

## Appendix B

### Laws Affecting Watershed Management

This appendix provides a summary (and links to additional information) of key federal laws governing water resources (<http://www.epa.gov/win/law.html>) in the United States that provide the basis for watershed protection activities, as well as information that can be used for protecting a watershed. For each item, we provide a summary of the legislation, its impact or relationship with watershed planning, and links to additional information.

#### **Clean Water Act**

The Federal Water Pollution Control Act, or Clean Water Act (CWA) (full text can be located at <http://www.epa.gov/win/law.html>), is the principal law governing pollution in the nation's streams, lakes, and estuaries. Originally enacted in 1948, it was totally revised by amendments in 1972 (P.L. 92-500) that gave the act its current form and spelled out ambitious programs for water quality improvements that are now being put in place by industries and cities. Congress made certain fine-tuning amendments in 1977 (P.L. 95-217) and 1981 (P.L. 97-117).

The CWA prohibits the discharge of any pollutant to waters of the United States from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permitting program is designed to track point sources, monitor the discharge of pollutants from specific sources to surface waters, and require the implementation of the controls necessary to minimize the discharge of pollutants.

Initial efforts to improve water quality under the NPDES program primarily focused on reducing pollutants in industrial process wastewater and discharges from municipal sewage treatment plants.

As pollution control measures for managing these sources were implemented and refined, studies showed that more diffuse sources of water pollution were also significant causes of water quality impairment, specifically, stormwater runoff draining large surface areas, such as agricultural and urban land. This fact led the EPA to adopt a watershed approach that is based on determining the total maximum daily load (TMDL) of a particular pollutant that a waterbody can accept and still meet its water quality standards.

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## **The Basis for Watershed Management Efforts—Water Quality Standards and Total Maximum Daily Loads**

EPA's TMDL program is the main driver behind the adoption of watershed approaches to managing water issues. Under CWA Section 303(d), states are required to identify waters that do not meet water quality standards—even after the implementation of nationally required levels of pollution control technology. The law further requires states to develop TMDLs (with oversight from Environmental Protection Agency (EPA)) and establish a priority ranking for the identified impaired waters. These TMDLs allocate pollutant loadings among pollution sources in a watershed and provide a basis for identifying and establishing controls to reduce both point source and nonpoint source (NPS) pollutant loadings.

Water quality standards are a fundamental component of the CWA and, specifically, watershed management. These standards are adopted by states and tribes to protect public health; restore chemical, physical, and biological integrity of waters; and provide water quality for the protection and propagation of fish and wildlife and for recreation (“fishable/swimmable”). Standards consider the use and value of state and tribal waters for public water supplies, agricultural and industrial purposes, and navigation. Water quality standards depend on the designated uses of the water body and are based on water quality criteria established by EPA.

State TMDL programs are required to use all “existing and readily available” information in developing Section 303(d) lists. This information may include source water assessments and endangered species act information. For example, since TMDLs are developed for specific pollutants or stressors, identification of these pollutants as a result of a source water assessment could provide an important indicator to states for verifying the need for developing a TMDL. States prepare section 303(d) lists that identify waters not meeting water quality standards because of a particular pollutant or stressor. This type of information is helpful for identifying contaminants of concern for watersheds and source waters (refer to EPA's website—<http://www.epa.gov/owow/tmdl/>—for 303(d) lists, by state, of impaired waters). TMDLs for particular water bodies generally provide more detailed information about the sources of the pollution and can be used to develop allocation scenarios for pollutant loadings among pollution sources in a watershed.

State TMDL programs are generally managed by state water quality agencies. At the local level, a variety of stakeholders may be involved including local and regional governing agencies, point sources, farmers, foresters, land developers, city and state planners, and local environmental organizations. For the latest status on the federal TMDL program, visit EPA's homepage—<http://www.epa.gov/owow/tmdl/index.html>.

## Managing Stormwater Discharges Through NPDES Permits

The 1987 amendments to the CWA mandated that EPA develop a tiered implementation strategy for the NPDES Stormwater Program. The second phase of the strategy was the Final Stormwater Phase II Rule, which was signed by Administrator Browner on October 29, 1999, and published in the *Federal Register* on December 8, 1999. The rule regulates two classes of storm water dischargers on a nationwide basis:

- Operators of small MS4s located in urbanized areas as defined by the Bureau of the Census (termed a “regulated” small MS4). A “small” MS4 is any MS4 not already covered by Phase I of the NPDES stormwater program. Waivers from coverage are available.
- Operators of construction activities that disturb equal to or more than one and less than five acres of land. Waivers from coverage are available.

Additional small MS4s (outside of urbanized areas) and construction sites (disturbing less than one acre of land), along with other sources that are significant contributors of pollutants to U.S. waters (e.g., as identified via a TMDL process), may be brought into the NPDES Stormwater Program by the NPDES permitting authority.

