

GLOSSARY

303(d): The Federal Clean Water Act requires states to submit a list of impaired waters to the USEPA for review and approval using water quality assessment data from the Section 305(b) Water Quality Report. States are then required to develop total maximum daily load analyses (TMDLs) for water bodies on the 303(d) list.

305(b): The Illinois 305(b) report is a water quality assessment of the state's surface and groundwater resources that is compiled by the IEPA as a report to the USEPA as required under Section 305(b) of the Clean Water Act.

319 Nonpoint Source Pollution Control Program: Congress enacted Section 319 of the Clean Water Act in 1987 as a way of encouraging and supporting the states' efforts to develop management programs to control the complex problem of nonpoint source water pollution. Nonpoint source pollution is caused by rainfall or snowmelt moving over and through the ground and carrying natural and human-made pollutants into lakes, rivers, streams, wetlands, estuaries, other coastal waters, and groundwater. Atmospheric deposition and hydrologic modification are also sources of nonpoint pollution.

Advanced Identification (ADID): An EPA program designed to provide improved awareness of the locations, functions, and values of wetlands and other waters of the U.S. More specifically, it is intended to inform landowners, developers, and local governments that it may not be appropriate to fill or drain certain high quality wetland sites. ADID projects also can provide guidance on strategies for long-term protection and management of aquatic resources in an area.

Antecedent Moisture Condition (AMC): The soil moisture before a precipitation event that affects runoff.

Aquatic habitat: Structures such as stream substrate, woody debris, aquatic vegetation, and overhanging vegetation that is important to the survival of fish and macroinvertebrates.

Aux Sable Creek Watershed Coalition: The organization comprised of a committee of concerned watershed residents that continue to educate and advocate in the Aux Sable Creek Watershed.

Aux Sable Creek Watershed Plan Advisory Committee: A group of stakeholders within the Watershed formed to begin the process of updating the existing plan to address the nine criteria which are required of watershed plans by the Illinois Environmental Protection Agency (IEPA).

Aux Sable Creek Watershed Planning Committee: A group of local citizens and community leaders that identify resource concerns and address issues like flooding, soil erosion, loss of wetlands, development, degraded water quality, and loss of wildlife habitat. The group tries to preserve the quality of the Watershed and prepared a watershed plan and presented it in March 2001.

Best Management Practices (BMPs): Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practice to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Biological Oxygen Demand (BOD): The amount of dissolved oxygen that is required by microscopic organism (e.g. bacteria) to decompose organic matter in waterbodies.

Clean Water Act (CWA): The CWA is the basic framework for federal water pollution control and has been amended in subsequent years to focus on controlling toxics and improving water quality in areas where compliance with nationwide minimum discharge standards is insufficient to meet the CWA's water quality goals.

Conservation easement: The transfer of land use rights without the transfer of landownership. Conservation easements can be attractive to property owners who do not want to sell their land now, but would support perpetual protection from further development. Conservation easements can be donated or purchased.

Discharge (stream flow): The volume of water passing through a channel during a given time, usually measured in cubic feet per second (cfs).

Drain tile: A perforated, corrugated plastic pipe laid at the bottom of the foundation wall and used to drain excess water away from the foundation. It prevents ground water from seeping through the foundation wall.

Drainage basin: Land surface region drained by a length of stream channel; usually 1,000 to 10,000 square miles in size.

Dredged material: Bottom sediments which are removed by dredging.

Erosion: Displacement of soil particles on the land surface due to water or wind action.

Farmed wetland: Wetlands that were manipulated and used to produce an agricultural commodity prior to December 23, 1985, but had not been completely converted prior to that date and therefore are not prior converted cropland. These areas still meet the wetland criteria and include areas that are seasonally ponded or flooded for an extended period of time.

Fecal coliform bacteria: A group of organisms common to the intestinal tracts of humans and animals. The presence of fecal coliform bacteria in water, wastewater, or biosolids is an indicator of pollution and possible contamination by pathogens.

Federal Emergency Management Association (FEMA): Made to reduce the loss of life and property and protect the Nation from all hazards, including natural disasters, acts of

terrorism, and other man-made disasters, by leading and supporting the Nation in a risk-based, emergency management system of preparedness, protection, response, recovery, and mitigation.

Fill material: The materials—rock, soil, asphalt, concrete, construction debris, etc.—natural or man-made, deposited during filling.

First flush: The delivery of a highly concentrated pollutant loading during the early stages of a storm due to the washing effect of runoff on pollutants that have accumulated on the land.

Flocculent: A treatment that causes suspended organics to clump, which then will sink to the bottom of the pond.

Flood hazard mapping: A basic tool for flood preparedness and mitigation activities, including flood insurance programs.

Flood insurance: Insurance that covers against losses that are a direct result of flood damage. Flood insurance is required by lenders if a property is located in a flood zone

Flood Insurance Study (FIS): Studies conducted by the Federal Emergency Agency (FEMA) to determine the areas that have the highest probability for flooding.

