
18. GLOSSARY

24-hour composite sample: Either a flow or time-proportioned mixture of a certain number of discreet aliquots over a period of 24 hours.

Activated Sludge: A process for removing organic matter from sewage by saturating it with air and adding biologically active sludge.

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.

Adsorption: An advanced way of treating wastes in which activated carbon removes organic matter from wastewater.

Aeration Tank: A chamber for injecting air into water.

Aerobic: A life or process that occurs in the presence of oxygen.

Algae: Plants which grow in sunlit waters and release oxygen into the water. They are a food for fish and small aquatic animals.

Aliquot: A discrete sample used for analysis.

Alternative Systems: A system utilized in lieu of a conventional system.

Anaerobic: A life or process that occurs in the absence of oxygen.

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.

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 limitation: 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.

Bacteria: Small living organisms which often consume the organic constituents of sewage.

Beneficial Uses: The uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. “Beneficial Uses” that may be protected against include, but are not limited to: domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best Available Technology Economically Achievable (BAT): Technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Best Conventional Pollutant Control Technology (BCT): Technology-based standard for the discharge from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, oil and grease. The BCT is established in light of a two-part “cost reasonableness” test which compares the cost for an industry to reduce its pollutant discharge with the cost to a POTW for similar levels of reduction of a pollutant loading. The second test examines the cost-effectiveness of additional industrial treatment beyond BPT. EPA must find limits which are reasonable under both tests before establishing them as BCT.

Best Management Practice (BMP): Permit condition used in place of or in conjunction with effluent limitations to prevent or control the discharge of pollutants. May include schedule of activities, prohibition of practices, maintenance procedure, or other management practice. BMPs may include, but are not limited to, treatment requirements, operating procedures, or practices to control plant site runoff, spillage, leaks, sludge or waste disposal, or drainage from raw material storage.

Best Practicable Control Technology Currently Available (BPT): The first level of technology-based standards established by the CWA to control pollutants discharged to waters of the U.S. BPT effluent limitations guidelines are generally based on the average of the best existing performance by plants within an industrial category or subcategory.

Best Professional Judgment (BPJ): The method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data.

Bioaccumulation: The progressive accumulation of contaminants in the tissues of organisms through any route including respiration, ingestion, or direct contact with contaminated water, sediment, pore water, or dredged material to a higher concentration than in the surrounding environment. Bioaccumulation occurs with exposure and is independent of the trophic level.

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.

Biosolids: Nutrient-rich organic materials resulting from the treatment of domestic sewage in a treatment facility. When treated and processed, these residuals can be recycled and applied as a fertilizer to improve and maintain productive soils and stimulate plant growth. Uses include, but are not limited to, land application to agricultural land, forest land, a reclamation site or sale or give away to the public for home lawn and garden use.

Black Water: The term given to any water that carries animal, human or food wastes.

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

Categorical Industrial User (CIU): An industrial user subject to National categorical pretreatment standards.

Categorical Pretreatment Standards: Limitations on pollutant discharges to publicly owned treatment works promulgated by EPA in accordance with Section 307 of the Clean Water Act that apply to specified process wastewaters of particular industrial categories [40 CFR §403.6 and Parts 405-471].

Chain-of-Custody: Procedures used to protect samples from tampering and to document such protection.

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.

Chlorinator: A device for adding chlorine gas to sewage to kill infectious germs.

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.

Clean Water Act (CWA): An act passed by the U.S. Congress to control water pollution. It was formerly referred to as the Federal Water Pollution Control Act of 1972 or Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500), 33 U.S.C. 1251 et. seq., as amended by: Public Law 96-483; Public Law 97-117; Public Laws 95-217, 97-117, 97-440, and 100-04.

Clean Water Act Section 402(p) [33 USC 1342(p)]: The federal statute requiring municipal and industrial dischargers to obtain NPDES permits for their discharges of storm water.

Clean Water Act Section 303(d) Listed Water Body : An impaired water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology-based pollution controls required by the CWA.

