



The Clean Water Act (CWA)

Objectives



Terminal Objective

Given the Environmental Laws and Regulations course manual as a reference, you will be able to:

- **Describe and demonstrate how the Clean Water Act (CWA) applies to and affects operations at DOE facilities.**

Objectives



Enabling Objectives

- **List the two goals that the CWA set in order to accomplish its primary objective of restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters.**
- **Identify the implementing programs that are responsible for ensuring the quality of the Nation's waters.**

Objectives

Enabling Objectives (continued)

- **Explain how the CWA addresses radioactive discharges.**
- **Explain why compliance with the law is almost always cheaper than incurring penalties.**
- **Define Point Source and Non-Point Source discharges**

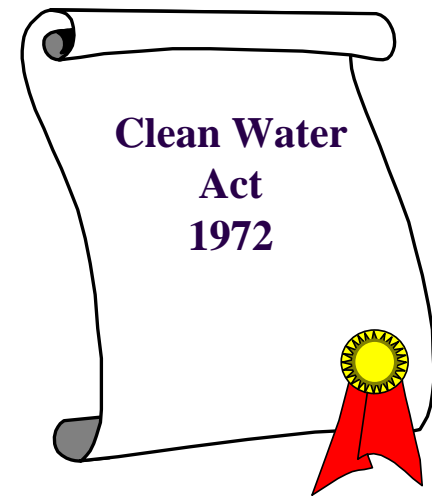
Overview

The Clean Water Act (CWA) is a major environmental statute that affects the DOE. All [DOE] facilities that discharge waste waters to either a surface water body or a publicly owned treatment system must comply with the CWA.



Legislative History

- **The Water Pollution Control Act was first enacted in 1948**
- **The Act was amended by the Federal Water Pollution Control Act (FWPCA) Amendments of 1972**
 - **This Act is now commonly known as the CWA**

