basins, dams levees, used to control large, flood producing events such as 100 and 500 year flood events. |
| **Peripheral Growth Areas:** Outer area of a city or town, primed for future development. |
| **Pervious Surface:** A surface that allows for the movement of stormwater into it and typically designed to capture and absorb rainfall. |
| **Pollutants / Contaminants:** A substance introduced into the environment (water) that has undesired effects, or adversely affects the usefulness of a resource. |
| **Prairie:** A large area of level or rolling land in the Mississippi River valley that, in its natural uncultivated state, usually has deep fertile soil, a diverse plant community consisting of tall coarse grasses and forbs with few trees. **Prairie Pothole:** Shallow wetlands that were once found in prairie areasthat were created from glacial activity; many of these have been drained by for agricultural land uses. |
| **Production zone:** A zone of fertile conditions that sustains plants. |
| **Recreation:** Activities done for [enjoyment](http://en.wikipedia.org/wiki/Happiness), [amusement](http://en.wikipedia.org/wiki/Amusement), or [pleasure](http://en.wikipedia.org/wiki/Pleasure) and are considered to be "[fun](http://en.wikipedia.org/wiki/Fun)". |
| **Retrofit:** Stormwater management measures installed in an urban or ultra-urban landscape where little or no prior stormwater controls existed. |
| **Riparian:** Relating to or living or located on the bank of a natural watercourse such as a river or lake. |
| **Savanna:** A [grassland](http://en.wikipedia.org/wiki/Grassland) [ecosystem](http://en.wikipedia.org/wiki/Ecosystem) characterized by the trees (frequently oak and hickory) being sufficiently widely spaced so that the [canopy](http://en.wikipedia.org/wiki/Canopy_%28forest%29) does not close. |
| **Sediment Control:** A practice or device designed to keep [eroded](http://en.wikipedia.org/wiki/Erosion) [soil](http://en.wikipedia.org/wiki/Soil) on a [construction](http://en.wikipedia.org/wiki/Construction) site used to prevent water pollution. |
| **Sensitive Area:** Same as an Environmentally Sensitive Area, that contains a natural feature typically protected by government regulations. |
| **Slope:** The number of feet of vertical drop per 100 feet of horizontal run;%. i.e. land with 15% slope has 15 feet or more of vertical drop in 100 feet of horizontal run.Slope Categories include: A=0-2%; B=2-5%; C=5-9%; D=9-14%; E=14-18%; F=18-25%; G=25 |
| **Smart Growth:** A broad concept that describes a series of principles that encourage development that better serves the economic, environmental and social needs of communities than do many of the principles that have guided development in the post-World War II period. The U.S. Environmental Protection Agency identified the following ten principles of smart growth: 1. Mix land uses 2. Take advantage of compact building design 3. Create a range of housing opportunities and choices 4. Create walkable neighborhoods 5. Foster distinctive, attractive communities with a strong sense of place 6. Preserve open space, farmland, natural beauty, and critical environmental areas 7. Strengthen and direct development toward existing communities 8. Provide a variety of transportation choices 9. Make development decisions predictable, fair, and cost effective 10. Encourage community and stakeholder collaboration in development decisions |
| **Soil Quality:** The capacity of a specific kind of soil to function, within natural or managed ecosystem boundaries, to sustain plant and animal productivity, maintain or enhance water and air quality, and support human health and habitation. |
| **Storm Occurrence:** (500 yr., 100 yr., 50 yr., etc.) A storm event that has a given probability of occurring in any given year. I.e., 100 year storm = 1% chance of occurring in any given year (it is NOT a storm that will occur every 100 years).  |
| **Storm Sewer / Storm Drain:** An underground sewer that carries only surface runoff, street wash, and snow melt from the land. (Not to be confused with sanitary sewers, which carry domestic and commercial wastewater.) |
| **Stormwater:** Surplus surface water generated by rainfall and snowmelt that does not infiltrate into the earth but flows overland to rivers, lakes or streams.  |
| **Storm Water Conveyance:** The natural or engineered path stormwater takes to enter a storm drain / sewer or receiving body of water, such as a detention basin, creek, stream, or river. |