Operators of Phase II regulated small MS4s and small construction activities are required to apply for NPDES permit coverage (most under a general rather than an individual permit) and implement stormwater discharge management controls (often referred to best management practices (BMPs)) that effectively reduce or prevent the discharge of pollutants into receiving waters.

The Phase II rule also revised the Phase I stormwater regulation. Specifically, EPA revised the original no exposure provision, found at 40 Code of Federal Regulations (CFR) 122.26(b)(14), to be a conditional exclusion. This conditional exclusion applies to all categories of industrial activity (except construction activity) with no exposure of industrial materials and activities to storm water. The Phase II revision, found at Section 122.26(g), requires industrial operators claiming no exposure to submit written certification that a condition of no exposure exists at their facility/site. The final rule includes a *No Exposure Certification Form* that is intended to serve as the required written certification in areas where EPA is the NPDES permitting authority. For more information concerning the no exposure revision, see the Stormwater Phase II Rule: Conditional No Exposure Exclusion for Industrial Activity fact sheet located on the EPA web site at ([cfpub.epa.gov/npdes/stormwater/swphases.cfm](http://cfpub.epa.gov/npdes/stormwater/swphases.cfm)), or call EPA’s Stormwater Phase II Rule Hotline at (202) 260-5816, or send an e-mail to [sw2@epa.gov](mailto:sw2@epa.gov).

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## Nonpoint Source Controls

Section 319 of the CWA delegates the regulation of NPS pollution to the states and establishes the Nonpoint Source Management Program. EPA recognized the need for greater federal leadership to help focus state and local NPS efforts. Under Section 319 of the 1987 CWA amendments, states are:

- required to conduct statewide assessments of their waters to identify those that were either impaired (did not fully support state water quality standards) or threatened (presently meet water quality standards but are likely not to continue to meet water quality standards fully) because of NPS pollution;
- required to develop NPS management programs to address the impaired or threatened waters identified in their nonpoint assessments; and
- entitled to receive annual grants from EPA to assist them in implementing their NPS management programs once EPA had approved the assessments and programs.

Although Section 319 does not include an enforcement mechanism to ensure that states actually develop and implement programs, CWA Section 303 requires that states identify all activities that cause a waterbody to be impaired—including NPSs—and develop mitigation plans. This provision enables the states to regulate the runoff from NPSs of pollution. These requirements are explained in the Proposed Federal Consistency Guidelines, which can be downloaded from the EPA website at <http://www.epa.gov/owow/nps/Section319/319guide03.html>.

State NPS pollution control programs vary considerably. Most states encourage landowners to adopt voluntary NPS control methods. Some states, including North Carolina, New Jersey, Hawaii, and Washington, require consideration of NPSs through detailed erosion control plans and implementation of BMPs for ground-disturbing activities. North Carolina, for example, requires erosion control plans 30 days before any land-disturbing activities are started. Other states have empowered local jurisdictions to create and enforce their own erosion control measures.

## Wetlands Program

Section 404 of the CWA, which is administered by the U.S. Army Corps of Engineers, establishes a program to regulate the discharge of dredged or fill material into U.S. waters. While the Section 404 program regulates the discharge of dredged or fill material on a case-by-case basis, provisions found within this authority can allow for the regulation of aquatic resources in a more comprehensive manner. Some examples include watershed planning, special area management planning, and advanced identification.

EPA's [wetlands program](#) attempts to integrate wetlands protection into existing EPA programs (e.g., CWA). In addition, some states have developed or are developing State Wetlands Conservation Plans to provide a framework for integrating wetland programs across many state programs. EPA's wetlands program has experience in providing assistance for the development of comprehensive wetlands plans, participating in efforts to develop such plans, and reviewing plans for other state and local programs.

Wetland protection programs often need to assess the overall health of watershed ecosystems in order to estimate the impacts of proposed man-made changes. Assessments undertaken by federal, state, and local governments for protecting wetlands can provide information that may be useful for watershed assessments.

Wetlands can provide a wide range of different functions and benefits to local communities, including the interception and filtration of pollutants, thereby improving source water quality and possibly reducing treatment costs. Constructed wetlands can improve source water quality for downstream rivers. Integrating wetlands protection and restoration into watershed programs can highlight the importance of targeting wetlands as high priority areas for protection and can reduce duplication of efforts and conflicting actions.

More information is available at <http://www.epa.gov/owow/wetlands/>.

### **Spill Prevention, Control, and Countermeasure Requirements**

The CWA also includes provisions to prevent spills of certain substances from reaching navigable waters. Section 311 of the CWA provides EPA and the U.S. Coast Guard with the authority to establish a program for preventing, preparing for, and responding to oil spills that occur in navigable waters of the United States. EPA implements provisions of Section 311 of the CWA through a variety of regulations, including the National Contingency Plan and the Oil Pollution Prevention regulations.