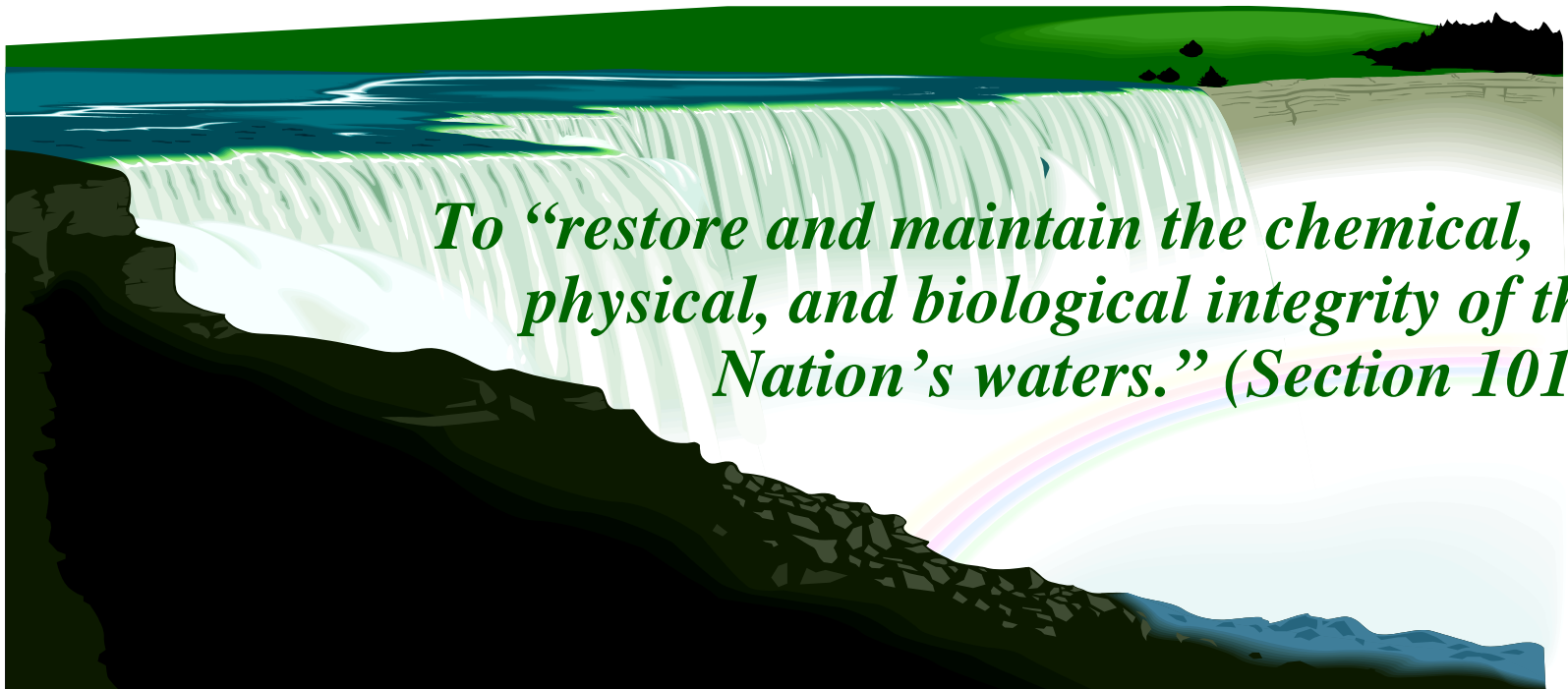


Legislative History

The 1972 amendments:

- **Brought about the most significant change in the law**
- **Instituted a shift:**
 - **From reliance on violations of water and quality standards as the primary enforcement tool, to**
 - **Establishment of specific technology-based effluent limitations that are enforceable as permit conditions**

Purpose



To “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” (Section 101)

Goals

- **To attain a level of water quality that “provides for the protection and propagation of fish, shellfish, and wildlife, and provides for recreation in and on the water”
1983**
- **To make navigable waters free of pollutant discharges by 1985**



Strategies

The following five strategies were employed, through the CWA, to achieve these goals:

- **A system of minimum national effluent standards for each industry was created**
- **Water quality standards were set**
- **A discharge permit program was created**



Strategies

- **Provisions for special problems (such as toxic chemicals and oil spills) were established**
- **A revolving construction loan program for publicly owned treatment works (POTWs) was established**



EPA's Role



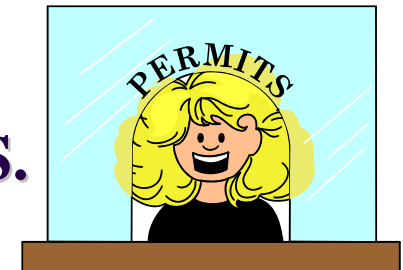
The CWA requires the Environmental Protection Agency (EPA) to:

- **Establish effluent limitations for the amounts of specific pollutants that may be discharged by municipal sewage plants and industrial facilities**
- **Set limits based on water quality in order to control pollution (in cases where technology-based limits are not strict enough to make waters safe)**

NPDES Permits for Point Sources

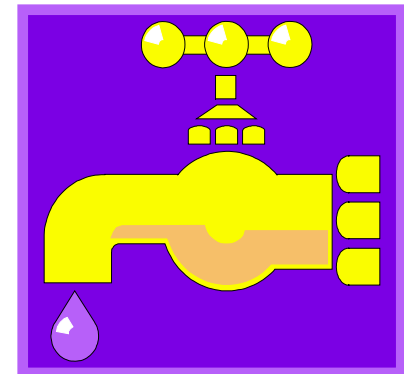
National Pollutant Discharge Elimination System (NPDES) permits:

- **Must be applied for and obtained by anyone discharging pollutants into U.S. waters (from any point source)**
- **Specify the discharge standards and monitoring and reporting requirements that a facility must achieve for each point source or outfall**



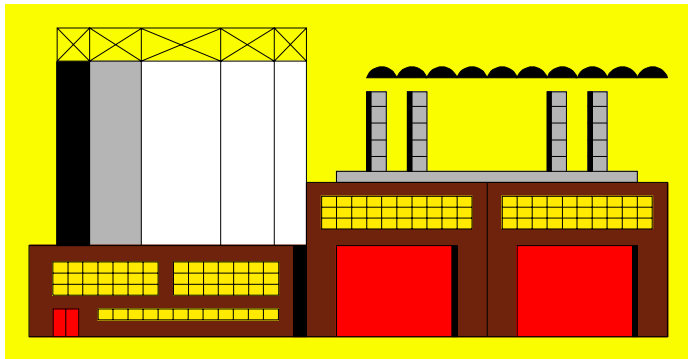
NPDES Permits for Point Sources

- **Require more stringent controls when toxic pollutants are discharged**
 - **Regulations for toxics are based on best available and economically achievable technology (Section 307)**