Floodplain: Land adjoining the channel of a river, stream, watercourse, lake or wetland that has been or may be inundated by floodwater during periods of high water that exceed normal bank-full elevations.

Floodway: The floodway is the portion of the stream or river channel that includes the adjacent land areas to that must be reserved to discharge the 100-year flood without increasing the water surface.

Floodway Fringe: The Floodway Fringe is typically the area outside of the Floodway, but within the 100—year Floodplain.

Grading (earthmoving): The moving of dirt and other materials on the Earth’s surface to achieve desired characteristics for building, vegetating, or other activities.

Grading (materials): The degree of mixing of particle size classes in sediment. Well-graded sediments are those with a more or less uniform distribution of sizes; poorly graded implies uniformity in size or lack of a continuous distribution.

Gully erosion: Severe erosion in which trenches are cut to a depth greater than 30 centimeters (a foot). Gully erosion forms when several rills combine or are cut deeper and wider. Generally, ditches deep enough to cross with farm equipment are considered gullies.

Headwaters: Upper reaches of tributaries in a drainage basin.

Hydric soil: Soil units that are wet frequently enough to periodically produce anaerobic conditions, thereby influencing the species composition or growth, or both, of plants on those soils.

Hydrologic Soil Group (HSG): Soils are classified by the Natural Resource Conservation Service into four Hydrologic Soil Groups based on the soil's runoff potential. The four Hydrologic Soil Groups are A, B, C and D. A's generally have the smallest runoff potential and D's the greatest.

Hydrologic Unit Code (HUC): A hierarchical classification of drainage basins. An 8 digit HUC indicates region (leftmost 2 digits), sub-region (next two digits), accounting unit (next 2 digits), and cataloging unit (rightmost 2 digits).

Hydrology: The scientific study of the properties, distribution, and effects of water on the earth's surface, in the soil and underlying rocks, and in the atmosphere.

Illicit discharge: All nonurban runoff discharges to urban runoff drainage systems that could cause or contribute to a violation of State water quality, sediment quality, or ground-water quality standards, including but not limited to sanitary sewer connections, industrial process water, interior floor drains, car washing, and grey water systems

Impervious cover: An area covered with solid material or that is compacted to the point where water cannot infiltrate underlying soils (e.g. parking lots, roads, houses, patios, swimming pools, tennis courts, etc.). Stormwater runoff velocity and volume can increase in areas covered by impervious surfaces.

Index of Biotic Integrity (IBI): The IBI is based on fish surveys with the rating dependent on the abundance and composition of the fish species in a stream. Fish communities are useful for assessing stream quality because fish represent the upper level of the aquatic food chain and therefore reflect conditions in the lower levels of the food chain. Fish population characteristics are dependent on the physical habitat, hydrologic and chemical conditions of the stream, and are considered good indicators of overall stream quality because they reflect stress from both chemical pollution and habitat perturbations. For example, the presence of fish species that are intolerant of pollution are an indicator that water quality is good. The IBI is calculated on a scale of 12 to 60, the higher the score the better the stream quality.

Individual Permits (IP): Permits usually issued for projects that involve wetland impacts greater than 1.5 acres.

Infiltration: That portion of rainfall or surface runoff that moves downward into the subsurface soil.

Macroinvertebrates: Invertebrates that can be seen by the unaided eye (macro). Most benthic invertebrates in flowing water are aquatic insects or the aquatic stage of insects, such as stonefly nymphs, mayfly nymphs, caddisfly larvae, dragonfly nymphs and midge larvae.

They also include such things as clams and worms. The presence of benthic macroinvertebrates that are intolerant of pollutants is a good indicator of good water quality.

Macroinvertebrate Biotic Index (MBI): The MBI is very similar to the IBI except it is based on sampling macroinvertebrates (insects, worms etc.) that live in the stream rather than fish. The MBI scale is from 1 to 10, with 1 being the highest stream quality indicator and 10 being the worst. A MBI less than 6 indicates a good macroinvertebrate population. As with fish, the presence of pollution intolerant macroinvertebrate species is an indicator of good water quality. Since macroinvertebrates are less mobile than fish, the MBI is a good index to evaluate upstream/downstream impacts of point source discharges.

Mitigation: Measures taken to eliminate or minimize damage from development activities, such as construction in wetlands or Regulatory Floodplain filling, by replacement of the resource.

National Flood Insurance Program (NFIP): Managed by the Mitigation Division within the Federal Emergency Management Agency (FEMA), participants in the NFIP adopt and enforce floodplain management ordinances to reduce future flood damage and in exchange are eligible to receive federally funded flood insurance.

