

GLOSSARY OF COMMON IPP TERMS

Act or “the act” [40 CFR 403.3(b)]

The Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), as amended, Title 33 of the *United States Code* (U.S.C.), section 1251 *et seq.*

Allowable Headworks Loading (AHL)

The estimated maximum loading of a pollutant that can be received at a POTW’s headworks and not cause a POTW to violate a particular treatment plant or environmental criterion. AHLs are developed to prevent interference or pass through.

Approval Authority [40 CFR 403.3(c)]

The director in an NPDES Authorized State with an approved state pretreatment program, or the appropriate EPA regional administrator in a non-NPDES Authorized State or NPDES state without an approved state pretreatment program.

Approved POTW Pretreatment Program [40 CFR 403.3(d)]

A program administered by a POTW that meets the criteria established in 40 CFR Part 403 and that has been approved by a regional administrator or state director.

Baseline Monitoring Report (BMR) [paraphrased from 40 CFR 403.12(b)]

A report submitted by categorical industrial users (CIUs) within 180 days after the effective date of an applicable categorical pretreatment standard—or at least 90 days before beginning discharge for new sources—that contains specific facility information, including flow and pollutant concentration data. For existing sources, the report must also certify as to the compliance status of the facility with respect to the categorical pretreatment standards.

Best Available Technology Economically Achievable (BAT)

A level of technology based on the best available control and treatment measures that are economically achievable within a given industrial category or subcategory.

Best Management Practice (BMP) [40 CFR 403.3(e)]

A schedule of activities, prohibition of practices, maintenance procedures, and other management practices to implement the prohibitions listed in 40 CFR 403.5(a)(1) and (b). BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

Best Practicable Control Technology Currently Available (BPT)

A level of technology represented by, typically, the average of the best practicable wastewater treatment performance levels currently available within a given industrial category or subcategory.

Biochemical Oxygen Demand (5-day) (BOD₅)

An indirect measure of the concentration of biologically degradable material present in organic wastes. It reflects the amount of oxygen consumed in 5 days by biological processes breaking down organic waste.

Blowdown

The discharge of water with high concentrations of accumulated solids from boilers to prevent plugging of the boiler tubes or steam lines. In cooling towers, blowdown is discharged to reduce the concentration of dissolved salts in the recirculating cooling water.

Bypass [40 CFR 403.17(a)]

The intentional diversion of wastestreams from any portion of an industrial user’s treatment facility.

Categorical Industrial User (CIU)

An industrial user subject to national categorical pretreatment standards.

Categorical Pretreatment Standards *[paraphrased from 40 CFR 403.6]*

Standards specifying the quantity, concentration, or pollutant properties of pollutants that may be discharged to POTWs. EPA promulgates pretreatment standards for specific industry categories in accordance with CWA section 307. These standards are codified in 40 CFR chapter I, subchapter N, Parts 405–471.

Chronic Effect

An adverse effect on a human or animal in which symptoms recur frequently or develop slowly over a long period.

Chronic Exposure

Multiple exposures occurring over an extended period or over a significant fraction of an animal's or human's lifetime (usually 7 years to a lifetime).

Chronic Toxicity

The capacity of a substance to cause long-term poisonous health effects in humans, animals, fish, and other organisms.

Clean Water Act (CWA)

The common name for the Federal Water Pollution Control Act. Public Law 92-500; 33 U.S.C. section 1251 *et seq.*; the statutory authority for both the NPDES Permit Program and the National Pretreatment Program.

Code of Federal Regulations (CFR)

A codification of federal rules published annually by the Office of the Federal Register National Archives and Records Administration. Title 40 of the CFR contains the regulations for "Protection of the Environment."

Combined Sewer Overflow (CSO)

A discharge of untreated wastewater from a combined sewer system at a point before the headworks of a POTW. Because combined systems receive both storm event drainage (from rainfall or snowmelt, and street runoff) and untreated sewage, CSOs generally occur during wet weather when the systems can become overloaded, resulting in bypassing of the treatment works and discharge directly to receiving waters.

Combined Wastestream Formula (CWF) *[paraphrased from 40 CFR 403.6(e)]*

Procedure for calculating alternative discharge limits at industrial facilities where a wastestream regulated by a categorical pretreatment standard is combined before treatment with wastestreams other than those subject to the standard.

