

FEDERAL WATER POLLUTION CONTROL ACT (CLEAN WATER ACT)

33 U.S.C. §§ 1251-1387, October 18, 1972, as amended 1973-1983, 1987, 1988, 1990-1992, 1994, 1995 and 1996.

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Overview. The Federal Water Pollution Control Act, popularly known as the Clean Water Act, is a comprehensive statute aimed at restoring and maintaining the chemical, physical and biological integrity of the nation's waters. Enacted originally in 1948, the Act was amended numerous times until it was reorganized and expanded in 1972. It continues to be amended almost every year.

Even prior to the enactment of the 1972 version of the Act, the Act authorized the Public Health Service to prepare comprehensive programs for eliminating or reducing the pollution of interstate waters and tributaries and improving the sanitary condition of surface and underground waters. Due regard was to be given to improvements necessary to conserve waters for public water supplies, propagation of fish and aquatic life, recreational purposes, and agricultural and industrial uses. A number of other provisions found in the current Act were adopted prior to 1972.

Primary authority for the implementation and enforcement of the Clean Water Act now rests with the U.S. Environmental Protection Agency (EPA). In addition to the measures authorized before 1972, the Act authorizes water quality programs, requires federal effluent limitations and state water quality standards, requires permits for the discharge of pollutants into navigable waters, provides enforcement mechanisms, and authorizes funding for wastewater treatment works construction grants and state revolving loan programs, as well as funding to states and tribes for their water quality programs. Provisions have also been added to address water quality problems in specific regions and specific waterways.

Important for wildlife protection purposes are the provisions requiring permits to dispose of dredged and fill materials into navigable waters. Permits are issued by the Army Corps of Engineers under guidelines developed by EPA. What is known as Section 404 permitting applies to many wetlands, which has proven controversial.

Findings/Policy. The objective of the Clean Water Act is to restore and maintain the chemical, physical and biological integrity of the nation's waters. Among the national goals stated in the Act are the elimination of the discharge of pollutants into navigable waters by 1985 and, where attainable, the achievement by mid-1983 of an interim goal of water quality sufficient to provide for the protection and propagation of fish, shellfish, and wildlife and for recreation in and on the water.

It is the policy of Congress to recognize the primary responsibilities and rights of states to prevent, reduce and eliminate pollution. Congress also intends that the states manage the wastewater treatment works construction grants program and implement the discharge permit programs under the Act. The federal government will support research and provide technical services and financial aid to state and interstate agencies and

municipalities. Congress emphasized that the authority of each state to allocate quantities of water within its jurisdiction are not superseded, abrogated or otherwise impaired by the Act.

It is also the policy of Congress that the President will take such action as may be necessary to insure that, to the fullest extent possible, foreign countries take meaningful action to prevent, reduce and eliminate pollution in their waters and in international waters. § 1251.

Except as otherwise provided, the Administrator of the EPA administers the Act. EPA, in cooperation with other federal agencies, states, interstate agencies, municipalities and industries, is to develop comprehensive programs for preventing, reducing or eliminating pollution and improving the sanitary condition of surface and underground waters. Due regard must be given to the improvements necessary to conserve these waters for the protection and propagation of fish and aquatic life and wildlife, recreational purposes, and the withdrawal of water for public water supply, agricultural, industrial and other purposes. §§ 1251 and 1252.

Selected Definitions. Biological monitoring: the determination of the effects of the discharge of pollutants on aquatic life using certain techniques and procedures at appropriate frequencies and locations. Discharge of a pollutant: the addition of any pollutant to navigable waters from a point source and the addition of a pollutant to the waters of the contiguous zone or the ocean from a point source other than a vessel or other floating craft. The word discharge, when used without qualification, refers to the discharge of a pollutant or pollutants. Effluent limitation: any restriction imposed by a state or EPA on quantities, rates and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance. Municipality: Includes a city, town, county, district, or other public body created by or under state law and having jurisdiction over disposal of sewage or other wastes. Also includes an Indian tribe or authorized Indian tribal organization. Navigable waters: the waters of the U.S., including the territorial seas. Point source: any discernible, confined and discrete conveyance, but does not include agricultural stormwater discharges and return flows from irrigated agriculture. Pollutant: dredged soil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water, but the term does not include sewage from vessels or a discharge incidental to the normal operation of a vessel of the Armed Forces with the meaning of § 1322, or, in some cases, water or oil injected into wells for oil or gas production purposes. Pollution: the man-made or man-induced alteration of the chemical, physical, biological and radiological integrity of water. Toxic pollutant: those pollutants which, after discharge and upon exposure, ingestion, inhalation or assimilation into an organism will, on the basis of information available to EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions or deformations in the organism or its offspring. Treatment works: any devices and systems used in the storage, treatment, recycling and

reclamation of municipal sewage or industrial wastes of a liquid nature or necessary to recycle or reuse water at the most economical cost over the estimated life of the works. It also means any other method or system for preventing, abating, reducing, storing, treating, separating or disposing of municipal waste, which includes stormwater runoff, or industrial waste, which includes waste in combined stormwater and sanitary systems. §§ 1292 and 1362.