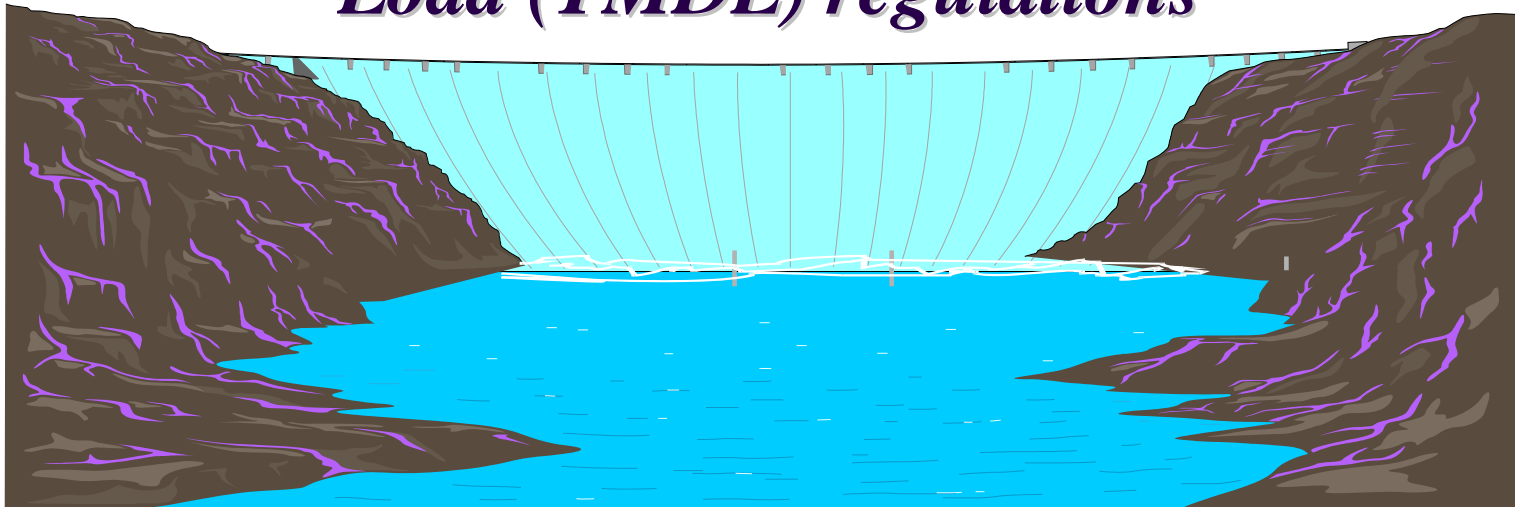
NPDES Permits for Point Sources

Permits issued by this program utilize industrial effluent standards and water quality standards to establish discharge limits for industries and treatment plants.



NPDES Permits for Point Sources

Can be made more stringent if the specific water body requires lower discharges to meet water quality standards under Total Maximum Daily Load (TMDL) regulations



NPDES Permits for Non-Point Sources



NPDES permit program expanded in 1992 to include storm water and other non-point source discharges, including:

- **parking and storage lots**
- **agricultural storm water discharges**

NPDES Permits for Non-Point Sources



- **Section 303(d) requires states to list waterways that do not meet federal or state water quality standards**
- **These listed waterways are subject to TMDL standards**

NPDES Permits for Non-Point Sources

What does Section 303(d) mean to DOE?

- **Any DOE facility that discharges to a state-listed waterway may find its permitted discharge limits reduced to reduce the overall pollutant load on the listed waterway**
- **States have authority to allocate discharges among the array of permitted point and non-point discharges**

Pretreatment Standards

Industries that discharge waste streams to POTWs do not need a NPDES permit. However, they must maintain certain national pretreatment standards before their waste may be discharged.



Pretreatment Standards

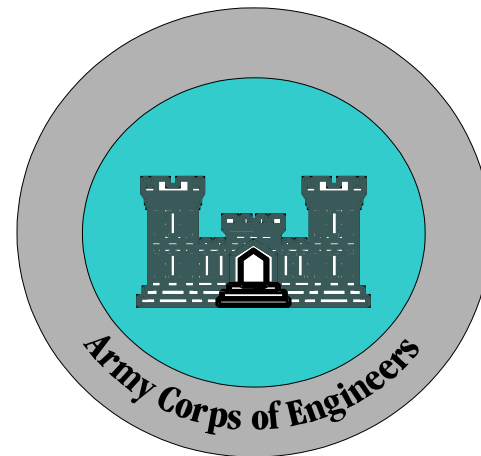
- **Require industries discharging waste to POTWs to pretreat waste that may:**
 - **Disrupt the POTWs' treatment processes, or**
 - **Cause the POTW to violate its NPDES permit**
- **The industry and the POTW will establish guidelines specific to what the industry will discharge**

Pretreatment Standards

- **These standards are enforced under the POTW's NPDES permit**
- **If deviations from the pretreatment plan occur, it is the industry's responsibility to notify the POTW of the change**
- **Apply to DOE facilities if they discharge into a POTW**

Discharge of Dredged or Fill Materials

Permits for the discharge of dredged or fill materials into U.S. waters at specific sites are issued by the Army Corps of Engineers (Section 404).