National Pollutant Discharge Elimination System (NPDES): Clean Water Act law requiring smaller communities and public entities that own and operate in MS4 to apply and obtain an NPDES permit for stormwater discharges. Permittees at a minimum must develop, implement, and enforce a stormwater program designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable. The stormwater management program must include these six minimum control measures:

1. Public education and outreach on stormwater impacts
2. Public involvement/participation
3. Illicit discharge detection and elimination
4. Construction site stormwater runoff control
5. Post-construction stormwater management in new development and redevelopment
6. Pollution prevention/good housekeeping for municipal operations

National Wetlands Inventory (NWI): U.S. Fish and Wildlife Service study that provides information on the characteristics, extent, and status of U.S. wetlands and deepwater habitats and other wildlife habitats.

Nationwide Permits (NWP): Permits usually issued for projects which contain similar circumstances (i.e. residential developments, recreational developments, utilities, etc.) that have minimal impacts (currently greater than 0.10-acres and less than 1.5-acres).

Nonpoint Source Pollution (NPS or NPSP): Refers to pollutants that accumulate in waterbodies from a variety of sources including runoff from the land, impervious surfaces, the drainage system and deposition of air pollutants.

Nutrients: Substances needed for the growth of aquatic plants and animals such as phosphorous and nitrogen. The addition of too many nutrients (such as from sewage dumping and over fertilization) will cause problems in the aquatic ecosystem through excess algae growth and other nuisance vegetation and may cause adverse impacts to aquatic species.

Pollutant load: The amount of any pollutant deposited into waterbodies from point source discharges, combined sewer overflows, and/or stormwater runoff.

Polyacrylamide: A polymer (-CH₂CHCONH₂-) formed from acrylamide subunits that can also be readily cross-linked. Used in sediment control to coagulate sediment particles which are in suspension. The newly formed, larger sediment particles can no longer be supported by the water and fall out of suspension, thus, no longer being carried by the water.

Quality Assurance Project Plan (QAPP): A detailed description of the monitoring methods/components along with reasoning behind the procedure. The QAPP is required for any projects seeking Section 319 grant funding and helps ensure to the IEPA that the data that is being collected is to strict standards to be credible.

Rill erosion: The removal of soil by concentrated water running through little streamlets, or headcuts. Detachment in a rill occurs if the sediment in the flow is below the amount the load can transport and if the flow exceeds the soil's resistance to detachment. As detachment continues or flow increases, rills will become wider and deeper.

Rip-rap: Rock or other material used to armor shorelines and streambeds against water and sometimes ice erosion. It is normally made from hard rock, commonly granite, and is used to protect coastlines from erosion and other coastal processes caused by the sea. It is also used inland, on lakes to protect the banks from erosion.

Soil Bioengineering: Techniques for stabilizing eroding or slumping stream banks that rely on the use of plants and plant materials such as live willow posts, brush layering, coconut logs and other “greener” or “softer” techniques. This is in contrast to techniques that rely on creating “hard” edges with riprap, concrete and sheet piling (metal and plastic).

Stormwater: A term used to describe water that originates during precipitation events. It may also be used to apply to water that originates with snowmelt or runoff water from overwatering that enters the stormwater system.

Stormwater management: A set of actions taken to control stormwater runoff with the objectives of providing controlled surface drainage, flood control and pollutant reduction in runoff.

Stormwater Pollution Prevention Plan (SWPPP): Required for all construction sites which disturb more than one acre at a time and are reviewed by the SWCD and various permitting agencies before construction can begin.

Stormwater Retention Requirement: Requiring developments to store stormwater onsite to allow the water a pervious on- site area to sit before entering a basin. Often required in subdivision codes.

Stormwater Runoff: Stormwater that does not soak into the ground and either flows into surface waterways or is channeled into storm sewers.

Sub-watershed: A smaller basin within a larger drainage area that all drains to a central point of the larger watershed.

Threatened and Endangered Species (T&Es): An “endangered” species is one that is in danger of extinction throughout all or a significant portion of its range. A “threatened” species is one that is likely to become endangered in the foreseeable future.

Treatment train: Several BMPs used together to improve water quality, infiltration and reduce sedimentation.

Turbidity: Refers to the clarity of the water, which is a function of how much material including sediment is suspended in the water.

Water table: The water table is the level at which the ground water pressure is equal to atmospheric pressure. It may be conveniently visualized as the 'surface' of the ground water in given vicinity.

Watershed: An area confined by topographic divides that drains to a given stream or river. The land area above a given point on a waterbody (river, stream, lake, or wetland) that contributes runoff to that point is considered the Watershed.

Wetland: A wetland is considered a subset of the definition of the Waters of the United States. Wetlands are land that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, under normal conditions, do support a prevalence of vegetation adapted for life in saturated soil conditions (known as hydrophytic vegetation). A wetland is identified based upon the three attributes: 1) hydrology, 2) hydric soils, and 3) hydrophytic vegetation.