Research and Related Programs. The Act authorizes a number of research programs and studies on the prevention, reduction and elimination of pollution, as well as the issuance of grants for these purposes. For example, EPA must conduct research on the harmful effects of pollutants in water on health and welfare in conjunction with the U.S. Fish and Wildlife Service (USFWS) and other federal agencies. This research is to emphasize the effect that the bioaccumulation of pollutants in aquatic species has on the value of aquatic commercial and sport fisheries, and must explore methods to reduce and remove these pollutants from the affected species so as to restore and enhance valuable resources. The Act also authorizes research on the effect of pollution on estuaries and estuarine zones, as well as on the nature of river systems. §§ 1254 and 1254a.

The Act authorizes grants to states and interstate agencies for the prevention, reduction and elimination of pollution, including enforcement activities. Beginning in 1974, EPA was not permitted to make grants under this section to any state which, among other things, had not provided for the establishment and operation of devices, methods, systems and procedures to monitor and to compile and analyze data on the quality of navigable waters and, to the extent practicable, ground waters, including biological monitoring. § 1256.

Various provisions of the Act address specific regions or waterways. Examples include: Alaska village demonstration projects; a Hudson River reclamation demonstration project; continuation of the Chesapeake Bay program; continuation of the Management Conference of the Long Island Sound Study; establishment of a Lake Champlain Management Conference to develop a comprehensive pollution prevention, control and restoration plan for Lake Champlain. The Great Lakes are discussed in the next paragraph. §§ 1263, 1266, 1267, 1269 and 1270.

Great Lakes Programs. The Great Lakes are addressed with a number of programs. The Act authorizes EPA to enter into agreements with states and other public bodies to carry out projects to demonstrate new methods and techniques and develop preliminary plans for the elimination or control of pollution within all or any part of the watersheds of the Great Lakes. A demonstration wastewater management program for the rehabilitation and environmental repair of Lake Erie was specifically authorized. The Act also established a Great Lakes National Program Office within EPA and a Great Lakes Research Office within the National Oceanic and Atmospheric Administration (NOAA). Related federal agencies, including the USFWS, are required to report to EPA annually regarding agency activities affecting compliance with the 1978 Great Lakes Water Quality Agreement. As part of the Great Lakes program, EPA, in conjunction with USFWS and NOAA, is to

conduct research on the harmful effects of pollutants on the general health and welfare. §§ 1258 and 1268.

Aquatic Sediment. In 1992, Congress adopted a requirement that EPA, in consultation with NOAA, conduct a comprehensive survey of data on aquatic sediment quality in the U.S. and report to Congress in two years on the results of the survey, with recommendations for actions necessary to prevent contamination of aquatic sediments and to control sources of contamination. EPA was also instructed to conduct a monitoring program to assess aquatic sediment quality, which would, among other things, identify locations where pollutants in sediment may pose a threat to the quality of drinking water supplies, fisheries resources and marine habitats. The report on the findings of the monitoring program is due two years after the survey results are due and biennially thereafter. Related provisions on aquatic sediment can be found in the ocean dumping provisions of the Marine Protection, Research, and Sanctuaries Act of 1972, which is also summarized in this Handbook. § 1271.

Waste Treatment Management Plans and Grants. The Act is intended to require and assist in the development and implementation of waste treatment management plans and practices to achieve the goals of the Act. Plans and practices must provide for treatment of waste using the best practicable technology before there is any discharge of pollutants into receiving waters, as well as the confined disposal of pollution so that it will not migrate to cause water or other environmental pollution. To the extent practicable, waste treatment management is to be on an areawide basis and is to provide for the control or treatment of all point and non-point sources of pollution. Among other things, the Administrator shall encourage waste treatment management which combines open space and recreational considerations with such management. § 1281.

To encourage and facilitate the states' development of areawide waste treatment management plans, Congress directed EPA to publish guidelines for the identification of areas with substantial water quality control problems. These areas require an areawide waste treatment management plan and a continuing planning process. No national pollution discharge elimination system (NPDES) permit may be issued which is in conflict with an approved plan.

