

Appendix H

Glossary

Acute: A stimulus severe enough to rapidly induce an effect; in aquatic toxicity tests, an effect observed in 96 hours or less is typically considered acute. When referring to aquatic toxicology or human health, an acute effect is not always measured in terms of lethality.

Antidegradation: Policies which ensure protection of water quality for a particular water body where the water quality exceeds levels necessary to protect fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as outstanding natural resource waters. Antidegradation plans are adopted by each state to minimize adverse effects on water.

Aquifer: An underground area that contains fresh water in sufficient amounts to yield useful quantities to wells and springs.

Artificial Wetlands: Wetlands that are artificially created, often as part of a water treatment facility.

Authorized Program or Authorized State: A state, Territorial, Tribal, or interstate NPDES program which has been approved or authorized by EPA under 40 CFR Part 123.

Average Monthly Discharge Limitations: The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during that month divided by the number of days on which monitoring was performed (except in the case of fecal coliform).

Average Weekly Discharge Limitation: The highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Basin: A hydrologic unit consisting of a part of the surface of the Earth covered by a drainage system consisting of a surface stream or body of impounded surface water plus all tributaries.

Berm: An earthen mound used to direct the flow of runoff around or through a structure.

Best Management Practices (BMPs): Activities or structural improvements that help reduce the quantity and improve the quality of storm water runoff. BMPs include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Bioassay: A test used to evaluate the relative potency of a chemical or a mixture of chemicals by comparing its effect on a living organism with the effect of a standard preparation on the same type of organism.

Biochemical Oxygen Demand (BOD): A measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified time period (usually 5 days) in a wastewater sample; it is used as a measurement of the readily decomposable organic content of a wastewater.

Bioretention: A water quality practice that utilizes landscaping and soils to treat urban storm water runoff by collecting it in shallow depressions. It then filters the runoff through a fabricated planting soil media.

Biosolids: Sewage sludge that is used or disposed through land application, surface disposal, incineration, or disposal in a municipal solid waste landfill. Sewage sludge is defined as solid, semi-solid, or liquid untreated residue generated during the treatment of domestic sewage in a treatment facility.

Buffer Strip or Zone: Strips of trees, grass or other erosion resistant vegetation located between a waterway and an area of more intensive land use.

Bypass: The intentional diversion of wastestreams from any portion of a treatment (or pretreatment) facility.

Catch Basin: An entryway to the storm drain system, usually located at street corners.

Centralized Wastewater Treatment System: A managed system consisting of collection sewers and a single treatment plant used to collect and treat wastewater from an entire service area. Traditionally, such a system has been called a publicly owned treatment works (POTW) as defined at 40 CFR 122.2.

Chemical Oxygen Demand (COD): A measure of the oxygen-consuming capacity of inorganic and organic matter present in wastewater. COD is expressed as the amount of oxygen consumed in mg/l. Results do not necessarily correlate to the biochemical oxygen demand (BOD) because the chemical oxidant may react with substances that bacteria do not stabilize.

Chronic: A stimulus that lingers or continues for a relatively long period of time, often one-tenth of the life span or more. Chronic should be considered a relative term depending on the life span of an organism. The measurement of a chronic effect can be reduced growth, reduced reproduction, etc., in addition to lethality.

Code of Federal Regulations (CFR): A codification of the final rules published daily in the Federal Register. Title 40 of the CFR contains the environmental regulations.

Combined Sewer Overflow (CSO): A discharge of untreated wastewater from a combined sewer system at a point prior to the headworks of a publicly owned treatment works. CSOs generally occur during wet weather (rainfall or snowmelt). During periods of wet weather, these systems become overloaded, bypass treatment works, and discharge directly to receiving waters.

Combined Sewer System (CSS): A wastewater collection system which conveys sanitary wastewaters (domestic, commercial and industrial wastewaters) and stormwater through a single pipe to a publicly owned treatment works for treatment prior to discharge to surface waters.

Compliance Schedule: A schedule of remedial measures included in a permit or an enforcement order, including a sequence of interim requirements (for example, actions, operations, or milestone events) that lead to compliance with the CWA and regulations.

