

**1 Percent Chance Flood:** The flood event that has an annual 1 percent probability of being equaled or exceeded in any given year. This flood is the result of the critical duration 1 percent chance storm falling on the watershed. This is also commonly called the “100-year” flood.

**10 Percent Chance Flood:** The flood event that has an annual 10 percent probability of being equaled or exceeded in any given year. This flood is the result of the critical duration 10 percent chance storm falling on the watershed. This is also commonly called the “10-year” flood.

**Acre-Foot:** A measurement of water volume that is equal to 1 foot of water covering an area of 1 acre.

**Algae:** Simple rootless plants that grow in bodies of water in relative proportion to the amount of nutrients available. Algal blooms, or sudden growth spurts, can affect water quality adversely.

**Aquifer:** Saturated permeable geologic unit(s) that can transmit significant quantities of water under ordinary hydraulic gradients.

**Bedrock Aquifer:** One or more saturated geologic units composed of sedimentary, metamorphic, or igneous rock, that can transmit significant quantities of water under ordinary hydraulic gradients.

**Best Management Practices (BMPs):** Practices that can be used to control urban nonpoint source pollution.

**Bounce:** The vertical elevation difference between the peak flood elevation and the “normal” wetland elevation.

**Design Storm:** A rainfall event of specific return frequency and duration (e.g., a storm with a 2-year frequency of occurrence and 24-hour duration) that is used to calculate the runoff volume and peak discharge rate.

**Detention:** The temporary storage of storm runoff used to control the peak discharge rates, and which provides gravity settling of pollutants.

**Detention Pond:** An impoundment that is normally dry but is used to store stormwater runoff until it is released from the structure. Used to reduce the peak discharge from stormwater runoff.

**Detention Time:** The amount of time a parcel of water actually is present. Theoretical detention time for a runoff event is the average time parcels of water reside in the basin over the period of release.

**Erosion:** Wearing away of the lands or structures by running water, glaciers, winds, and waves.

**Eutrophication:** The natural or artificial process of nutrient enrichment whereby a water body becomes filled with aquatic plants and can be low in oxygen content.

**Evapotranspiration:** Water evaporated and transpired from soil and plant surfaces.

**Flood Fringe:** The portion of the floodplain outside of the floodway.

**Flood Profile:** A graph or a longitudinal plot of water surface elevations of a flood event along a reach of a stream or river.

**Floodplain:** Lowland area adjoining water bodies which are susceptible to inundation of water during a flood.

**Floodway:** The channel of a watercourse and those portions of the adjoining floodplain which are reasonably required to carry and discharge the 100-year flood.

**Freeboard:** A factor of safety above a certain flood level. This typically is defined as the vertical separation (feet) between the design flood level (e.g., 1 percent chance flood elevation) and the lowest floor of a structure or the top of an embankment. Freeboard compensates for the many unknown factors (e.g., waves, ice, debris, etc.) that may increase flood levels beyond the calculated level.

**Geology:** The science which treats the origin, history, and structure of the earth, as recorded in the rocks; together with the forces and processes now operating to modify rocks.

**Glacial Drift:** Material which was deposited by glaciers.

**Groundwater:** Water underneath the ground surface that is under positive pressure.

**Hydric Soils:** Soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part.

**Hydrograph:** A graph showing variation in the water depth or discharge in a stream or channel, over time, at a specified point of interest.

**Hydrology:** The applied science concerned with the waters of the earth in all its states—their occurrences, distribution, and circulation through the unending hydrologic cycle of: precipitation; consequent runoff, stream flow, infiltration, and storage; eventual evaporation; and reprecipitation.

**Impervious Area:** Impermeable surfaces, such as pavement or rooftops, which prevent the infiltration of water into the soil.

**Infiltration:** The entrance of water into the soil or other porous material through the interstices or pores of a soil or other porous medium.

**Inundation Period:** Time that flood waters temporarily stored in wetlands and ponds exceed the “normal” elevation. Difference between the peak flood elevation and the “normal” elevation

**Invert Elevation:** The vertical elevation of a pipe or orifice in a pond which defines the water level.

**Landlocked Lake or Basin:** Area which has an outlet that is significantly higher than the normal water level of the lake, pond, or wetland.

**Nationwide Urban Runoff Program (NURP):** A study initiated by the EPA in 1978 to develop a consistent database and set of recommendations to be used to make planning decisions about nonpoint pollution issues. This study included 28 projects across the United States that were completed independently under the direction of the EPA. This study has been used extensively in both the characterization of stormwater quality, and as a guide to implementation of management alternatives for stormwater treatment. The most often cited management option derived from this study is a detention basin referred to as a NURP pond. The NURP study provided recommendations for the size and shape of detention ponds to provide pollutant removal efficiency.

**No Net Loss:** No reduction in the area and value of a wetland from existing conditions.

**Nonpoint Source Pollution:** Pollution originating at a variety of nonlocalized sources, such as street runoff, septic systems, atmospheric deposition, or groundwater.

**Nutrients:** Fertilizer, particularly phosphorus and nitrogen (the two most common components that run off in sediment).

**Ordinary High Water Level:** The boundary of public waters and wetlands; also, an elevation delineating the highest water level which has been maintained for a sufficient period of time to leave evidence upon the landscape, commonly that point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial. For watercourses, the ordinary high water level is the elevation of the top of the bank of the channel. For reservoirs and flowages, the ordinary high water level is the operating elevation of the normal summer pool.