Coagulation: The clumping together of solids to make them settle out of the sewage faster. Coagulation of solids is brought about with the use of certain chemicals such as lime, alum and iron salts.

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 sewage: Domestic and industrial wastewater and storm drainage carried in the same pipe.

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) when the 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 storm water through a single pipe to a publicly owned treatment works for treatment prior to discharge to surface waters.

Comminutor: A device for the catching and shredding of heavy solid matter in the primary stage of waste treatment.

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.

Composting: The natural biological decomposition of organic material in the presence of air to form a humus-like material.

Concentrated Animal Feeding Operation (CAFO): A facility that confines a specific number of animals and meets certain other conditions in the regulations. Wastewater discharge permits for these operations are based upon the requirements of the CAFO Effluent Guidelines.

Confined Space: An enclosed space that an employee can bodily enter and perform assigned work, that has limited means of exit and entry.

Control Authority: The POTW, if it has an approved pretreatment program; in the absence of such a program, the NPDES State, if it has an approved pretreatment program or EPA, if the State does not have an approved pretreatment program.

Conventional Pollutants: Pollutants typical of municipal sewage, and for which municipal secondary treatment plants are typically designed; defined by Federal Regulation [40 CFR §401.16] as BOD, TSS, fecal coliform bacteria, oil and grease, and pH.

Conventional Systems: Systems that have been traditionally used to collect municipal wastewater in gravity sewers and convey it to a central primary or secondary treatment plant prior to discharge to surface waters.

Conveyance: A channel or passage that conducts or carries water including any pipe, ditch, channel, tunnel, conduit, well, or container.

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.

Daily Discharge: The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the 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 over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

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.

Debris: The remains of anything destroyed or broken, or accumulated loose fragments of rock.

Designated uses: Those uses specified in water quality standards for each water body or segment whether or not they are being attained.

Diffused Air: A technique by which air under pressure is forced into sewage in an aeration tank. The air is pumped down into the sewage through a perforated pipe and bubbled through the sewage.

Digestion: The decomposition of sludge that takes place in tanks and results in the partial gasification, liquefaction, and mineralization of pollutants.

Director: The Regional Administrator or State Director, as the context requires, or an authorized representative. When there is no approved State program, and there is an EPA administered program, Director means the Regional Administrator. When there is an approved State program, "Director" normally means the State Director.

Discharge: Any addition of any pollutant to waters of the U.S. from any conveyance.

Discharge Monitoring Report (DMR): The form used (including any subsequent additions, revisions, or modifications) to report self-monitoring results by NPDES permittees. DMRs must be used by approved States as well as by EPA.

Distillation: The heating the effluent and removing of the vapor or steam.

Effluent: The liquid that comes out of a treatment plant after completion of the treatment process.

Effluent Limitation: Any restriction established by the Administrator on quantities, rates, and concentrations of chemical, physical, biological and other constituents which are discharged from point sources, other than new sources, into navigable waters, the water of the contiguous zone or the ocean.

Erosion: When land is diminished or wanes away due to the effects of 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.

Existing uses: Those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.

Floc: A clump of solids formed in sewage by biological or chemical action.

Flocculation: The process by which clumps of solids in sewage are made to increase in size by chemical, physical, or biological action.

Flume: A specially shaped open channel flow section providing a change in the channel area and/or slope which results in an increased velocity and change in the level of the liquid flowing through the flume. A flume normally consists of three sections: (1) a converging section; (2) a throat section; and (3) a diverging section. The flow rate through the flume is a function of the liquid level at some point in the flume.

Flow-Weighted Composite Sample: A composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

Flow-Proportional Composite Sample: A composite sample that combines discrete aliquots of a sample collected over time, based on the flow of the wastestream being sampled. There are two methods used to collect this type of sample. One collects a constant sample volume at time intervals which vary based on stream flow. The other collects varying sample volumes based on stream flow, at constant time intervals.

First Flush: Individual sample taken during the first 30 minutes of a storm event. The pollutants in this sample can often be used as a screen for non-storm water discharges since such pollutants are flushed out of the system during the initial portion of the discharge.