Compliance Schedule

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

Composite Sample

A series of water samples taken over a given period of time and weighted by flow rate.

Concentration-based Limit

A limit based on the relative strength of a pollutant in a wastestream, usually expressed in milligrams per liter (mg/L).

Continuous Discharge

A discharge that occurs without interruption during the operating hours of a facility, except for infrequent shutdowns for maintenance, process changes, or similar activities.

Control Authority *[paraphrased from 40 CFR 403.3(f)]*

The POTW, in the case of a POTW with an approved pretreatment program or the Approval Authority, in the case of a POTW without an approved pretreatment program.

Conventional Pollutants *[40 CFR 401.16]*

Pollutants typical of municipal sewage, and for which municipal secondary treatment plants are typically designed. EPA has, pursuant to section 304(a) of the CWA, identified BOD₅, total suspended solids (TSS), fecal coliform bacteria, oil and grease, and pH as conventional pollutants.

Daily Maximum Limitation

The maximum allowable discharge of pollutants during a 24-hour period. 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.

Detection Limit

The minimum concentration of an analyte (substance) that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero as determined by the procedure set forth in 40 CFR Part 136, appendix B.

Development Document

A document that EPA prepares while developing effluent limitations guidelines and pretreatment standards. It explains the data and methodology used to establish effluent limitations and categorical pretreatment standards for an industrial category.

Dilute Wastestream *[paraphrased from 40 CFR 403.6(e)(1)(i)]*

Used in calculating alternative standards for purposes of the combined wastestream formula, this wastestream is composed of the average daily flow (at least a 30-day average) from the following: (a) boiler blowdown streams, noncontact cooling streams, stormwater streams, and demineralized backwash streams; provided, however, that where such streams contain a significant amount of a pollutant, and the combination of such streams, before treatment, with an industrial user's (IU's) regulated process wastestream(s) will result in a substantial reduction of the concentration of that pollutant, the Control Authority, upon application of the IU, may exercise its discretion to determine whether such stream(s) should be classified as diluted or unregulated. In its application to the Control Authority, the IU must provide engineering, production, sampling and analysis, and such other information so the Control Authority can make its determination; or (b) sanitary wastestreams where such streams are not regulated by a categorical pretreatment standard; or (c) any process wastestreams that were, or could have been, entirely exempted from categorical pretreatment standards pursuant to paragraph 8 of the *NRDC v. Costle* consent decree (12 ERC 1833) for one or more of the following reasons (see 40 CFR Part 403, appendix D):

- The pollutants of concern are not detectable in the effluent from the IU [paragraph (8)(a)(iii)].
- The pollutants of concern are present only in trace amounts and are neither causing nor likely to cause toxic effects [paragraph (8)(a)(iii)].
- The pollutants of concern are present in amounts too small to be effectively reduced by technologies known to the Administrator [paragraph (8)(a)(iii)].
- The wastestream contains only pollutants that are compatible with the POTW [paragraph (8)(b)(I)].

Direct Discharger

A point source that discharges a pollutant(s) to waters of the United States, such as streams, lakes, or oceans. These sources are subject to the National Pollutant Discharge Elimination System program regulations. Municipal and industrial facilities that introduce pollution through a defined conveyance or system such as outlet pipes are direct dischargers.

Effluent Limitations Guideline (ELG)

Any effluent limitations regulation issued by EPA pursuant to CWA section 304(b). These regulations are published to adopt or revise a national standard prescribing restrictions on quantities, rates, and concentrations of chemical, physical, biological, and other constituents that are discharged from point sources, in specific industrial categories (e.g., metal finishing, metal molding and casting). ELGs are sometimes referred to as effluent guidelines.

Enforcement Response Plan (ERP) [paraphrased from 40 CFR 403.8(f)(5)]

One of the key components of an approved POTW pretreatment program; includes step-by-step enforcement procedures developed and followed by POTW personnel to identify, document, and respond to violations by IUs.

Existing Source

Any source of discharge, the construction or operation of which commenced before the publication by EPA of proposed categorical pretreatment standards that will be applicable to such source if the standard is thereafter promulgated in accordance with CWA section 307.

Federal Water Pollution Control Act (FWPCA)

The title of Public Law 92-500; 33 U.S.C. section 1251 *et seq.*, also known as the Clean Water Act (CWA), enacted October 18, 1972.