Composite Sample: Sample composed of two or more discrete samples. The aggregate sample will reflect the average water quality covering the compositing or sample period.

Conventional Septic System: A wastewater treatment system consisting of a septic tank and a typical trench or bed subsurface wastewater infiltration system.

Criteria: The numeric values and the narrative standards that represent contaminant concentrations that are not to be exceeded in the receiving environmental media (surface water, ground water, sediment) to protect beneficial uses.

Culvert: A short, closed (covered) conduit or pipe that passes storm water runoff under an embankment, usually a roadway.

CWA: The Clean Water Act

Daily Discharge: The discharge of a pollutant measured during any 24-hour period that reasonably represents a calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged during the day. For pollutants with limitations expressed in other units of measurement (e.g., concentration) the daily discharge is calculated as the average measurement of the pollutant throughout the day (40 CFR 122.2).

Daily Maximum Limit: The maximum allowable discharge of pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

Detention Pond: A storm water system that delays the downstream progress of storm water runoff in a controlled manner. This is typically accomplished using temporary storage areas and a metered outlet device. (As opposed to a less common Retention pond)

Dike: An embankment used to confine or control water. Dikes are often built along the banks of a river to prevent overflow; a levee.

Discharge: The volume of water and suspended sediment of surface water that passes a given location within a given period of time. Rivers are usually measured in Cubic Feet per Second (CFS). Storm water discharge can be measured in gallons per minute (GPS).

Drip Guard: A device used to prevent drips of fuel or corrosive or reactive chemicals from contacting other materials or areas.

Ecosystem: An ecological community and its environment interacting and functioning as a unit.

Effluent Limitation: Any restriction imposed by the Director on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean.

Erosion: When land is diminished or worn away due to wind, water or glacial ice. Often the eroded debris (silt or sediment) becomes a pollutant via storm water runoff. Erosion occurs naturally, but can be intensified by land clearing activities such as farming, development, road building and timber harvesting.

Eutrophication: Excessive levels of phosphorous, nitrogen, and nutrients in the water, which leads to a decrease in oxygen levels. Often characterized by excessive growth of algae and aquatic vegetation, which often results in deteriorated water quality and beach closings.

Filter Fabric: A textile of relatively small mesh that is used to allow water to pass through, while keeping sediment out (permeable) or prevent both runoff and sediment from passing through (impermeable).

Filter Strip: A long, narrow portion of vegetation used to retard water flow and collect sediment for the protection of watercourses, reservoirs, or adjacent properties.

Final Stabilization: means that either:

1. All soil disturbing activities at the site have been completed, and that a uniform perennial vegetative cover with a density of at least 70% for the area has been established or equivalent measures (i.e., concrete or asphalt paving, rip rap, etc.) have been employed; or
2. For individual lots part of a larger common plan of development or sale in residential or commercial developments, that either:
 - a) The coverage recipient has completed final stabilization as specified in (1) above, or
 - b) The coverage recipient has established temporary stabilization before another property owner assumes operational control for the property AND the coverage recipient for the larger common plan of development has provided the appropriate Notice of Intent or Registration form, the appropriate Construction General Permit, and guidance documents to the new property owner and the new owner assumes control by completing the appropriate NOI or Registration Form.

Flash Flood: A sudden, violent flood after heavy rain.

Flocculant: A substance that causes small particles to aggregate (flocculate).

Flood: A temporary rise in flow or stage of any watercourse or storm water conveyance system that results in storm water runoff exceeding its normal flow boundaries and inundating adjacent, normally dry areas.

Flood Control: The specific regulations and practices that reduce or prevent the damage caused by storm water runoff.

Floodplain: Any land area susceptible to inundation by storm water from any source.

Flow meter: A gauge that shows the speed of water moving through a conveyance.

Four-Zero-One (401) (a) Certification: A requirement of Section 401(a) of the Clean Water Act that all federally issued permits be certified by the state in which the discharge occurs. The state certifies that the proposed permit will comply with state water quality standards and other state requirements.

Free Groundwater: Unconfined groundwater whose upper surface is a free water table.

General Permit: A permit issued under the NPDES program to cover a certain class or category of storm water discharges. These permits reduce the administrative burden of permitting storm water discharges.