The provisions of the Act on the planning process are wide-ranging. Among other things, USFWS is to provide technical assistance to states requesting help in developing and implementing their plans. Congress also authorized the appropriation of \$6 million to the Secretary of Interior to complete the National Wetlands Inventory by 1982, and to provide information to states as it becomes available to assist the states with their programs. Other provisions direct the Secretary of Agriculture, acting through the Soil Conservation Service and other agencies, to establish a program for entering into contracts with owners and operators of rural land, in states or areas for which a plan has been approved, for the purpose of encouraging the use of best management practices to control nonpoint source pollution. § 1288.

Construction Grants and Loans. The Act outlines a program of grants to state, municipalities or intermunicipal or interstate agencies for the construction of publicly owned treatment works (POTWs). There are extensive provisions on the requirements, prerequisites and conditions for the grants, which can also be awarded to privately owned treatment works under certain limited conditions. Funds are allotted among the states by formula, with reservations of funds for small communities, innovative and alternative projects, water quality management planning, nonpoint source pollution programs and marine estuaries. §§ 1281-1287 and 1289-1299.

In 1987, Congress began to change its focus from the use of direct grants for the construction of wastewater treatment facilities to the concept of capitalization grants. The Act as amended provides for EPA to make grants to states for the purpose of establishing water pollution control revolving loan funds, which would provide assistance for the construction of POTWs, for implementing nonpoint source management programs under § 1329, and for developing and implementing conservation and management plans for estuaries under § 1330. The Act reduces the level of funding authorized for capitalization grants each year, with \$1.2 billion authorized for 1989 and only \$.6 billion authorized for 1994. §§ 1381-1387.

Effluent Limitations and Water Quality Standards. The Act prohibits the discharge of pollutants except in compliance with the effluent limitations and other provisions of the Act. Effluent limitations from point sources other than POTWs must be treated using best practicable control technology. Toxic pollutants, defined and otherwise described in the Act, require treatment using the best available technology which is economically achievable. If the source discharges into a POTW, it must comply with applicable pretreatment requirements. Notwithstanding any other provisions, the Act makes it unlawful to discharge any radiological, chemical, or biological warfare agent, any high-level radioactive waste, or any medical waste into navigable waters.

Effluent limitations must be determined for point sources which are consistent with state water quality standards, including toxic and pretreatment standards. Procedures for state assurance of water quality standards must be established, guidelines to identify and evaluate the extent of nonpoint source pollution must be developed, and water quality inventory requirements must be set. The Act also requires EPA to develop national standards of performance for the control of discharge of pollutants from new sources.

When discharges of pollutants from a point source or group of point sources under established effluent limitations would interfere with the attainment or maintenance of water quality necessary to assure protection of public health, public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water, EPA must establish effluent limitations for the point source or sources which can reasonably be expected to contribute to the attainment or maintenance of water quality. §§ 1311, 1312, 1314, 1316 and 1317.

The Act provides for states to adopt water quality standards and for EPA to adopt standards for the states which do not. States also are required to develop strategies for cleanup of toxic pollutants in waters where the application of best available technology discharge standards is not sufficient to meet state water quality standards. The state must establish a total maximum daily load for those pollutants suitable for maximum daily load measurements. Further, states must identify waters for which controls on thermal discharges under § 1311 are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish and wildlife. The state is to estimate the total maximum daily thermal load required to assure appropriate protection and propagation. The states must report on their water quality biennially. §§ 1313 and 1315.

EPA is expected to provide information and guidelines to assist states in adopting water quality standards, including information on: the identifiable effects on health and welfare, including plankton, fish, shellfish, wildlife, plant life, shorelines, beaches, esthetics and recreation, which may be expected from the presence of pollutants in a body of water, including ground water; the concentration and dispersal of pollutants, or their byproducts, through biological, physical and chemical processes; the effects of pollutants on biological community diversity, productivity and stability. In addition, the Administrator must publish information, for example, on factors necessary to restore and maintain the chemical, physical and biological integrity of all navigable waters, ground waters, waters of the contiguous zone and the oceans, on the factors necessary to the protection and propagation of shellfish, fish and wildlife, and factors to allow recreation activities in and on the water. § 1314.

The Act imposes requirements regarding recordkeeping and reporting, and allows for inspections. It also contains extensive provisions on enforcement, with administrative, civil and criminal penalties available for violations. §§ 1318 and 1319.