Fungi: Small, non-chlorophyll bearing plants which may play a useful role in trickling filter treatment operations.

General Permit: An NPDES permit issued under 40 CFR §122.28 that authorizes a category of discharges under the CWA within a geographical area. A general permit is not specifically tailored for an individual discharger.

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.

Gray Water: Domestic wastewater composed of washwater from sinks, kitchen sinks, bathroom sinks and tubs and laundry tubs.

Grinder Pump: A mechanical device which shreds solids and raises the fluid to a higher elevation through pressure sewers.

Groundwater: The body of water beneath the surface of the ground that is made up primarily of the water that has seeped down from the surface.

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.

Head of Liquid: Depth of flow.

Illicit Discharge: Any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to an NPDES permit and discharges from fire fighting activities.

Incineration: The burning of sludge or other material to remove the water and reduce the remaining residues to ash.

Infiltration: water other than wastewater that enters a wastewater system and building sewers from the ground through such means as defective pipes, pipe joints, connections, and manholes. (Infiltration does not include inflow.)

Infiltration and inflow (I&I): The total quantity of water from both infiltration and inflow.

Infiltration/Percolation: A land application technique where large volumes of wastewater are applied to land, allowed to penetrate the surface and percolate through the underlying soil.

Inflow: Water other than wastewater that enters a wastewater system and building sewers from sources such as roof leaders, cellar drains, yard drains, area drains, foundation drains, drains from springs and swampy areas, manhole covers, cross connections between storm drains and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters, and drainage. (Inflow does not include infiltration.)

Influent: Water, wastewater, or other liquid flowing into a reservoir, basin or treatment plant, or any unit thereof.

Indirect Discharge: The introduction of pollutants into a municipal sewage treatment system from any nondomestic source (i.e., any industrial or commercial facility) regulated under Section 307(b), (c), or (d) of the CWA.

Instantaneous Maximum Limit: The maximum allowable concentration of a pollutant determined from the analysis of any discrete or composite sample collected, independent of the flow rate and the duration of the sampling event.

Interceptor Sewer: A sewer without building sewer connections that is used to collect and carry flows from main and trunk sewers to a central point for treatment and discharge.

Irrigation: A land application technique wherein wastewater is applied to the land to supply the water and nutrient needs of plants.

Land Application: The discharge of wastewater onto the ground for treatment or reuse.

Landfill: An area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.

Lateral Sewers: The pipes that run under the streets of a city and receive the sewers from homes or businesses.

Local Limits: Conditional discharge limits imposed by municipalities upon industrial or commercial facilities that discharge to the municipal sewage treatment system.

Major Facility: Any NPDES facility or activity classified as such by the Regional Administrator, or in the case of approved State programs, the Regional Administrator in conjunction with the State Director. Major municipal dischargers include all facilities with design flows of greater than one million gallons per day and facilities with EPA/State approved industrial pretreatment programs. Major industrial facilities are determined based on specific ratings criteria developed by EPA/State.

Mass-Based Standard: A discharge limit that is measured in a mass unit such as pounds per day.

Materials Management Practices: Practices used to limit the contact between significant materials and precipitation. These may include structural or nonstructural controls such as dikes, berms, sedimentation ponds, vegetation strips, spill response plans, etc.

Maximum daily discharge limitation: The highest allowable daily discharge.

Mechanical Aeration: The injection of air into water via mechanical energy that causes the waste stream to absorb oxygen from the atmosphere.

Maximum Extent Practicable (MEP): There is no regulatory definition for MEP. The CWA section 402(p)(3)(B)(iii) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

Method Detection Limit (MDL): Defined as the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte.

Microbes: Minute plant or animal life. Some microbes that may cause disease exist in sewage.

Million Gallons per Day (mgd): A unit of flow commonly used for wastewater discharges. One mgd is equivalent to 1.547 cubic feet per second.

Mixed Liquor: A mixture of activated sludge and waters, containing organic matter undergoing activated sludge treatment in the aeration tank.