Grab Sample: A sample which is taken from a wastestream on a one-time basis without consideration of the flow rate of the wastestream and without consideration of time.

Grading: The cutting and/or filling of the land surface to a desired slope or elevation.

Groundwater: That portion of the water beneath the surface of the Earth that can be collected with wells, tunnels, or drainage galleries, or that flow naturally to the Earth's surface via seeps or springs.

Hazardous Substance: Any substance, other than oil, which, when discharged in any quantities into waters of the U.S., presents an imminent and substantial danger to the public health or welfare, including but not limited to fish, shellfish, wildlife, shorelines and beaches (Section 311 of the CWA); identified by EPA as the pollutants listed under 40 CFR Part 116. Any substance, other than oil, which, when discharged in any quantities into waters of the U.S., presents an imminent and substantial danger to the public health or welfare, including but not limited to fish, shellfish, wildlife, shorelines and beaches (Section 311 of the CWA); identified by EPA as the pollutants listed under 40 CFR Part 116.

Holding Pond: A pond or reservoir, usually made of earth, built to store polluted runoff for a limited time. (Detention Basin)

Illicit Connection: Any discharge to a municipal separate storm sewer that is not composed entirely of storm water, and is not authorized by an NPDES permit, or is not due to fire fighting activities.

Infiltration: The penetration of water through the ground surface into sub-surface soil or the penetration of water from the soil into sewer or other pipes through defective joints, connections, or manhole wells.

Inlet: An entrance into a ditch, storm sewer or other waterway.

Lagoon: A shallow pond where sunlight, bacterial action and oxygen work to purify wastewater.

Large Construction: includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than five (5) acres of land or will disturb less than five (5) acres of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than five (5) acres. Large construction activity is covered by the Large Construction General Permit.

Large Municipal Separate Storm Sewer System (MS4): A storm sewer system located in an area serving a population of 250,000 or more, as determined by the latest U.S. Census. Comprising multiple conveyance systems, including ditches, that transfer storm water from impervious surfaces to streams.

Material Storage Area: On-site location where raw materials, final products, by-products or waste materials are stored.

Medium Municipal Separate Storm Sewer System (MS4): A storm sewer system located in an area serving a population 100,000 or more but less than 250,000, as determined by the latest U.S. Census.

Comprising multiple conveyance systems, including ditches, that transfers storm water from impervious surfaces to streams.

Monitoring Well: A non-pumping well used for drawing water quality samples.

Municipal Sources: POTWs collect domestic sewage from houses, other sanitary wastewater, and wastes from commercial and industrial facilities. POTWs discharge conventional pollutants, and are covered by secondary treatment standards and state water quality standards. POTWs also produce biosolids during the treatment process.

National Pollutant Discharge Elimination System (NPDES): The name of the surface water quality program authorized by Congress as part of the 1987 Clean Water Act. This is EPA's program to control the discharge of pollutants to waters of the United States.

Nonconventional Pollutants: All pollutants that are not included in the list of conventional or toxic pollutants in 40 CFR Part 401. Includes pollutants such as chemical oxygen demand (COD), total organic carbon (TOC), nitrogen, and phosphorus.

Non-Point Source (NPS) Pollutants: Pollutants from many diffuse sources. Rainfall or snowmelt moving over and through the ground causes NPS pollution. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters and even our underground sources of drinking water.

Notice of Intent (NOI): An application to notify the permitting authority of a facility's intention to be covered by a general permit; exempts a facility from having to submit an individual or group application.

Nephelometric Turbidity Units (NTUs): the unit of measure for turbidity.

Oil/Grease Traps: Devices that collect oil and grease, removing them from water flows.

Oil Sheen: A thin, glistening layer of oil on the surface of water.

Oil/Water Separator: A device installed (usually at the entrance to a drain) which removes oil and grease from water entering the drain.

Operator/Owner: For the purpose of this manual and in the context of stormwater associated with construction activity, any party associated with a construction project that meets either of the following two criteria:

1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications
2. The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

Outfall: The point where wastewater or drainage discharges from a sewer pipe, ditch or other conveyance to a receiving body of water.