Applicants for federal permits or licenses for activities involving discharges into navigable waters are to provide certification from the state that the proposed activity will not violate applicable effluent limitations and water quality standards. Licenses and permits may not be granted if the state or interstate certification has been denied. § 1341.

Discharge Permits. One of the most significant features of the 1972 Act is the creation of a national pollutant discharge elimination system (NPDES). Except as otherwise provided in the Act, industrial sources and publicly owned treatment works may not discharge pollutants into navigable waters without a permit. The Administrator may issue a permit for discharge upon condition that the discharge meets applicable requirements, which are outlined extensively in the Act and which reflect, among other things, the need to meet federal effluent limitations and state water quality standards. The Act also provides that, with EPA approval, a state may administer its own permit program in lieu of the federal program. There are special provisions on municipal and industrial stormwater discharges. § 1342.

EPA was required, by mid-1973, to promulgate guidelines for determining the degradation of the waters of the territorial seas, the contiguous zone and the oceans.

These guidelines were to include, for example: the effect of disposal of pollutants on human health or welfare, including but not limited to plankton, fish, shellfish, wildlife, shorelines and beaches; the effect on marine life, changes in marine ecosystem diversity, productivity and stability, or species and community population changes; the effect of disposal of pollutants on aesthetic, recreation and economic values. Discharge permits may not be issued except in compliance with the guidelines. § 1343.

Section 404 Permits. Section 1344 of the Act as codified originated as Section 404 of the Act as adopted by Congress. The requirement that persons wanting to dispose of dredged or fill material in navigable waters obtain a permit from the Army Corps of Engineers is important to the current debate over the protection of wetlands.

The Act directs the EPA Administrator to adopt guidelines for disposal sites. Applying these guidelines, the Corps may issue permits on an individual basis or may issue general permits on a state, regional or national basis. A general permit may be issued for any category of activities that are similar in nature, will cause only minimal environmental effects when performed separately, and will have only minimal cumulative adverse impact on the environment. The Secretary of the Army is required to notify USFWS when an application for an individual permit is received and when the Secretary proposes to issue a general permit. USFWS must submit any comments on the application or the proposed general permit within 90 days.

EPA is authorized to prohibit the use of a site for disposal if discharges would have an unacceptable adverse effect on municipal water supplies, shellfish beds, fishery areas, and wildlife or recreational uses. On the other hand, permits are not required for certain types of activity, such as the discharge of dredged or fill material resulting from ordinary farming, silviculture and ranching activities.

The Act establishes procedures for state assumption of the program. It includes a requirement that the Director of USFWS, as well as the Corps of Engineers, provide advice to the Administrator regarding transfer of the program to a state. § 1344.

Sewage Sludge. The Act regulates the disposal and use of sewage sludge. The disposal of sewage sludge resulting from the operation of a treatment works is prohibited whenever it would result in a pollutant entering navigable waters, except in accordance with a permit issued by EPA or an approved state program. The Administrator is directed to issue regulations governing the issuance of permits and requiring for these permits the use of the standards and procedures applicable to NPDES permits. By regulation, EPA is required to identify uses for sludge, including disposal, specify the factors to consider in determining measures and practices applicable to each use or disposal, and identify concentrations of pollutants which interfere with each use or disposal. § 1345.

Oil and Hazardous Substance Liability. U.S. policy, as stated in the Act, is that there should be no discharges of oil or hazardous substances into or upon the navigable waters of the U.S., on adjoining shorelines or into or upon the waters of the contiguous zone, or which may affect natural resources belonging to, appertaining to, or under the exclusive

management or authority of the U.S. The President, by regulation, shall determine the quantities of oil and hazardous substances the discharge of which may be harmful to the public health or welfare or the environment, including but not limited to fish, shellfish, wildlife, public and private property, shorelines and beaches.

The Act imposes liability for the costs of the removal of oil and hazardous substances that have been discharged, as well as for natural resource damages. It also imposes administrative and civil penalties for unlawful discharges and for failure to carry out orders issued under the Act. The word removal refers to the containment and removal of oil or hazardous substances from the water and shorelines or the taking of other actions necessary to minimize or mitigate damage to the public health or welfare, including, but not limited to, fish, shellfish, wildlife, and public and private property, shorelines, and beaches.

The Act also establishes a national response system and requires the preparation of a National Contingency Plan by the President to provide for efficient and coordinated action to minimize damage from oil discharges, including containment, dispersal and removal. The Oil Spill Liability Trust Fund established under 26 U.S.C. § 9509 is made available for purposes of the Act. Further provisions on oil discharges can be found in the Oil Pollution Act, summarized separately in this Handbook. § 1321.