Mixing Zone: An area where an effluent discharge undergoes initial dilution and is extended to cover the secondary mixing in the ambient water body. A mixing zone is an allocated impact zone where water quality criteria can be exceeded as long as acutely toxic conditions are prevented.

Municipality: A city, town, borough, county, parish, district, association, or other public body created by or under state law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of CWA.

Municipal Separate Storm Sewer Systems (MS4): A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned by a State, city, town or other public body, that is designed or used for collecting or conveying storm water, which is not a combined sewer, and which is not part of a publicly owned treatment works. [40 CFR §122.26(b)(8)].

National Pollutant Discharge Elimination System (NPDES): The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of CWA.

National Pretreatment Standard or Pretreatment Standard: Any regulation promulgated by the EPA in accordance with Sections 307(b) and (c) of the CWA that applies to a specific category of industrial users and provides limitations on the introduction of pollutants into publicly owned treatment works. This term includes the prohibited discharge standards under 40 CFR §403.5, including local limits [40 CFR §403.3(j)].

New Source Performance Standards (NSPS): Technology-based standards for facilities that qualify as new sources under 40 CFR §122.2 and 40 CFR §122.29. Standards consider that the new source facility has an opportunity to design operations to more effectively control pollutant discharges.

Nitrogenous Wastes: Wastes of animal or plant origin that contain a significant concentration of nitrogen.

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.

Nonpoint Source Pollution (NPS): Nonpoint source refers to diffuse, widespread sources of pollution. Nonpoint Sources include but are not limited to urban, agricultural, or industrial areas, roads, highways, construction sites, communities served by septic systems, recreational boating activities, timber harvesting, mining, livestock grazing, as well as physical changes to stream channels, and habitat degradation.

Non-Storm Water: Non-storm water consists of all discharges to and from a storm water conveyance system that do not originate from precipitation events (i.e., all discharges from a conveyance system other than storm water).

Non-structural BMPs: In general, activities or programs to educate the public or provide low cost non-physical solutions. Examples include: activity schedules, prohibitions of practices, street sweeping, facility maintenance, detection and elimination of illicit connections and illegal dumping, and other low-cost measures.

Nuisance: As defined in the Porter-Cologne Water Quality Control Act a nuisance is “anything which meets all of the following requirements: 1) Is injurious to health, or is indecent, or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. 2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. 3) Occurs during, or as a result of, the treatment or disposal of wastes.”

Numeric Effluent Limitations: The typical method by which effluent limits are prescribed for pollutants in waste discharge requirements implementing the federal NPDES regulations. When numeric effluent limits are met at the “end-of-pipe,” the effluent discharge generally will not cause water quality standards to be exceeded in the receiving waters.

Nutrients: Elements or compounds essential as raw materials for organism growth and development (e.g., carbon, oxygen, nitrogen and phosphorus).

Organic Matter: The carbonaceous waste contained in plant or animal matter and originating from domestic or industrial sources.

Outfall: Point source where an effluent is discharged into receiving waters.

Overland Flow: A land application technique that cleanses wastewater by allowing it to flow over a sloped surface. As the water flows over the surface, the contaminants are removed and the water is collected at the bottom of the slope for reuse.

Oxidation: The addition of oxygen which breaks down organic wastes or chemicals in sewage by bacterial and chemical means.

Oxidation Pond: A man-made lake or body of water in which wastes are consumed by bacteria. It is used most frequently with other waste treatment processes. An oxidation pond is basically the same as a sewage lagoon.

Pathogen: An organism that is capable of producing an infection or disease in a susceptible host.

Peak flow: The maximum flow that occurs over a specific length of time (e.g. daily, hourly, instantaneous).

Percolation: The movement of water through sub-surface soil layers, usually continuing downward to the groundwater.

Permittee: Any "person," as defined at 40 CFR §122.2, authorized by an NPDES Permit to discharge to Waters of the United States.

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.

Phosphorous: An element that while essential to life, contributes to the eutrophication of lakes and other bodies of water.

pin floc: Small floc particle.

Point Source: Any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fixture, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged.

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.