**Peak Discharge:** The maximum instantaneous rate of flow during a storm, usually in reference to a specific design storm event.

**Percolation:** Movement of water through soil layers of material.

**Precipitation:** The total measurable supply of water of all forms of falling moisture, including dew, rain, mist, snow, hail, and sleet; usually expressed as depth of liquid water on a horizontal surface in a day, month, or year, and designated as daily, monthly, or annual precipitation.

**Public Ditch:** A public drainage system established and administered under Chapter 103e of the Minnesota Statutes, including both county and judicial ditches.

**Public Waters:** Any waters as defined in Minnesota Statutes, section 103G.005, subdivision 15.

**Public Wetlands:** Any waters as defined in Minnesota Statutes, section 103G.15a.

**Reach:** Longitudinal segments of a stream defined by natural or manmade restrictions. In an urban area the segments of the stream between two consecutive road crossings could typically constitute a reach.

**Recharge:** Replenishment of the groundwater system by natural or artificial means.

**Recurrence Interval:** Recurrence Interval means the average interval of time, based on a statistical analysis of actual or representative stream flow records, which can be expected to elapse between floods equal to or greater than a specified stage or discharge. The recurrence interval is generally expressed in years.

**Retention:** The holding of runoff in a basin without release except by means of evaporation, infiltration, or emergency bypass.

**Retention Facility:** A permanent natural or constructed structure that provides for the storage of stormwater runoff by means of a permanent pool of water.

**Riparian:** A relatively narrow strip of land that borders a stream or river, often coincides with the maximum water surface elevation of the 100-year storm.

**Runoff:** That portion of the precipitation which is not absorbed by the deep strata but finds its way into the surface water system after meeting the demands of evapotranspiration.

**Secchi Disc:** A circular plate, used to measure the transparency or clarity of water by noting the greatest depth at which it can be visually detected. Its primary use is in the study of lakes.

**Sediment:** Solid matter carried by water, sewage, or other liquids.

**Shoreland:** Shoreland means land located within the following distances from public water: 1,000 feet from the ordinary high water level of a lake, pond, or flowage; and 300 feet from a river or stream, or the landward extent of a floodplain designated by ordinance on a river or stream, whichever is greater.

**Swale:** A natural depression or wide shallow ditch used to temporarily store, route, or filter runoff.

**Time of Concentration:** The time required for surface runoff from the most remote part of a watershed to reach the watershed outlet.

**Transpiration:** The process by which plants dissipate water into the atmosphere from leaves and other surfaces.

**Water Bodies:** Natural and constructed depressions and stormwater conveyance and storage facilities including wetlands, lakes, ponds, streams, and rivers.

**Watershed:** A geographical area which collects precipitation and provides runoff to a particular collector such as a stream, lake, or marsh.

**Wetland:** A wetland is land transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. A more specific definition of wetland can be found in Section 300.23 of the Wetlands District Ordinance.

**Wetland Type:** A wetland classification according to Wetlands of the United States, United States Fish and Wildlife Service Circular 39 (1971 edition), as provided in Section 300.23 of the City of Minnetonka's Zoning Ordinance.

**Type 1 Wetland:** Seasonally flooded basins or flats in which soil is covered with water or is waterlogged during variable seasonal periods but usually is well-drained during much of the growing season. Type 1 wetlands are located in depressions and in overflow bottom lands along water courses and in which vegetation varies greatly according to season and duration of flooding and includes bottom land hardwoods as well as herbaceous growths.

**Type 2 Wetland:** Occurs along the shallow edges of lakes, marshes, and floodplains, or in perched depressions. The soil is usually without standing water during much of the growing season, but is waterlogged within at least a few inches of the surface. Vegetation includes grasses, sedges, rushes, and various herbaceous plants.

**Type 3 Wetland:** Soil is usually water logged during the growing season, often covered with as much as six inches or more of water. Vegetation includes grasses, bulrushes, cattails, arrowheads, smartweeds, and other emergent aquatic vegetation

**Type 4 Wetland:** Soil covered with six inches to three feet or more of water during growing season. Vegetation includes cattails, reeds, bulrushes, and wild rice. Open water areas may contain pondweeds, naiads, coontail, water milfoils, and other submergent aquatic vegetation.

**Type 5 Wetland:** Water is usually less than 10 feet deep and is fringed by a border of emergent vegetation. Vegetation includes pondweeds, naiads, coontail, water milfoils, and other submergent aquatic vegetation.

**Type 6 Wetland:** Occurs along sluggish streams or on floodplains. The soil is usually waterlogged during the growing season, and is often covered with as much as six inches of water. Vegetation includes alder, willow, and dogwood.

**Type 7 Wetland:** Occurs along sluggish streams, on floodplains, on flat perched depressions, and in shallow lake basins. The soil is waterlogged to within a few inches of its surface during the growing season and is often covered with as much as one foot of water. Vegetation typical to this wetland type includes tamarack, white cedar, black spruce, balsam fir, red maple, and black ash.

**Type 8 Wetland:** Occurs along sluggish streams, on flat perched depressions, and shallow lake basins. The soil is waterlogged and supports a spongy covering of mosses. Vegetation typical to this wetland type includes sphagnum moss, heath shrubs, and sedges. Minnesota bogs contain leatherleaf, Labrador tea, cranberries, and pitcher plants. Scattered stunted black spruce and tamarack also are common features of bogs.