As a cornerstone of its strategy to prevent oil spills from reaching our nation's waters, the EPA requires that certain facilities develop and implement oil spill prevention, control, and countermeasures (SPCC) plans. Unlike oil spill contingency plans that typically address spill cleanup measures after a spill has occurred, the goal of an SPCC plan is to ensure that facilities put in place containment and other countermeasures to prevent oil spills from reaching navigable waters.

Under EPA's Oil Pollution Prevention regulation, facilities must detail and implement spill prevention and control measures in their SPCC plans. A spill contingency plan is required as part of the SPCC plan if a facility is unable to provide secondary containment (e.g., berms surrounding the oil storage tank). These plans are an essential element of a watershed impact analysis and a source water impact analysis

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because they list the types, quantities, and spill controls for oils and hazardous substances stored at municipal facilities.

Spills are also regulated under the Oil Pollution Act (OPA). The OPA was signed into law in August 1990, largely in response to rising public concern following the Exxon Valdez incident. The OPA increased penalties for regulatory noncompliance, broadened the response and enforcement authorities of the federal government, and preserved state authority to establish laws governing oil spill prevention and response.

### **Safe Drinking Water Act**

Section 1453 of the [Safe Drinking Water Act](#) (SDWA), as amended in 1996, requires all states to complete assessments of their public drinking water supplies. By 2003, each state and participating tribe will delineate the boundaries of areas in the state (or on tribal lands) that supply water for each public drinking water system, identify significant potential sources of contamination, and determine how susceptible each system is to sources of contamination.

These drinking water source protection areas include federal lands that support non-federally owned public water systems (PWSs) as well as non-federal lands that support federally owned PWSs. For each area, the source water assessments synthesize existing information about the sources of each drinking water supply to provide a national base line on the potential contaminant threats and help guide future watershed restoration and protection. Source water protection plans and wellhead protection are discussed in the following subsections.

### **Source Water Protection Plans**

The SDWA Amendments of 1996 required states to develop [Source Water Assessment and Protection](#) (SWAP) programs. A SWAP program includes a strategic approach to conducting the source water assessments, delineates the area of influence from which a contaminant may enter a PWS, inventories sources of potential or known contaminants within the delineated zone, and determines the susceptibility of a PWS to such contaminants.

Information needed for source water assessments may be available from watershed assessments conducted for other programs (such as TMDL assessments). SWAPs can be integrated into other watershed protection efforts like point and NPS pollution control, wetlands protection, waste management, air pollution, and pesticide management. This integration of efforts will allow various watershed stakeholders to look for opportunities to leverage limited resources to meet common goals. For more information about SWAP, see <http://www.epa.gov/owow/watershed/>.

## **Wellhead Protection Program**

The SDWA amendments of 1986 (P.L. 99-339) established the [Wellhead Protection \(WHP\)](#) program to protect the recharge areas of PWS wells from all sources of contamination. Like the SWAP, the WHP provides information municipalities need to develop an overall watershed baseline impact assessment.

## **Underground Injection Control Program (UIC)**

If the regulator finds that an underground injection activity, such as a leaky septic system, is contributing to surface water quality concerns, the regulator can impose restrictions on the activity to prevent further environmental degradation.

## **Coastal Zone Management Act of 1972**

The Coastal Zone Management Act was amended through the [Coastal Zone Act Reauthorization Amendments \(CZARA\)](#) of 1990 and P.L. 104-150, and the Coastal Zone Protection Act of 1996. In 1990, as part of the CZARA, Congress required the 29 states with federally approved Coastal Zone Management Act programs to develop coastal NPS programs. These programs provide for implementation within coastal watersheds of management measures specified by EPA and incorporate policies and mechanisms, enforceable at the state level, to ensure implementation of the specified measures. EPA and the National Oceanic and Atmospheric Administration (NOAA) jointly approve the programs. For more information, see <http://www.ocrm.nos.noaa.gov/czm/>.

## **Other Federal Laws**

### **Clean Air Act**

The Clean Air Act (CAA) requires the prevention or control of air pollution from stationary and mobile sources. The CAA includes provisions for control of air toxins, acid rain, chloroflourocarbons (CFCs), and halons. It provides for a national air quality permit program and increased enforcement.

CAA permits and air emissions inventories of stationary sources can assist in watershed planning by quantifying material that can enter the watershed via air deposition. These emission inventories provide excellent information about the sources of watershed pollutants that may be coming from air deposition.

### **Comprehensive Environmental Response, Compensation, and Liability Act**

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)—also known as the Superfund law—regulates the cleanup of leaking hazardous waste disposal sites. It also

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establishes liability for hazardous substance releases—producing facilities are liable for cleanup of their releases and restitution costs. Furthermore, states may identify clean up of these sites as applicable or relevant and appropriate requirements for its water quality standards.