Pollution Prevention: Practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control, treatment, or disposal.

Polyelectrolytes: Synthetic chemicals used to speed the removal of solids from sewage. The chemicals cause the solids to flocculate or clump together more rapidly than chemicals like alum or lime.

Post-Construction BMPs: A subset of BMPs including structural and non-structural controls which detain, retain, filter, or educate to prevent the release of pollutants to surface waters during the final functional life of development.

Practical Quantification Limit (PQL): The lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

Pressure Sewer: A system of pipes in which the water, wastewater or other liquid is transported to a higher elevation by applying a pumping force behind it.

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)].cultural waste discharged into water.

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.).

Priority Pollutants: Those pollutants considered to be of principal importance for control under the CWA based on the NRDC consent decree settlement [(NRDC et al. v. Train, 8 E.R.C. 2120 (D.D.C. 1976), modified 12 E.R.C. 1833 (D.D.C. 1979)]; a list of these pollutants is provided as Appendix A to 40 CFR Part 423.

Process Wastewater: Any water which, during manufacturing or processing, comes into direct contact with, or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly Owned Treatment Works (POTW): A treatment works, as defined by Section 212 of the CWA, that is owned by the State or municipality, including any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature and sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant [40 CFR §403.3].

Pump: A mechanical device for causing flow, raising or lifting water or other fluid, or applying pressure to fluids.

Receiving Water: The Waters of the U.S. which includes both surface and groundwaters.

Runoff Coefficient: The fraction of total rainfall that will appear at the conveyance as runoff.

Salts: The minerals that water picks up as it passes through the air over and under the ground, and as the water is used by households and industry.

Sand Filters: Filters that physically remove some suspended solids from sewage. Air and bacteria decompose additional wastes filtering through the sand. Cleaner water drains from the bed. The sludge accumulating at the surface must be removed from the bed periodically.

Sanitary Sewer: A pipe or conduit (sewer) intended to carry wastewater or water-borne wastes from homes, businesses, and industries to the POTW.

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

Secondary Industry Category: Any industry category which is not a primary industry category.

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).

Sedimentation Tanks: Tanks that help to remove solids from sewage. The wastewater is pumped to the tanks where the solids settle to the bottom or float on the top as scum. The scum is skimmed off the top, and solids on the bottom are pumped to incineration, digestion, filtration or other means of final disposal.

Seepage: The slow movement of water through small cracks or pores of a material, through the soil, or into or out of a body of surface or subsurface water.

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

Septic Tanks: Underground tanks where domestic wastes are piped to directly from a home or homes when a sewer line is not available to carry them to a treatment plant. The bacteria in the wastes decompose the organic waste and the sludge settles on the bottom of the tank. The effluent flows out of the tank into the ground through drains. The sludge is pumped out of the tanks, usually by commercial firms, at regular intervals.

Sewage Sludge: Solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works [40 CFR §503.9(w)]. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

Sewer: A system of pipes that collects and delivers wastewater to treatment plants or receiving streams.

Significant Industrial User (SIU): An indirect discharger that is the focus of control efforts under the national pretreatment program; includes all indirect dischargers subject to national categorical pretreatment standards, and all other indirect dischargers that contribute 25,000 gpd or more of process wastewater, or which make up five percent or more of the hydraulic or organic loading to the municipal treatment plant, subject to certain exceptions [40 CFR §403.3(t)].

Sludge: The solid matter that settles to the bottom, floats, or becomes suspended in sedimentation tanks and must be disposed of by filtration and incineration or by transport to appropriate disposal sites.

Spill Prevention Control and Countermeasure Plan (SPCC): A plan prepared by a facility to minimize the likelihood of a spill and to expedite control and cleanup activities should a spill occur.

Standard Industrial Classification (SIC) Code: A code number system used to identify various types of industries. The code numbers are published by the Superintendent of

Documents, U.S. Government Printing Office, Washington, D.C. 20402. A particular industry may have more than one SIC code if it conducts several types of commercial or manufacturing activities onsite.