Flow-proportional Composite Sample

A sample consisting of a series of aliquots (equal portions of the sample) in which each aliquot is collected after the passage of a defined volume of discharge.

Flow-Weighted Average Formula (FWA) [paraphrased from 51FR21461]

A procedure used to calculate alternative limits where wastestreams regulated by a categorical pretreatment standard and non-regulated wastestreams combine after treatment but before the monitoring point.

General Prohibitions [40 CFR 403.5(a)(1)]

Prohibitions that apply to each IU introducing pollutants into a POTW whether or not the IU is subject to other national pretreatment standards or any national, state, or local pretreatment requirements:

- No IU may introduce into a POTW any pollutant(s) that cause pass through or interference.
- An IU may have an affirmative defense in any action brought against it alleging a violation of the general or specific prohibitions where the IU can demonstrate that:
 - It did not know or have reason to know that its discharge, alone or in conjunction with a discharge or discharges from other sources, would cause pass through or interference; and
 - A local limit designed to prevent pass through or interference (or both) was developed for each pollutant in the IU's discharge that caused pass through or interference, and the IU was in compliance with each such local limit directly before and during the pass through or interference; or
 - If a local limit designed to prevent pass through or interference (or both) has not been developed for the pollutant(s) that caused the pass through or interference, the IU's discharge directly before and during the pass through or interference did not change substantially in nature or constituents from the IU's prior discharge activity when the POTW was regularly in compliance with the POTW's NPDES permit requirements and, in the case of interference, applicable requirements for sewage sludge use or disposal.

Grab Sample

A sample that is taken from a wastestream on a one-time basis with no regard to the flow of the wastestream. A single grab sample should be taken over a period not to exceed 15 minutes.

Headworks

The point at which wastewater enters a wastewater treatment plant. The headworks may consist of bar screens, comminutors, a wet well, or pumps.

Indirect Discharge or Discharge [40 CFR 403.3(i)]

The introduction of pollutants into a POTW from any non-domestic source regulated under CWA section 307(b), (c), or (d).

Industrial User (IU) or User [40 CFR 403.3(j)]

A source of indirect discharge.

Industrial Waste Survey (IWS)

The process of identifying and locating IUs and characterizing their industrial discharge.

Inhibition

Event that occurs when pollutant levels in a POTW's wastewater or sludge cause operational problems for biological treatment processes involving secondary or tertiary wastewater treatment and alter the POTW's ability to adequately remove BOD, TSS, and other pollutants.

Injunction

An order to a party to affirmatively perform, or to refrain from performing, some designated action to come into, and maintain, compliance with environmental laws.

Injunctive Relief

Generally, action ordered of a defendant by a federal district court judge. This relief may be ordered either as a term of an order consented to by the parties in a lawsuit (where the parties file a "consent decree") or after a contested trial before the judge.

Interference [paraphrased from 40 CFR 403.3(k)]

A discharge that, alone or in conjunction with a discharge or discharges from other sources, both (1) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use, or disposal; and (2) therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with ... [applicable] statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations).

Local Limits [40 CFR 403.5(c)]

Specific discharge limits developed and enforced by POTWs upon industrial or commercial facilities (IUs) to implement the general and specific discharge prohibitions listed in 40 CFR 403.5(a)(1) and (b).

Maximum Allowable Headworks Loading (MAHL)

The estimated maximum loading of a pollutant that can be received at a POTW's headworks without causing pass through or interference. The most protective (lowest) of the allowable headworks loadings (see definition) estimated for a pollutant.

Maximum Allowable Industrial Loading (MAIL)

The estimated maximum loading of a pollutant that can be received at a POTW's headworks from all permitted IUs and other controlled sources without causing pass through or interference. The MAIL is usually calculated by applying a safety factor to the MAHL and discounting for uncontrolled sources, hauled waste, and growth allowance.

Monthly Average

The arithmetic average value of all daily results for a calendar month for an individual pollutant parameter. Historically, EPA has considered a 30-day average to mean a monthly average.

National Pollutant Discharge Elimination System (NPDES)

The national program for issuing, modifying, revoking, and reissuing, terminating, monitoring, and enforcing discharge permits from point sources to waters of the United States, and imposing and enforcing pretreatment requirements, under CWA sections 307, 402, 318, and 405.