At the municipal level, restoration planning (CERCLA) documents provide a list and description of sites that are slated for restoration. When conducting a watershed baseline impact study, you should consider these sites as they may contribute, via runoff or ground water, to the impairment of a particular waterbody.

### **Emergency Planning and Community Right to Know Act**

The Emergency Planning and Community Right to Know Act (EPCRA) requires personnel to participate in the emergency planning process. If a site has extremely hazardous substances (EHS) above its threshold planning quantities, EPCRA requires the site to notify and provide information to the local emergency planning committees (LEPCs) and state emergency response commissions (SERCs). The site must notify the SERCs and LEPCs if a CERCLA hazardous substance or EHS is released.

EPCRA requires that site managers provide information to emergency planners and the public on hazardous substances used at the site, including the hazards posed by these chemicals and how they are handled on-site. A toxic release inventory (TRI) of toxic chemical releases must be conducted and submitted annually to EPA and the appropriate state agency (TRI Form R). This report must include information on the release and off-site transfer of toxic chemicals.

EPCRA documents provide excellent information about the location of stored hazardous materials that should be incorporated into a watershed impact assessment document.

### **Endangered Species Act**

The Endangered Species Act (ESA), 16 USC 1531 et seq., was enacted in 1973. The ESA establishes a procedural framework, substantive mandates, and prohibitions to ensure that it conserves species federally listed as threatened and endangered (T&E). Under the substantive mandates, a person is prohibited from undertaking actions that are likely to jeopardize a federally listed T&E species, destroy or adversely modify the designated critical habitat of such a species, or “take,” without authorization, a listed T&E species.

### **Federal Insecticide, Fungicide, and Rodenticide Act**

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (see 7 USC 136 as amended) and the Food Quality Protection Act of 1996 were promulgated to protect citizens from hazardous effects of pesticides. Enforcement authority for FIFRA rests with the EPA, which regulates the production, distribution, storage, use, and disposal of pesticides within the United States. (See 40 CFR parts 150–171.) FIFRA

requirements that most influence current operations at municipalities are found in 40 CFR Part 171, which specifies certification requirements for pesticide applicators. FIFRA regulations for pesticide storage and disposal in 40 CFR 165 (subparts C and D) have been deleted and are superseded in part by regulations enacted under the Resource Conservation and Recovery Act (RCRA).

### **Resource Conservation and Recovery Act**

RCRA, 42 USC 6901 et seq., was enacted by Congress in 1976 as a comprehensive regulatory program for the management of hazardous waste (HW) from “cradle to grave.” Under RCRA, HW is treated, stored, and disposed of in ways that minimize risk to human health and the environment. RCRA has been amended several times since its enactment, most importantly by the Hazardous and Solid Waste Amendments of 1984 (HSWA). The HSWA mandated changes to RCRA, such as HW minimization, land disposal restrictions, and provisions for regulation of underground storage tanks (USTs) that contain petroleum products or hazardous substances. HSWA provides management and technical standards for generators and transporters of HW and for owners and operators of treatment, storage, and disposal (TSD) facilities and USTs.

RCRA operating permits and closure plans provide a list and description of sites that have discharges to groundwater, surface water, and to air. When conducting a watershed baseline impact study, you should consider these sites as they may contribute, via runoff or ground water, to the impairment of a particular waterbody. Furthermore, you should be aware that states may revise a RCRA operating permit or closure plan to establish stricter discharge limits if that site is identified as an activity causing an impairment to a waterbody.

### **Toxic Substances Control Act**

The Toxic Substances Control Act (TSCA), 15 U.S.C. 2601 et seq., authorizes EPA to screen existing and new chemicals used in manufacturing and commerce to identify potentially dangerous products or uses that should be subject to federal control. As enacted, TSCA also included a provision requiring EPA to take specific measures to control the risks from polychlorinated biphenyls (PCBs) [Section 6(e)]. Subsequently, three titles have been added to address concerns about other specific toxic substances—*asbestos* in 1986 (Title II, P.L. 99-519), *radon* in 1988 (Title III, P.L. 100-551), and *lead* in 1992 (Title IV, P.L. 102-550).

EPA may require manufacturers and processors of chemicals to conduct and report the results of tests to determine the effects of potentially dangerous chemicals on living things. Based on test results and other information, EPA may regulate the manufacture, importation, processing, distribution, use, and/or disposal of any chemical that presents an unreasonable risk of injury to human health or the environment. A variety of regulatory tools are available to EPA under

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TSCA ranging in severity from a total ban on production, import, and use to a requirement that a product bears a warning label at the point of sale. TSCA directs EPA to use the least burdensome option that can reduce risk to a level that is reasonable given the benefits provided by the chemical product or process.