Permeability: The characteristic of soil that allows water or air to move through it. Usually described in inches/hours or inches/day.

Permit Issuing Authority (Permitting Authority): The state agency or EPA regional office that issues environmental permits to regulated facilities.

pH: A measure of the hydrogen ion concentration of water or wastewater; expressed as the negative log of the hydrogen ion concentration in mg/l. A pH of 7 is neutral. A pH less than 7 is acidic, and a pH greater than 7 is basic.

Phyto-Filtration: Using plants and trees to filter impurities or excessive levels of nutrient from water.

Plunge Pool: A basin used to slow flowing water. The pool may be protected from erosion by various lining materials.

Point Source Pollutant: Pollutants from a single, identifiable source such as a factory, refinery or place of business.

Pollutant: Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water [40 CFR 122.2].

Pollutant, Conservative: Pollutants that do not readily degrade in the environment, and which are mitigated primarily by natural stream dilution after entering receiving bodies of waters. Included are pollutants such as metals.

Pollutant, Non-Conservative: Pollutants that are mitigated by natural biodegradation or other environmental decay or removal processes in the receiving stream after in-stream mixing and dilution have occurred.

Pollutant Loading: The total quantity of pollutants in storm water runoff. Total Daily Maximum Loading (TMDL) is the limiting of pollutant loading into a body of water, such as a lake or river.

Pretreatment: The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a publicly owned treatment works [40 CFR 403.3(q)].

Primary Treatment: The practice of removing some portion of the suspended solids and organic matter in a wastewater through sedimentation. Common usage of this term also includes preliminary treatment to remove wastewater constituents that may cause maintenance or operational problems in the system (i.e., grit removal, screening for rags and debris, oil and grease removal, etc.).

Publicly Owned Treatment Works (POTW): A treatment works, as defined by Section 212 of the CWA, that is owned by the state or municipality. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW

treatment plant [40 CFR 403.3]. Privately-owned treatment works, Federally-owned treatment works, and other treatment plants not owned by municipalities are not considered POTWs.

Receiving Water: The "Water of the United States" as defined in 40 CFR 122.2 into which the regulated stormwater discharges.

Recharge: Re-supplying of water to the aquifer. Recharge generally comes from snowmelt and storm water runoff.

Residual: The amount of pollutant that remains in the environment after a natural or technological process has taken place, such as the particulates remaining in air after passing through a scrubber.

Retention: A process that halts the downstream progress of storm water runoff. This is typically accomplished using total containment involving the creation of storage areas that use infiltration devices, such as dry wells, to dispose of stored storm water via percolation over a specified period of time. (As opposed to a more common Detention Pond)

Riparian: Of, or pertaining to, rivers/streams and their banks.

Runoff: Drainage or flood discharge that leaves an area as surface flow or as pipeline flow has reached a channel or pipeline by either surface or sub-surface routes.

Sanitary Sewer: A system of underground pipes that carries sanitary waste or process wastewater to a treatment plant.

Sanitary Sewer Overflows (SSO): Untreated or partially treated sewage overflows from a sanitary sewer collection system.

Secondary Containment: Structures, usually dikes or berms, surrounding tanks or other storage containers to catch spilled material.

Secondary Treatment: Technology-based requirements for direct discharging municipal sewage treatment facilities. Standard is based on a combination of physical and biological processes typical for the treatment of pollutants in municipal sewage. Standards are expressed as a minimum level of effluent quality in terms of: BOD 5, suspended solids (SS), and pH (except as provided for special considerations and treatment equivalent to secondary treatment).

Sediment/Silt: Soil, sand and materials washed from land into water, usually after rain. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud water so that sunlight does not reach aquatic plants.

Sediment Trap: A device for removing sediment from water flows, usually installed at points of outflow.

Sedimentation: The process of depositing soil, clay, sand or other sediments that were moved by the flow of water.

Self-Monitoring: Sampling and analyses performed by a facility to determine compliance with a permit or other regulatory requirements.

Small Construction: includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than one (1) acre and less than five (5) acres of land or will disturb less than one (1) acre of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one (1) acre and less than five (5) acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

Small Municipal Separate Storm Sewer System (MS4): A storm sewer system located in an area serving a population less than 100,000, as determined by the latest U.S. Census. Comprising multiple conveyance systems, including ditches, that transfers storm water from impervious surfaces to streams.

