

GLOSSARY

Many of the definitions below were adapted from the Cannon River Comprehensive Watershed Management Plan developed through the Minnesota Board of Soil and Water Resource's One Watershed, One Plan program (2020; available online at: <http://www.dakotaswcd.org/lw1p.html>).

Alternative Management Tools – The Minnesota Department of Agriculture has developed a list of example activities that can be used by farmers in areas that are vulnerable to nitrate contamination to reduce nitrate leaching into groundwater. The information can be accessed online (<https://www.mda.state.mn.us/chemicals/fertilizers/nutrient-mgmt/nitrogenplan/nitrogenmgmt/amts>)

Aquifer – A body of permeable rock that can contain or transmit groundwater.

Baseflow – Sustained flow of a stream in the absence of direct runoff. Natural base flow is sustained largely by groundwater discharges.

Best Management Practice – Structural and non-structural practices and methods that can be used in both agricultural and urban settings that decrease runoff, erosion, and pollutants and improve water quality, soil health, and land use activities.

Calcareous Fen – A rare and distinctive wetland characterized by a substrate of non-acidic peat and dependent on a constant supply of cold, oxygen-poor groundwater rich in calcium and magnesium bicarbonates.

Contaminants – Substances that, when accidentally or deliberately introduced into the environment, may have the potential to harm living organisms, including people, wildlife and plants.

Dissolved Oxygen – The level of free, non-compound oxygen present in water or other liquids. It is an important parameter in assessing water quality because of its influence on the organisms living within a body of water.

Drainage Authority – The board or joint county drainage authority having jurisdiction over a drainage system or project (Minn. Stat. § 103E.005, Subd. 9). Pursuant to Minn. Stat. § 103D.625, the managers of a watershed district established pursuant to Minn. Stat. 103D shall take over a joint county or county drainage system within the watershed district and the right to maintain and repair the drainage system if directed by a joint county drainage authority or a county board.

E. coli – Escherichia coli (abbreviated as E. coli) is a fecal coliform bacteria that comes from human and animal waste. The Environmental Protection Agency (EPA) uses E. coli measurements to determine whether fresh water is safe for recreation.

eLINK – Web-based conservation and grants tracking system hosted by the Board of Water and Soil Resources.

Flooding – The Federal Emergency Management Agency defines a flood as a general and temporary condition where two or more acres of normally dry land or two or more properties are inundated by water or mudflow (Federal Emergency Management Agency, 2016).

Geomorphology – The study of the processes responsible for the shape and form, or morphology, of watercourses; describes the processes whereby sediment (e.g., silt, sand, gravel) and water are transported from the headwaters of a watershed to its mouth.

Groundwater – Water located below ground in the spaces present in soil and bedrock.

Groundwater Recharge – Water infiltrating through the ground surface to become groundwater.

Hydrology – The movement of water. Often used in reference to water movement as runoff over the soil after a rainfall event as it contributes to surface water bodies.

Hydrologic & Hydraulic Model – A continuous simulation computer model that predicts natural (hydrologic) and artificial (hydraulic) flow paths, volumes, and rates in a defined area of land.

Impervious Surfaces – Surfaces that severely restrict the movement of water through the surface of the earth and into the soil below. Impervious surface typically refers to man-made surfaces such as non-porous asphalt or concrete roadways, buildings, and heavily compacted soils.

Index of Biotic Integrity (IBI) – The IBI is a biological assessment tool that provides a framework for translating biological community data into information regarding ecological integrity (“the capability of supporting and maintaining a balanced, integrated, functional organization comparable to that of the natural habitat of the region”, Frey 1977). It utilizes a variety of attributes (“metrics”) of the biological community, each of which responds in a predictable way to anthropogenic disturbance. The metrics are based on ecological traits of the organisms present at a given site, represent different aspects of ecological structure and function, and are scored numerically to quantify the deviation of the site from least-disturbed conditions. When the individual metric scores are summed together, the composite IBI score characterizes biological integrity (Karr et al 1986).

Infiltration – A process by which water in the ground surface enters the soil.

Invasive Species – Organisms not endemic to a geographic location they often displace native species and have the potential to cause environmental change.

