

COMMON STORMWATER DEFINITIONS #2

2, 10, 100-year Storm: Refers to rainfall totals that have a 'x' percent probability of occurring at the location in that year. For instance the 10-year storm statistically would occur once every 10 years or have a 10% chance of occurring in any one year.

90 Percent Storm: (or 90th Percentile Rainfall Depth) represents the depth of rainfall which is not exceeded in 90 percent of all runoff producing rainfall storm events within the time period analyzed. In other words 90 percent of the storms that produce runoff will be less than or equal to this depth.

Curve Number (CN): A runoff coefficient used to predict direct runoff or infiltration from rainfall excess. The number is based on combining land use and one of four hydrologic soil types on a parcel of land. The *CN* has a range of 30-100; lower numbers indicate low runoff and more permeable soils, while higher numbers indicate increasing runoff potential and less permeable soils.

Detention Basin: Is a flood control stormwater management facility designed to hold runoff for a period of time and to eventually empty after rainwater runoff ends. It is built primarily to control water quantity and not necessarily water quality.

Environmental Protection Agency (EPA): An agency of the federal government whose mission is to protect human health and the environment. When congress writes an environmental law, the EPA implements it by writing regulations. Often they set national standards that states and tribes enforce through their own regulations.

Erosion Sediment Control: The capture or control of particles suspended in runoff from construction site activity which is otherwise carried into streets, storm sewer inlets, then through drainage ways into area waterways reducing the beneficial uses of water. *Erosion and Sediment Control* is required by City ordinances.

Extended Dry Detention Basin: A detention basin designed to temporarily capture the water quality volume of runoff from a storm and detain it for forty hours.

Extended Wet Detention Basin: A detention facility constructed with a permanent pool of water and additional storage space above the permanent pool, which fills during a storm event. It is designed to detain the water quality volume for forty hours. Pollutants are removed from stormwater through settling and biologic processes.

First Flush: The initial runoff during a storm or snowmelt event which carries more pollutants with it than runoff that occurs later in the storm. The *first flush* can be thought of as the first cleansing of the ground. Examples of contaminants include excess fertilizers, oil, soaps and pet waste.

Illicit Discharge: Any discharge to a Municipal Separate Sewer System (MS4) that is not entirely comprised of stormwater. *Illicit discharges* often include pathogens, nutrients, surfactants, and various toxic pollutants. The exceptions include water from fire fighting activities and discharges from facilities already under an NPDES permit.

Native Soil and Vegetation Preservation: The practice of preserving land areas containing soil profiles and vegetation that have adapted to the climate, hydrology, and ecology of the area to minimize the impacts of development.

Nebraska Department of Environmental Quality (NDEQ): Is a regulatory agency of the EPA whose goal is to protect Nebraska's air, land and water resources. They are also responsible for coordinating with local, state

and federal agencies such as: the U.S. EPA ; the U.S. Department of Defense and the Army Corps of Engineers to implement federally-delegated environmental programs.

Pervious Pavement: A type of pavement that allows water and air to infiltrate the surface layer into the underlying soil or sub-base layer. The captured water is stored in the sub-base layer until it either infiltrates the underlying soil or is routed through an underdrain system.

Retention (Wet) Ponds: Is a stormwater control structure designed with a permanent pool of water which allows suspended sediment particles and associated pollutants to settle out. Often retention ponds are designed to detain as well.

Riparian Corridor: Refers to the strips of herbaceous and woody vegetation that are parallel to streams and adjacent to open waterbodies such as, rivers, streams, wetlands, or lakes. Riparian Buffers capture sediment and other pollutants in surface runoff water before they enter the adjoining waterbody.

Smart Growth: Refers to coordinated urban planning to support economic, community and environmental goals. It is the big-picture way to manage the overall footprint of impervious surfaces at the neighborhood, watershed and community scales. It aims to prevent development in important rural and natural resources areas.

Swale: Is a sloped depression or ditch which conveys and infiltrates stormwater.

Bioswale: An open vegetated swale with an engineered soil mix and underdrain system designed to treat a specific water quality volume.

Native Vegetation Swale: Native grasses and forbes planted in a swale to reduce velocity of runoff and promote infiltration.

Wetland Swale: An open vegetated channel without underdrains or soil matrix designed to filter runoff and remain wet between rain events.

Watershed: All the land area that drains to a given point.

Water Quality: The chemical, physical, and biological characteristics of water. This term also refers to regulatory concerns about water's suitability for swimming, fishing, drinking, agriculture, industrial activity, and healthy aquatic ecosystems.

Water Quality Modeling: Is a tool, using mathematical techniques, to simulate and predict the position and movement of pollutants in a watershed.

Water Quality Control Volume (WQCV): The volume of stormwater that BMP's are designed to capture and treat in order to improve water quality in the stormwater runoff. The volume of water is retained and infiltrated or slowly released to remove pollutants and reduce erosion. It's generally described by either a specified runoff amount or rainfall volume.

Water Quality Criteria: Section 304(a)(1) of the Clean Water Act requires the EPA to develop criteria for water quality that accurately reflects the latest scientific knowledge. The criteria are developed for the protection of aquatic life and for human health.