# *Glossary*

**NOTE: Definitions are provided to help the reader understand the terms used throughout this Report. Many of these terms are defined in the Clean Water Act or EPA's implementing regulations, which contain legally binding requirements. The definitions provided in this document are not intended to substitute for the legally binding definitions provided in the Clean Water Act or implementing regulations.**

**301(h) Waiver from Secondary Treatment for Marine Discharges**

A modification of secondary treatment requirements for POTWs that discharge to marine waters as authorized under section 301(h) of the Clean Water Act. The 301(h) waiver requires monitoring and reporting to ensure that balanced indigenous populations of biological communities are maintained in proximity to the discharge, and it allows recreational activities in and on the water.

**advanced treatment**

A level of treatment that is more stringent than secondary or produces a significant reduction in conventional, nonconventional or toxic pollutants present in the wastewater treated by a facility. See Appendix F, Table F-1, Category II.

**asset management system**

A set of procedures and management practices designed to help wastewater treatment facilities manage their installations, focusing on activities with major environmental impacts.

**best management practice (BMP)**

Schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution of waters of the United States. 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 material storage.

**brownfields**

Land that might be contaminated by a hazardous substance or pollutant, which may complicate its expansion, redevelopment or reuse. See Appendix F, Table F-2, Category VII-H.

**capital renewal**

Practices that sustain the current level of performance of the plant by implementing rehabilitation, refurbishing or replacing capital assets to restore an asset, facility or system to its original condition and function. Capital renewal does not include costs for routine operation and maintenance at wastewater treatment plants.

**Clean Water State Revolving Fund (CWSRF)**

A State-managed revolving fund that provides loans for specific water pollution control purposes.

**coastal watersheds**

Watersheds that drain to the ocean or to an estuary or bay as defined by the National Oceanic and Atmospheric Administration (NOAA) using 8-digit watersheds.

**collection system**

A system of collector and/or interceptor sewers that collect wastewater from a community.

**collector sewers**

Pipes used to collect and carry wastewater from a sanitary or industrial wastewater source to an interceptor sewer that conveys the wastewater to a treatment facility. See Appendix F, Table F-1, Category IV-A.

**combined sewer overflow (CSO)**

Discharge of a mixture of stormwater and untreated wastewater that occurs when the capacity of a combined sewer system is exceeded during a rainstorm. See Appendix F, Table F-1, Category V.

**combined sewer system**

A sewer system designed to convey both domestic sanitary wastewater and stormwater.

**community**

With respect to wastewater treatment, a group of residences, businesses or industries sharing a common treatment or conveyance facility.

**Comprehensive Conservation Management Plan (CCMP)**

One purpose of the National Estuary Program conference under section 320 of the Clean Water Act is to develop a Comprehensive Conservation and Management Plan (CCMP). The CCMP recommends priority corrective actions and compliance schedules for addressing point and nonpoint sources of pollution to restore and maintain water quality, recreational activities in the estuary, and assure that the designated uses of the estuary are protected

**concentrated animal facility (feedlot)**

A facility for the controlled feeding of animals that tends to concentrate large amounts of animal waste which, if they cannot be absorbed by the soil, might be carried to nearby streams or lakes by rainfall runoff. Large facilities (e.g., having more than 1,000 confined cattle) are considered point sources that may be required to have permits under the National Pollutant Discharge Elimination System (NPDES) program. In general, smaller facilities are also considered to be point sources subject to NPDES

permitting if they meet certain criteria for their method of discharge or if they are designated as point sources.

**conveyance needs**

The cost estimate to construct, expand or upgrade sewer collection systems for transporting wastewater to treatment facilities. See Appendix F, Table F-1, Categories IV-A and IV-B.

**decentralized treatment system**

Onsite or cluster wastewater system used to treat and dispose of relatively small volumes of wastewater, usually from dwellings and businesses located relatively close together. Onsite and cluster systems are also commonly used in combination.

**design year needs**

The cost estimate for building publicly owned wastewater treatment facilities eligible for assistance under the Clean Water Act to serve the population expected within 20 years. For the CWNS 2004, the design year is 2024.

**documented need**

A project that addresses a water quality or public health problem existing as of January 1, 2004, with associated abatement costs that meet CWNS documentation requirements in Chapter 1 of this Report.

**drainage basin**

A geographic area in which water, sediments and dissolved materials drain to a common outlet, typically a point on a larger stream, a lake, an underlying aquifer, an estuary or an ocean. A watershed is also sometimes referred to as the *drainage basin* of the receiving waterbody. See ***watershed***.

**environmental data systems**

Tools that store, manage and deliver descriptive environmental information and allow data analysis. Some of EPA's environmental data management systems are the following:

*EnviroFacts*: A single point of access to select EPA environmental data. The Web site provides information from several EPA databases containing data on environmental activities that might affect air, water and land anywhere in the United States.