National Pretreatment Standard or Pretreatment Standard or Standard [40 CFR 403.3(l)]

Any regulation containing pollutant discharge limits promulgated by EPA in accordance with CWA section 307(b) and (c) that applies to IUs. This term includes prohibitive discharge limits established pursuant to 40 CFR 403.5.

New Source [40 CFR 403.3(m)]

Any building, structure, facility or installation from which there is or could be a discharge of pollutants, the construction of which began after the publication of proposed pretreatment standards under CWA section 307(c) that will be applicable to such source if such standards are thereafter promulgated in accordance with that section *provided that any of the following are true:*

- The building, structure, facility or installation is constructed at a site at which no other discharge source is located.
- The building, structure, facility, or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source.
- The production or wastewater generating processes of the building, structure, facility, or installation are substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source should be considered.
- Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility, or installation meeting the criteria of paragraphs (m)(1)(ii), or (m)(1)(iii) of this section but otherwise alters, replaces, or adds to existing process or production equipment.
- Construction of a new source, as defined under this paragraph, has commenced if the owner or operator has begun, or caused to begin as part of a continuous onsite construction program:
 - Any placement, assembly, or installation of facilities or equipment; or
 - Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities that is necessary for the placement, assembly, or installation of new source facilities or equipment; or
 - Entered into a binding contractual obligation for the purchase of facilities or equipment that are intended to be used in its operation within a reasonable time. Options to purchase or contracts that can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

Ninety-day Final Compliance Report [paraphrased from 40 CFR 403.12(d)]

A report submitted by CIUs within 90 days following the date for final compliance with applicable categorical standards. The report must contain flow measurement (of regulated process streams and other streams), measurement of pollutants, and a certification as to whether the categorical standards are being met.

Noncontact Cooling Water

Water used for cooling that does not come into direct contact with any raw material, intermediate product, waste product, or finished product. The only pollutant contributed from the discharge is heat.

Nonconventional Pollutant

Any pollutant that is neither a toxic pollutant nor a conventional pollutant (e.g., manganese, ammonia).

Non-regulated Wastestream

Unregulated and dilute wastestreams (not regulated by categorical standards).

Pass Through [40 CFR 403.3(p)]

A discharge that exits the POTW into waters of the United States in quantities or concentrations that, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Publicly Owned Treatment Works (POTW) [40 CFR 403.3(q)]

A treatment works (as defined by CWA section 212) that is owned by a state or municipality [as defined by CWA section 502(4)]. This definition includes any devices or systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW plant. The term also means the municipality [as defined in CWA section 502(4)] that has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

Regulated Wastestream

For purposes of applying the combined wastestream formula, a wastestream from an industrial process that is regulated by a categorical standard.

Removal Credit [paraphrased from 40 CFR 403.7]

Variance for an IU from the otherwise applicable categorical pretreatment standard that reflects the POTW's removal of that pollutant.

Representative Sample

A sample from a wastestream that is as nearly identical as possible in composition to that in the larger volume of wastewater being discharged and is typical of the discharge from the facility on a normal operating day.

Sanitary Sewer Overflow (SSO)

Untreated or partially treated sewage overflows from a sanitary sewer collection system.

Self-monitoring

Sampling and analyses performed by a facility to measure compliance with a permit or other regulatory requirements.

Sewage Sludge [40 CFR 122.2]

Any solid, semisolid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. Sewage sludge includes solids removed during primary, secondary, or advanced wastewater treatment; scum, septage, portable toilet pumpings, type III marine sanitation device pumpings (33 CFR 159); and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge. Also referred to as *biosolids*.

Sewer Use Ordinance (SUO)

A legal mechanism implemented by a local government entity that establishes requirements for the discharge of pollutants into a POTW.

Significant Industrial User (SIU) [40 CFR 403.3(v)]

(1) All users subject to categorical pretreatment standards under 40 CFR 403.6 and 40 CFR chapter I, subchapter N; and (2) any other IU that discharges an average of 25,000 gpd or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blowdown wastewater); and (3) contributes a process wastestream that makes up 5 percent or more of the average dry-weather hydraulic or organic capacity of the POTW plant; or is designated as such by the POTW on the basis that the IU has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8(f)(6)].