Sterilization: The destruction of all living organisms. In contrast, disinfection is the destruction of most of the living organisms.

Storm Sewer: A separate system of pipes that carries only runoffs from buildings and land during a storm.

Storm Water: Discharges generated by runoff from land and impervious areas such as paved streets, parking lots, and building rooftops during rainfall and snow events that often contain pollutants in quantities that could adversely affect water quality. Most storm water discharges are considered point sources and require coverage by an NPDES permit.

Structural Controls: Physical facilities or controls which may include secondary containment, treatment measures, (e.g. first flush diversion, detention/retention basins, and oil/grease separators), run-off controls (e.g., grass swales, infiltration trenches/basins, etc.), and engineering and design modification of existing structures.

Sump Pump: A mechanism used for removing water or wastewater from a sump or wet well.

Suspended Solids: The small particles of solid pollutants which are present in sewage and which resist separation from the water by conventional means.

Technology-Based Effluent Limit: A permit limit for a pollutant that is based on the capability of a treatment method to reduce the pollutant to a certain concentration.

Time Composite Sample: A composite sample prepared by collecting fixed volume aliquots at specified time intervals, which are combined into a single sample for analysis.

Total Dissolved Solids: The total dissolved (filterable) solids as determined by use of the method specified in 40 CFR part 136.

Total Maximum Daily Load (TMDL): The maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. Under Clean Water Act Section 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

Total Organic Carbon (TOC): 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 Pollutants: 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 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.

Toxicity: Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

Toxicity Reduction Evaluation (TRE): A site-specific study conducted in a stepwise process designed to identify the causative agent(s) of effluent toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity.

Toxicity Test: A procedure to determine the toxicity of a chemical or an effluent using living organisms. A toxicity test measures the degree of effect on exposed test organisms of a specific chemical or effluent.

Trickling Filter: A support media for bacterial growth, usually a bed of rocks or stones. The sewage is trickled over the bed so the bacteria can break down the organic wastes.

Turbidity: The capability of light to pass through water.

Upset: An exceptional incident in which there is unintentional and temporary noncompliance with the permit limit because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Urban Runoff: All flows in a storm water conveyance system, including storm water (wet weather flows) and non-storm water illicit discharges (dry weather flows).

Use Attainability Analysis (UAA): A structured scientific assessment of the factors affecting the attainment of a designated use, such as physical, chemical, biological, and economic factors as described in §131.10(g).

Variance: Any mechanism or provision under Sections 301 or 316 of the CWA or under 40 CFR Part 125, or in the applicable “effluent limitations guidelines” which allows modification to or waiver of the generally applicable effluent limitations requirements or time deadlines of the CWA. This includes provisions which allow the establishment of alternative limitations based on fundamentally different factors.

Waste Treatment Plant: A series of tanks, screens, filters, and other processes by which pollutants are removed from water.

Wastesload Allocation (WLA): The proportion of a receiving water’s total maximum daily load that is allocated to one of its existing or future point sources of pollution.

Water Quality-Based Effluent Limit (WQBEL): A value determined by selecting the most stringent of the effluent limits calculated using all applicable water quality criteria (e.g., aquatic life, human health, and wildlife) for a specific point source to a specific receiving water for a given pollutant.

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 Standards (WQS): A law or regulation that consists of the beneficial use or uses of a water body, the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular water body, 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 but are not limited to all interstate waters and intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, play lakes, or natural ponds. [See 40 CFR §122.2 for the complete definition.]

Watershed: That geographical area which drains to a specified point on a watercourse, usually a confluence of streams or rivers (also known as drainage area, catchments, or river basin).

Weir: A device used to gauge the flow rate of liquid through a channel; is essentially a dam built across an open channel over which the liquid flows, usually through some type of notch.

Wet Weather Flow: Dry weather flow combined with storm water introduced into a combined sewer, and dry weather flow combined with inflow in a separate sewer.

Whole Effluent Toxicity (WET): The total toxic effect of an effluent measured directly with a toxicity test.

Virus: The smallest form of microorganism capable of causing disease.

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