*EnviroMapper for Water*: A Web-based geographic information system (GIS) application that dynamically displays information about bodies of water in the United States. This interactive tool enables the creation of customized GIS maps that portray the Nation's surface waters along with a collection of environmental data. The application can be used to view environmental information from the national level down to the community level (within 1 mile). It also has the capability to pan, zoom, label and print maps.

*Ask WATERS*: Part of EPA's WATERS services, which are database and Web-based services that provide user-friendly interfaces to complex analyses. These selected services make extensive use of digital locational information and integrate other WATERS program data. Designed as modular units,

the services are being developed within a common architecture, and each service will be available as it is completed. Ask WATERS generates cross-program calculations and provides insight into overlaps between programs.

*BASINS* (Better Assessment Science Integrating Point and Nonpoint Sources): A multipurpose environmental analysis system that integrates a GIS, national watershed data, and state-of-the-art environmental assessment and modeling tools into one convenient package.

**environmental management systems (EMS)**

A set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency.

**estuarine management**

Activities necessary to develop and implement Comprehensive Conservation and Management Plans for protecting estuaries under the National Estuary Program created by Clean Water Act section 320. Estuary protection activities focus on restoring and maintaining the chemical, physical and biological integrity of the estuary and controlling nonpoint sources of pollution.

**estuary**

The thin zone along a coastline in which freshwater systems and rivers meet and mix with a salty ocean (such as a bay, mouth of a river, salt marsh or lagoon).

**facility**

A project and location involved in water quality management, such as a wastewater treatment plant or sewer system, a municipal separate storm sewer system or a nonpoint source (NPS) pollution control project. Although the term *facility* is typically construed as a wastewater treatment facility or some other structure, for NPS pollution control, it refers to a place. The types of NPS pollution control projects vary considerably, ranging from installing a pumpout system at a single marina to conducting countywide conservation tillage projects on numerous farms. Data in the CWNS 2004 were collected and organized by facility for all types of water pollution control.

**facility plan**

Any plan or study that directly relates to the construction of treatment works necessary to comply with the Clean Water Act. A facility plan investigates needs and provides information on the cost-effectiveness of alternatives. A recommended plan and an environmental assessment of the recommendations are also presented in a facility plan. A facility plan includes a description of the treatment works for which construction drawings and specifications are to be prepared. The description includes preliminary engineering data, cost estimates for design and construction of the treatment works, and a schedule for completion of design and construction.

**fertilizer**

Any organic or inorganic material of natural or synthetic origin that is added to soil to supply elements essential to plant growth.

**ground water protection**

Activities addressed in a State's ground water protection strategy that are a part of the Nonpoint Source Management Program under section 319(i) of the Clean Water Act to build State institutional capabilities to protect ground water resources from nonpoint sources of contamination. Activities include research, planning, groundwater assessments, demonstrations, enforcement, technical assistance, education and training. Wellhead protection and underground injection control for Class V wells, as well as water conservation programs, may be included.

**headworks**

With respect to a municipal wastewater treatment facility, the portion of the facility in which equalization of the influent wastewater occurs.

**herbicide**

A chemical substance designed to kill or inhibit the growth of plants, especially weeds.

**hydromodification**

Alteration of the hydrologic characteristics of coastal and noncoastal waters, which in turn could cause degradation of water resources. In the case of streams, the process whereby a stream channel or bank is eroded by flowing water. Hydromodification includes channelization and channel modification, dams, and stream bank/shoreline erosion, which typically result in the suspension of sediments in the watercourse. Needs to address water quality problems associated with hydromodifications are included in Category VII-K. See Appendix F, Table F-2.

**hypoxia**

Oxygen deficiency in aquatic ecosystems, which is a symptom of eutrophication. Eutrophication is the process in which a waterbody becomes rich in organic nutrients such as phosphorous and nitrogen from runoff, treatment plant discharges and other sources, thereby promoting the excessive growth of algae. The rapid growth of algae depletes the waterbody of oxygen and impedes the survival of other species.

**infiltration/inflow correction**

Control of the problem of penetration into a sewer system of water other than wastewater from the ground through such means as defective pipes or manholes (infiltration) or from sources such as drains, storm sewers and other improper entries into the system (inflow). See Appendix F, Table F-1, Category III-A.

**infrastructure improvement**

An upgrade or replacement of wastewater collection and treatment structures and other CWNS-eligible infrastructure.

**interceptor sewer**

A major sewer line that receives wastewater flows from collector sewers. An interceptor sewer carries wastewater directly to the treatment facility or to another interceptor. See Appendix F, Table F-1, Category IV-B.