Soil Bioengineering: Involves the use of live and dead woody cuttings and poles or posts collected from native plants to re-vegetate watershed slopes and stream banks. The cuttings, posts, and vegetative systems composed of bundles, layers, and mats of the cuttings and posts provide structure, drains, and vegetative cover to repair eroding and slumping slopes.

Spill Prevention Control and Countermeasures Plan (SPCC): Plans to prevent and respond to spills of hazardous substances as defined in the Clean Water Act.

Storm Drain: A slotted opening leading to an underground pipe or an open ditch carrying surface runoff. These lead directly to streams and do not go through a treatment or processing plant.

Storm Sewer Utility: A means of establishing a dedicated and reliable source of revenue based on user fees, rather than taxes, to help solve storm water management problems. This steady revenue source ensures that funds will be available to support a local storm water management program.

Stormwater: Precipitation from a storm event that flows quickly into streams or accumulates in natural or constructed storage systems. Storm water often includes pollutants and sediment from land surfaces.

Stormwater Discharge-Related Activities: Activities that cause, contribute to, or result in stormwater point source pollutant discharges, including excavation, site development, grading, and other surface disturbance activities; and measures to control stormwater, including the siting, construction, and operation of BMPs to control, reduce, or prevent stormwater pollution.

Stormwater Facilities: Systems such as watercourses, constructed channels, storm drains, culverts, and detention/retention facilities that are used for the conveyance and/or storage of storm water runoff.

Stormwater Management: Functions associated with planning, designing, constructing, maintaining, financing and regulating the facilities (both constructed and natural) that collect, store, control and/or convey storm water.

Stormwater Management Program (SWMP): to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system.

Stormwater Pollution Prevention Plan (SWPPP): a plan that includes site map(s), an identification of construction/contractor activities that could cause pollutants in the storm water, and a description of measures or practices to control these pollutants.

Stormwater System: The entire assemblage of storm water facilities located within a watershed.

Sump: A pit or tank that catches liquid runoff for drainage or disposal.

Surface Water: Water that remains on the surface of the ground, including rivers, lakes, reservoirs, streams, wetlands, impoundments, seas, estuaries, etc.

Swale: A low lying or depressed, at least seasonally, wet stretch of land. Often lined with grass (grassy swale) and used as a conveyance for storm water.

Total Maximum Daily Load (TMDL): a tool for establishing the allowable loadings of a given pollutant in a surface water resource to meet predetermined water quality standards.

Total Organic Carbon (TOC): Measures the amount of organic carbon in water.

Total Suspended Solids (TSS): A measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136.

Toxic Pollutant: Pollutants or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring. Toxic pollutants also include those pollutants listed by the Administrator under CWA Section 307(a)(1) or any pollutant listed under Section 405(d) which relates to sludge management.

Underground Storage Tanks (UST's): Storage tanks that have at least 10% of their storage capacity underground.

Urban Runoff: Storm water from urban areas, which tends to contain heavy concentrations of pollutants from vehicles and industry.

Water Quality Criteria: Comprised of numeric and narrative criteria. Numeric criteria are scientifically derived ambient concentrations developed by EPA or states for various pollutants of concern to protect human health and aquatic life. Narrative criteria are statements that describe the desired water quality goal.

Water Quality Standard (WQS): A law or regulation that consists of the beneficial use or uses of a waterbody, the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular waterbody, and an antidegradation statement.

Waters of the United States: All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide. Waters of the United States include all interstate waters and intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. [See 40 CFR 122.2 for the complete definition.]

Watercourse: A lake, stream, creek, channel, storm water conveyance system, or other topographic feature, over which storm waters flow at least periodically.

Watershed: That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also known as drainage area, catchment or river basin)\

Wet Weather Flows: Water entering storm drains during rainstorms.

Wetlands: Land with a wet, spongy soil, where the water table is at or above the land surface for at least part of the year. Wetlands are characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include swamps, bogs, fens, marshes, and estuaries.