Marine Sanitation Devices. The Act requires that EPA develop performance standards for marine sanitation devices, that is, equipment installed on board vessels to receive, retain, treat or discharge sewage, and any process to treat sewage. In consultation with the Secretary of the department in which the Coast Guard is operating and after giving consideration to the economic costs involved and the limits of available technology, the Administrator of EPA is to adopt standards designed to prevent the discharge of untreated or inadequately treated sewage into navigable waters; the Secretary of the department in which the Coast Guard is operating must promulgate regulations consistent with EPA's standards. Manufacturers may not sell marine sanitation devices unless they are certified by the Secretary as meeting the standards and regulations.

In the Clean Vessel Act of 1992, codified as a note to this section, Congress observes that there is an inadequate number of pumpout stations for the type of marine sanitation devices used by recreational vessels and that sewage discharged by recreational vessels because of an inadequate number of pumpout stations is a substantial contributor to localized water degradation. The 1992 Act is intended to provide funds to states for the construction, renovation, operation, and maintenance of pumpout stations and waste reception facilities. The program is described in the editor's note to the summary of the Federal Aid in Sport Fish Restoration Act, and its funding referred to in §§ 777c and 777g of that Act.

1996 amendments to the Clean Water Act require that the Administrator of EPA and the Secretary of Defense jointly determine the extent to which marine pollution control devices should be used by military vessels to mitigate adverse impacts on the environment of discharges (other than sewage) which are incidental to normal operations.

The Secretary of Defense must require the use of a device on board vessels whenever it is determined that the use of a device is reasonable and practical. The Act also provides for some state involvement in the control of discharges from vessels of the Armed Forces. §§ 1322 and 1322 note.

Federal Facilities. Federal facilities are subject to all federal, state, interstate and local requirements, administrative authority and sanctions respecting the control and abatement of water pollution to the same extent as any nongovernmental entity. § 1323.

Clean Lakes Program. The Act establishes a clean lakes program. States must, on a biennial basis, prepare and submit to EPA for approval an identification and classification, according to eutrophic condition, all publicly owned lakes in the state and a description of the procedures, processes and methods being used to control sources of pollution and restore quality. The states' reports on the water quality of lakes must include methods to mitigate the harmful effects of high acidity. A demonstration program will be funded, with funds to be distributed to the states based on relative acidity problems. § 1324.

Thermal Discharges. While § 1313 allows for more stringent requirements for thermal discharge when necessary, the Act also permits owners and operators of point sources to propose less stringent limits when appropriate. They need to demonstrate that the effluent limitations established by EPA or the state are more stringent than necessary to assure the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife. Water quality standards must require that the location, design, construction and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. § 1326.

Non-point Source Pollution. As amended in 1987, the Act is paying increased attention to nonpoint source pollution. It provides for states to prepare reports and propose management plans for the control of non-point source pollution for approval by EPA, and encourages the development of plans on a watershed-by-watershed basis. States with approved management programs are eligible, on a cost-sharing basis, for federal grants to assist in the implementation of the program. Grants are also available to states with approved plans to assist the states in carrying out ground water quality protection activities which will advance the state toward the implementation of a comprehensive nonpoint source pollution control program. Appropriations were authorized for the first several years of the grant program, from \$70 million for fiscal year 1988 to \$130 million for fiscal year 1991. § 1329

Estuaries. The Act authorizes a state/federal cooperative program to nominate estuaries of national significance and to develop and implement management plans to restore and maintain the biological and chemical integrity of estuarine waters. NOAA is directed to conduct water quality research and a trends assessment in estuaries of national significance. § 1330.

Administration of the Act. Several sections of the Act are devoted to its administration, to the creation of a Water Pollution Control Advisory Board, to employee protection, to federal procurement, to administrative review and procedure, and to reports to Congress. Citizen suits are permitted under the guidelines and procedures set forth in § 1365. The Act provides further that states, their political subdivisions and interstate agencies are not preempted from adopting or enforcing standards, limitations or requirements as long as they are no less stringent than their federal counterparts. Under § 1377, EPA is authorized to treat Indian tribes as states for purposes of water quality standards and numerous other provisions of the Act. §§ 1361-1377.

Appropriations Authorized. Numerous sections of the Act provide for the authorization of funds to be appropriated for programs and requirements established by the Act. §§ 1254-1258, 1262-1270, 1287-1289, 1324, 1325, 1329, 1330, 1345, 1376 and 1387.