**lagoon**

With respect to wastewater treatment, a pond in which algae, sunlight and oxygen interact to restore wastewater to a quality often equal to that of the effluent from the secondary treatment stage. Lagoons are widely used by small communities to provide wastewater treatment. A lagoon might not have a discharge to surface waters under normal (dry-weather) operation.

**Municipal Separate Storm Sewer System (MS4)**

Any pipe; ditch or gully; or system of pipes, ditches or gullies that is owned or operated by a government entity and used for collecting and conveying stormwater and is not a POTW or a combined sewer. Domestic, industrial and commercial sanitary sewage is collected and conveyed in systems separate from MS4s.

**Municipal Stormwater Management Plan**

A plan that describes a proposed municipal stormwater management program as part of a municipality's NPDES stormwater permit application. It includes a description of structural and source control measures that are to be implemented to (1) reduce pollutants in runoff from commercial and residential areas that is discharged from the storm sewer, (2) detect and remove illicit discharges and improper disposal into storm sewers, (3) monitor pollutants in runoff from industrial facilities that discharge to municipal separate storm sewers, (4) reduce pollutants in construction site runoff that is discharged to municipal separate storm sewers, and (5) enhance municipal maintenance, public education and public involvement.

**National Estuary Program**

A program established by Congress under section 320 of the Clean Water Act in 1987 to improve the quality of estuaries of national importance. For selected estuaries, the Administrator is to convene a management conference to develop a comprehensive conservation and management plan for the estuary recommending priority corrective actions to restore and maintain water quality of the estuary.

**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, 402, 318 and 405 of the Clean Water Act. This term includes State or interstate programs that have been approved or authorized by EPA under section 402(b) of the Clean Water Act. See 40 C.F.R. §123.

**need**

A project that addresses a water quality or public health problem existing as of January 1, 2004, with associated abatement costs.

**nonpoint sources**

Pollution sources that are diffuse and from which pollutants do not have a single point of origin or are not introduced into a receiving stream from a specific outlet. The pollutants are generally carried off the land by stormwater runoff. Nonpoint source (NPS) pollution may include runoff from agriculture, silviculture, urban development, mining, construction, dams and channels, inappropriate land disposal of waste, marinas and saltwater intrusion. See Appendix F, Table F-2, Category VII.

**nutrient**

An element or compound that is essential for growth and development of an organism; for example, carbon, nitrogen or phosphorus.

**onsite wastewater treatment system**

Any combination of unit processes or best management practices designed to receive, treat and dispose of wastewater from individual structures (homes, businesses and so forth). Some examples are septic tanks and holding tanks.

**pesticide**

Any chemical agent used to control plant or animal pests. Pesticides include insecticides, herbicides, fungicides, nematocides and rodenticides.

**point source**

Any discernible, confined and discrete conveyance from which pollutants are or may be discharged to waters of the United States. The term *point source* does not include return flows from irrigated agriculture or agricultural storm water runoff. Wastewater treatment plant outfalls and combined sewer system overflow points of discharge are typical point sources.

**primary treatment**

The first major stage of wastewater treatment (i.e., after grit removal), which includes removal of floating debris and solids by screening and sedimentation.

**publicly owned treatment works (POTW)**

A treatment facility, as defined in section 212 of the Clean Water Act, which is owned by a State or municipality. A POTW 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.

**recycled water distribution**

The costs associated with conveyance of the recycled water (wastewater reused after removal of waste contributed by humans) and any associated rehabilitation or replacement needs. See Appendix F, Table F-1, Category X.

**redocumentation**

The process by which documentation dated before 1994 supporting an individual facility's needs was updated or revised for the CWNS 2004. Facilities with needs in excess of $20 million had to be updated or revised as necessary by documentation dated January 1, 1998, or later. For nonpoint source needs, the above cutoff dates were 1990 and 1994, respectively.

**replacement/rehabilitation of sewers**

Reinforcement or reconstruction of structurally deteriorating sewers (beyond normal maintenance). See Appendix F, Table F-1, Category III-B.

**riparian vegetation**

Vegetation that is present on the banks of a river or stream or on the shore of a lake.

**sanitary sewer**

A municipal sewer designed to carry only domestic sanitary sewage and industrial wastes to a municipal wastewater treatment plant.

**sanitary sewer overflow (SSO)**

A release of raw domestic sewage (and in some cases, pretreated industrial wastes) from a separate sewer system before the sanitary wastewater reaches the municipal wastewater treatment facility.