Low-Impact Development – A stormwater management strategy that seeks to mitigate the impacts of increased urban runoff and stormwater pollution by managing it as close to its source as possible. It comprises a set of site design approaches and small-scale stormwater management practices that promote the use of natural systems for infiltration and evapotranspiration, and rainwater harvesting.

Macroinvertebrate – Organisms without backbones, which are visible to the naked eye without the aid of a microscope. Aquatic macroinvertebrates live on, under, and around rocks and sediment on the bottom of lakes, rivers and streams.

Measurable Goal – A statement of intended accomplishment for each priority issue. Goals are meant to be simply stated and achievable, can be quantitative or qualitative, long or short-term, and are meant to be measurable through the implementation of actions to attain a desired outcome.

Multipurpose Drainage Management – the use of various practices and designs to achieve multiple water management purposes (e.g. improve water quality and aquatic habitat) and goals, including drainage

Nitrate – A negatively charged compound (NO₃⁻) that is water soluble, available for plant uptake, and a product of both organic matter and synthetic fertilizer.

Pathogens – a bacterium, virus, or other microorganism that can cause disease.

Peak flows – Term typically used to define the characteristic high flow period of a stream or river.

Pollutant – Any substance, as in chemicals or waste products, that renders the air, soil, water, or other natural resource harmful or unsuitable for a specific purpose.

Priority Issue – Issues categorized, through the prioritization process (Section 4), as Priority Tier 1 issues. Priority issues will be the focus of this comprehensive plan.

Public Drainage Systems – A system of ditch or tile, or both, to drain property, including laterals, improvements, and improvements of outlets, established and constructed by a drainage authority. "Drainage system" includes the improvement of a natural waterway used in the construction of a drainage system and any part of a flood control plan proposed by the United States or its agencies in the drainage system (Minn. Stat. § 103E.005, Subd. 12.).

Public Water Suppliers – Entities that provide water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days a year.

Radionuclides – An atom that has excess nuclear energy, making it unstable.

Resource Category – A resource category, or "resource" is defined as a natural, economic, educational, biotic, aesthetic, land, or similar asset. Resources are generally considered something that can be managed, and are generally broad, such as surface water, groundwater, or education and outreach.

Resource Concern – A resource concern, or "concern" is defined as a physical, biological, chemical, geological or social subset or component of a resource. For example, the resource "surface water" can be further refined into several components, including streams and rivers, lakes, and wetlands.

Resource Issue – A resource issue, or "issue" affecting a concern is defined as a factor, stressor, or difficulty resulting in an adverse consequence for a concern. A concern can have one or many issues. For instance, nitrate-nitrogen causing the contamination of drinking water supply could be an issue (e.g. nitrate-nitrogen) affecting a concern (e.g. drinking water supplies).

Riparian – A vegetated ecosystem alongside a waterbody; characteristically have a high water table and are subject to periodic flooding.

Runoff – Water from rain, snow melt, or irrigation that flows over the land surface.

Safe Drinking Water Act (SDWA) – The federal law that protects public drinking water supplies throughout the nation. Under the SDWA, EPA sets standards for drinking water quality and, with its partners, implements various technical and financial programs to ensure drinking water safety.

Soil Health – as defined by the Natural Resource Conservation Service, also referred to as soil quality, is the continued capacity of soil to function as a vital living ecosystem that sustains plants, animals, and humans.

Stream Channel – A natural waterway, formed by fluvial processes, that conveys running water.

Stream Connectivity – The term used to define the longitudinal connection a stream has along its length and the lateral connection a stream has with its floodplain and adjacent uplands.

Total Maximum Daily Load – The total amount of a pollutant or nutrient that a water body can receive and still meet state water quality standards. Total maximum daily load also refers to the process of allocating pollutant loadings among point and nonpoint sources.

Total Phosphorus – A measure of the amount of all phosphorus found in a water column, including particulate, dissolved, organic and inorganic forms.

Total Suspended Solids – A measure of the amount of particulate material in suspension in a water column.

Turbidity – The cloudiness of the water that is caused by large numbers of individual particles that are generally invisible to the naked eye.

Wellhead Protection Plan – A plan developed to prevent contaminants from entering wells.