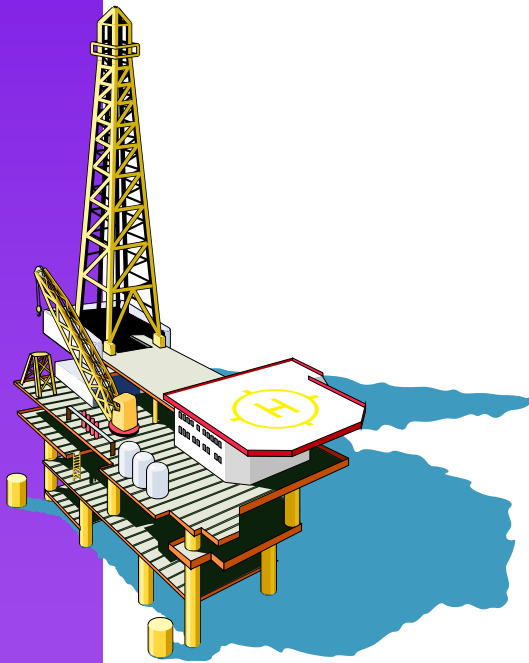
Discharge of Dredged or Fill Materials

Various dredged and fill material disposal activities are excluded from CWA Section 404 unless the action:

- **Alters the use of navigable waters, or**
- **Impairs the flow of those waters**



Oil & Hazardous Spills Program



Essentially the National Contingency Plan (NCP) is a program set up under both the CWA and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). It is designed to provide for immediate response and cleanup in the event of a spill into U.S. waters.

Oil & Hazardous Spills Program

The NCP sets forth procedures and standards that determine how the following people/institutions respond to a spill:

- **The EPA**
- **Other Federal agencies**
- **States**
- **Private parties**



Oil & Hazardous Spills Program



Examples of procedures set by the NCP:

- **Assigning spill cleanup responsibilities on State and Federal levels**
- **Providing for a strike force of personnel specially trained to deal with a spill**

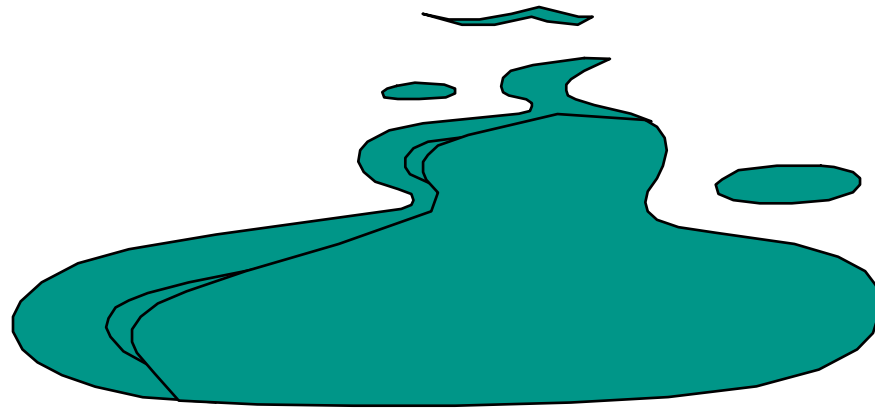
Oil & Hazardous Spills Program



- **Requiring early warning systems to ensure the earliest possible notification of excessive discharges**
- **Establishing procedures and techniques to be used in spill identification, containment, disposal, or removal**

Oil & Hazardous Spills Program

Under the CWA, the NCP mainly governs oil spills, while under CERCLA, it governs the release of hazardous substances.