Significant Noncompliance (SNC) [40 CFR 403.8(f)(2)(viii)]

IU violations that meet one or more of the following criteria:

- Chronic violations of wastewater discharge limits, defined here as those in which 66 percent or more of all the measurements for each pollutant parameter taken during a 6-month period exceed (by any magnitude) a numeric pretreatment standard or requirement, including instantaneous limits, as defined by 40 CFR 403.3(l).
- Technical Review Criteria (TRC) violations, defined here as those in which 33 percent or more of all the measurements for each pollutant parameter taken during a 6-month period equal or exceed the product of the numeric pretreatment standard or requirement including instantaneous limits, as defined by 40 CFR 403.3(l) multiplied by the applicable TRC (TRC = 1.4 for BOD, TSS, fats, oil and grease, and 1.2 for all other pollutants except pH).
- Any other violation of a pretreatment standard or requirement as defined by 40 CFR 403.3(l) (daily maximum, long-term average, instantaneous limit, or narrative standard) that the POTW determines has caused, alone or in combination with other dischargers, interference or pass through (including endangering the health of POTW personnel or the general public).
- Any discharge of a pollutant that has caused imminent endangerment to human health, welfare, or to the environment or has resulted in the POTW's exercise of its emergency authority under paragraph (f)(1)(vi)(B) of 40 CFR 403.8 to halt or prevent such a discharge.
- Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance.
- Failure to provide, within 45 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules.
- Failure to accurately report noncompliance.
- Any other violation or group of violations, which can include a violation of best management practices, that the POTW determines will adversely affect the operation or implementation of the local pretreatment program.

Slug Discharge [40 CFR 403.8(f)(2)(vi)]

Any discharge of a non-routine, episodic nature, including an accidental spill or a non-customary batch discharge that has a reasonable potential to cause interference or pass through, or in any other way violate the POTW's regulations, local limits, or permit conditions.

Specific Prohibitions [40 CFR 403.5(b)]

Prohibitions that apply to each IU introducing pollutants into a POTW regardless of whether the IU is subject to other national pretreatment standards or any national, state, or local pretreatment requirements. The following pollutants must not be introduced into a POTW:

- Pollutants that create a fire or explosion hazard in the POTW, including wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit (°F) or 60 degrees Celcius (°C) using the test methods specified in 40 CFR 261.21.

- Pollutants that will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the POTW is specifically designed to accommodate such discharges.
- Solid or viscous pollutants in amounts that will cause obstruction to the flow in the POTW resulting in interference.
- Any pollutant, including oxygen-demanding pollutants (BOD and the like) released in a discharge at a flow rate or concentration that will cause interference with the POTW.
- Heat in amounts that will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 104 °F (40 °C) unless the Approval Authority, at the POTW's request, approves alternative temperature limits.
- Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through.
- Pollutants that result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that could cause acute worker health and safety problems.
- Any trucked or hauled pollutants, except at discharge points designated by the POTW.

Standard Industrial Classification (SIC)

A system developed by the U.S. Office of Management and Budget that is used to classify various types of business entities. In 1998, the North American Industry Classification System (NAICS) replaced the SIC.

Stormwater

Rainwater, snowmelt, and surface runoff and drainage.

Time-proportional Composite Sample

A sample consisting of a series of aliquots collected after the passage of a definite period, regardless of the volume or variability of the rate of flow during that period.

Toxic Pollutant

Pollutant listed by the EPA Administrator under CWA section 307(a). The list of the current 126 toxic pollutants can be found at <http://water.epa.gov/scitech/methods/cwa/pollutants.cfm>.

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 from a specific chemical or effluent.

Unregulated Wastestream

For purposes of applying the combined wastestream formula, a wastestream not regulated by a categorical standard and not considered a dilute wastestream.

Upset [40 CFR 403.16(a)]

An exceptional incident in which there is unintentional and temporary noncompliance with categorical pretreatment standards because of factors beyond the reasonable control of the IU. 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.

Water Quality Criteria

Elements of state water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use.

Water Quality Standard (WQS)

Provisions of state or federal law that consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water, and serve the purposes of the Clean Water Act.

Whole Effluent Toxicity (WET)

The aggregate toxic effect of an effluent measured directly by a toxicity test.