| **Storm Water Utility:** A financial mechanism to finance water quality and municipal infrastructure designed to manage stormwater runoff. Typically takes the form of a fee per square foot of impervious surface. |
| **Stream, (major / minor):** Perennial and intermittent water sources identified through site inspection, and/or an approved city map, and/or United States Geological Survey (USGS) 7.5 minute series topographical map.  |
| **Stream Buffer:** A vegetated strip of land that lies adjacent to a stream and provides such functions as protecting water quality, providing wildlife habitat and storing flood waters.  |
| **Topography:** The practice of graphic delineation in detail usually on maps or charts of natural and man-made features of a place or region especially in a way to show their relative positions and elevations. |
| **Topsoil:** The fertile, uppermost part of the soil containing significant organic matter largely devoid of debris and rocks and often disturbed in cultivation. It is dark in color, loose, friable (easily crumbled), devoid of clumps and clods with an organic matter content greater than 3%, a pH between 6 and 8, and 30% or less clay content that ribbons out at an inch or less. |
| **Triple Bottom Line:** A three-pronged business and development approach that establishes criteria for measuring organizational and societal success expanding economic success to include ecological and social impacts as well. |
| **Uniform Sizing Criteria**: An integrated set of engineering criteria, known as the unified stormwater sizing criteria have been developed to size and design structural stormwater controls.  |
| **Urban:** Relating to, or constituting a city or town. |
| **Water Quality:** The physical, chemical and biological properties of water. |
| **Water Quality Volume:** A storm design that treatsrunoff from 90% of the storms that occur in an average year. For Iowa, this equates to providing water quality treatment for the runoff resulting from a rainfall depth of 1.25 inches or less. The goal is to reduce average annual post -development total suspended solids loadings by 80%. |
| **Water Resources Inventory:** An inventory thatcollects a standardized set of existing baseline information including geospatial data on water rights, water quantity, water quality, water management, threats to water supplies including potential climate change impacts, and other water resource issues. |
| **Watershed:** The region draining into a river, river system, or other body of water. The area of a watershed is typically determined by topography. |
| **Watershed Assessment:** A process toevaluate the physical, chemical and biological state of watershed health and the cumulative impact of proposed development on peak flows, suspended sediment, bed load, and stream channel stability within the watershed. |
| **Watershed Management Plan:** A Watershed Management Plan (WMP) identifies water quality problems in a watershed, proposes solutions, and creates a strategy for putting those solutions into action. Watershed Management Plans take a long-term, comprehensive approach, that has proven to be successful in a number of watersheds. |
| **Watershed Planning:**  A series of cooperative, iterative steps to characterize existing watershed conditions, identify and prioritize problems, define management objectives, develop protection or remediation strategies, and implement and adapt selected actions as necessary. |
| **Waterway:** a navigable body of water. |
| **Wetland:** A distinct land-based ecosystem that is [saturated](http://en.wikipedia.org/wiki/Aquifer) with [water](http://en.wikipedia.org/wiki/Water), either permanently or seasonally consisting primarily of [hydric soil](http://en.wikipedia.org/wiki/Hydric_soil), which supports [aquatic plants](http://en.wikipedia.org/wiki/Aquatic_plants) that play a number of roles in the environment, principally water purification, flood control, and shoreline stability. |
| **Woodland:** A low-density [forest](http://en.wikipedia.org/wiki/Forest) forming open habitats with plenty of sunlight and limited dense shade. |
| **Yield Plan:**  The number of units (houses) that can be developed per acre. |
| **Zoning:** A method of [land-use planning](https://en.wikipedia.org/wiki/Land-use_planning) used by local governments to define the type of development that takes place in a given area. |

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