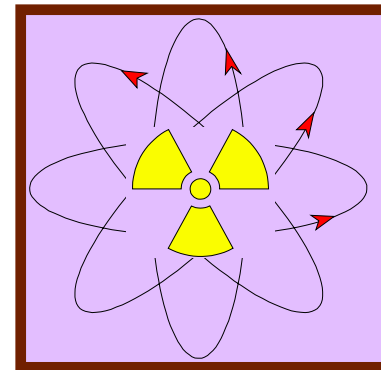
Spill Reporting (Section 311):

- **Is the major area where the CWA interfaces with CERCLA**
- **Establishes requirements to address oil spills and releases of hazardous substances**
- **Requires development of a Spill Control and Countermeasures Plan**

Radioactive Discharges

Regulated under the CWA:

- **Naturally occurring (e.g., radium), and**
- **Accelerator-produced radioisotopes**



Radioactive Discharges

Not regulated under the CWA:

- **Source**
- **Byproduct**
- **Special nuclear materials as defined by the Atomic Energy Act**



Applicability of the CWA to the DOE

Most DOE-relevant sections:

- **Technology-based effluent limitations (Section 301)**
- **Water quality-based effluent limitations (Section 302)**
- **Individual control strategies for toxic pollutants (Section 304(1))**
- **New source performance standards (Section 306)**

Applicability of the CWA to the DOE

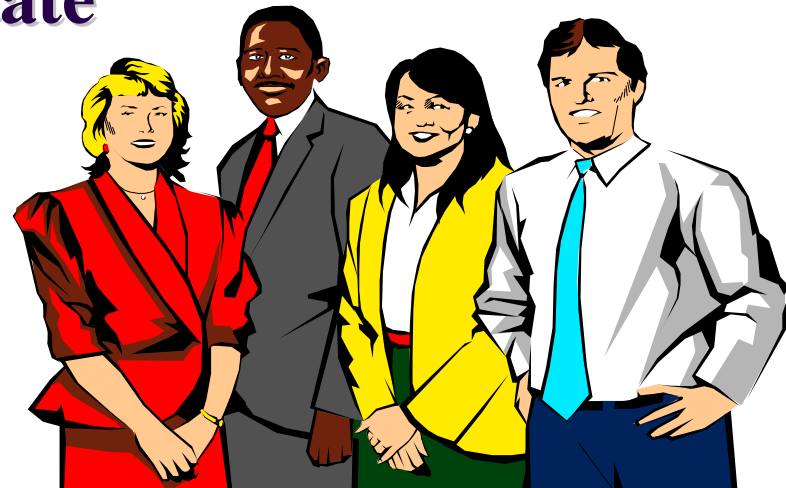
Most DOE-relevant sections:

- **Regulation of toxics and indirect discharges (Section 307)**
- **Federal facilities' pollution control (Section 313)**
- **Thermal discharges (Section 316)**
- **Point source and non-point source discharge permits under the NPDES (Section 402)**

Enforcement and Penalties

Enforcement can be initiated by:

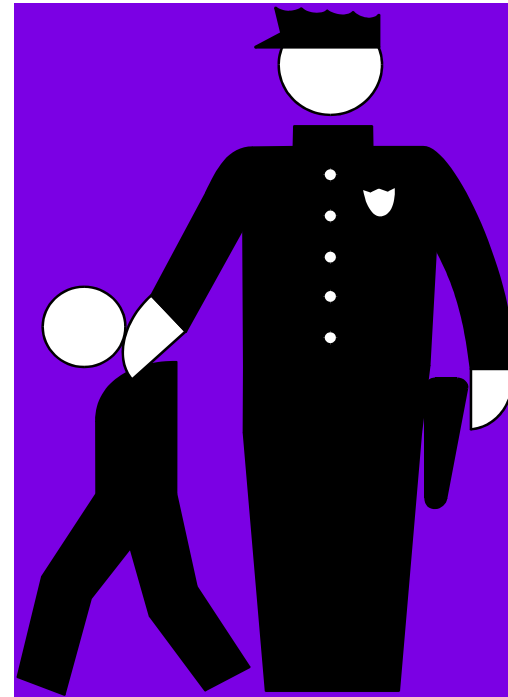
- **The EPA**
- **Corresponding State**
- **The Public**



Enforcement and Penalties

Penalties:

- **Fines**
- **Jail sentences**



Enforcement and Penalties

Penalties:

Action		Fine
Civil		\$25,000
Criminal	Negligent Violation	\$2,500 - 25,000
	Knowing Violation	\$5,000 - 50,000
	Knowing Endangerment	<\$250,000
	Falsifying Reports	\$10,000

Review Questions

- 1. The two principal goals of the Clean Water Act are: to attain an acceptable level of water quality within a minimal amount of time at low cost; and to develop a set of legally binding rules that would allow for prosecution of violators.**

- a. True**
- b. False**

Review Questions

2. **Under the Clean Water Act, EPA's nationwide (base level) treatment standards are the most stringent standards with which DOE must comply.**
 - a. **True**
 - b. **False**