**secondary wastewater treatment**

The minimum level of treatment that must be achieved for discharges from all municipal wastewater treatment facilities except those facilities granted ocean discharge waivers under section 301(h) of the Clean Water Act. Treatment levels are specific in terms of the concentration of conventional pollutants in the wastewater effluent discharged from a facility after treatment. Secondary treatment typically requires a treatment level that will produce an effluent quality of 30 mg/L of both 5-day biochemical oxygen demand ($BOD_5$) and total suspended solids, although secondary treatment levels required for some lagoon systems might be less stringent. In addition, the secondary treatment must remove 85 percent of $BOD_5$ and total suspended solids from the influent wastewater, although adjustments allowing lower percentage removals are authorized in some circumstances. See Appendix F, Table F-1, Category I.

**separate sewer system/sanitary sewer system**

A sewer system designed to exclude stormwater and used to convey only domestic, industrial and commercial sanitary wastewater (and in some cases, pretreated industrial wastes).

**Separate State Estimates (SSE)**

Costs that are not included in EPA's needs for the CWNS 2004 because the costs are justified with documents other than the established documentation types or they have no written documentation. These estimates are entered for States' purposes other than this Report, such as State level planning as well as

communication with State legislatures and other groups involved with addressing and preventing water quality problems.

**silviculture**

The care and cultivation of forest trees (e.g., forestry). See Appendix F, Table F-2, Category VII-C.

**small community**

A community with a population of fewer than 10,000 people and a total wastewater flow of less than 1 million gallons per day.

**storm sewer**

A sewer that carries only runoff from storm events.

**stormwater**

Stormwater runoff, snowmelt runoff, and surface runoff and drainage. See Appendix F, Table F-1, Category VI.

**Sustainable Infrastructure Initiative**

Initiative developed in response to the Gap Analysis and other recent 20-year estimations of wastewater treatment needs to reduce the infrastructure funding gap. The program was developed using input from industry, government and academia obtained at the January 2003 forum *Closing the Gap: Innovative Responses for Sustainable Water Infrastructure*.

**treatment facility**

A structure designed to treat wastewater, stormwater or combined sewer overflows before their discharge to the environment. Treatment is accomplished by subjecting the wastewater to a combination of physical, chemical and biological processes that reduce the concentration of contaminants.

**urban nonpoint source runoff**

Wet-weather runoff from urbanized areas not included in Phase I or Phase II of the Stormwater Permit Program. Includes runoff from construction activities occupying less than 1 acre. See Appendix F, Table F-2, Category VII-D.

**urbanized area (UA)**

A densely settled territory that contains 50,000 or more people.

**wastewater**

Dissolved or suspended waterborne waste material. *Sanitary* or *domestic wastewater* refers to liquid material collected from residences, offices and institutions. *Industrial wastewater* refers to wastewater from manufacturing facilities. *Municipal wastewater* is a general term applied to any liquid treated in a municipal treatment facility, and it usually includes a mixture of sanitary and pretreated industrial wastes.

**wastewater infrastructure**

The pipes and appurtenances for the collection, treatment and disposal of sewage in a community. The level of treatment depends on the size of the community, the type of discharge and/or the designated use of the receiving water.

**water quality criteria**

Specific levels of water quality that, if achieved, are expected to render a body of water suitable for its designated use. The criteria are based on specific levels of pollutants that would make the water unsuitable for specific designated uses, such as drinking, swimming, farming, fish production or industrial processes.

**water quality standards**

State-adopted and EPA-approved or EPA-promulgated ambient standards for waterbodies. Water quality standards consist of a designated use, or goal, for a waterbody; criteria, which are narrative or numeric levels or values necessary to support a particular use; and an antidegradation policy to protect existing uses and high-quality waters.

**water reuse**

The reuse of wastewater after removal of waste contributed by humans.

**watershed**

A geographic area in which water, sediments and dissolved materials drain to a common outlet, typically a point on a larger stream, a lake, an underlying aquifer, an estuary or an ocean. A watershed is sometimes referred to as the *drainage basin* of the receiving waterbody.

**watershed, hydrologic unit codes**

The United States, the District of Columbia, Puerto Rico and the U.S. Territories (including the U.S. Virgin Islands) are divided into 21 major 2-digit hydrologic unit codes or hydrologic regions. These 21 hydrologic regions are subdivided into 222 4-digit watersheds. The contiguous United States contains 204 4-digit watersheds. These 4-digit watersheds are further subdivided into 6- and 8-digit watersheds. In some portions of the United States, further subdivision of 8-digit watersheds to the 10- and 12-digit levels is available.

**wetland protection**

Activities to protect and restore wetlands that are an integral part of a Nonpoint Source Management Program or part of implementation or development of a Comprehensive Conservation and Management Plan under the Clean Water Act section 320 National Estuary Program. Clean Water Act section 404, which regulates the discharge of dredged or fill material into waters of the United States, is another mechanism for protecting wetlands.

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