

CHAPTER I

INTRODUCTION TO THE RESOURCE CONSERVATION AND RECOVERY ACT

Overview	I-1
RCRA: What It Is	I-2
- The Act	I-2
- Regulations	I-3
- Guidance and Policy	I-4
RCRA: How It Works	I-4
- Subtitle D — Solid Waste	I-4
- Subtitle C — Hazardous Waste	I-4
Who Is Involved in RCRA?	I-5
RCRA Today	I-5
- Looking to the Future	I-5
- Conserving Natural Resources	I-6
- Preventing Future Waste Problems	I-6
- Cleaning up Problems from Past Practices	I-7
Outline of the Manual	I-7
Summary	I-7

OVERVIEW

The Resource Conservation and Recovery Act (RCRA), an amendment to the Solid Waste Disposal Act, was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide.

The goals set by RCRA are:

- To protect human health and the environment from the potential hazards of waste disposal
- To conserve energy and natural resources
- To reduce the amount of waste generated

- To ensure that wastes are managed in an environmentally sound manner.

RCRA also regulates **underground storage tanks (USTs)** that store petroleum or certain chemical products under Subtitle I. Requirements exist for the design and operation of these tanks and the development of systems to prevent accidental spills. Examples of facilities using these tanks include petroleum refineries, chemical plants, and commercial gas stations.

The Medical Waste Tracking Act of 1988 was a 2-year demonstration program that expired in June 1991. It created a Subtitle J program designed to track **medical waste** from generation to disposal. At present, no federal EPA tracking regulations are in effect for medical waste, but many states have adopted their own programs.

The Comprehensive Environmental Response, Compensation, and Liability Act (known as Superfund or CERCLA) is a related statute that deals with cleaning up inactive and abandoned hazardous waste sites. RCRA, on the other hand, deals with materials that are currently destined for disposal or recycling.

RCRA: WHAT IT IS

The term RCRA is often used interchangeably to refer to the law, regulations, and EPA policy and guidance. The law describes the waste management program mandated by Congress that gave EPA authority to develop the RCRA program. EPA regulations carry out the Congressional intent by providing explicit, legally enforceable requirements for waste management. These regulations can be found in Title 40 of the Code of Federal Regulations (CFR), Parts 239 through 282. EPA guidance documents and policy directives clarify issues related to the implementation of the regulations. These three elements are the primary parts of the RCRA program.

■ The Act

The Act provides, in broad terms, general guidelines for the waste management program envisioned by Congress (e.g., EPA is directed to develop and promulgate criteria for identifying hazardous waste). The Act also provides the EPA Administrator (or his or her representative) with the necessary authority to develop these broad standards into specific requirements that implement the law.

THE ACT

The law that describes the kind of waste management program that Congress wants to establish. The Act also provides the Administrator of EPA (or his or her designee) with the authority to implement the program.

What we commonly know as RCRA, or the Act, is actually a combination of the first federal solid waste statutes and all subsequent amendments (see Figure I-1). In 1965, Congress enacted the Solid Waste Disposal Act, the first statute that specifically focused on improving solid waste disposal methods. The Solid Waste Disposal Act established economic incentives for states to develop planning, training, research, and demonstration projects for the management of solid waste. The Act was amended in 1976 by RCRA, which substantially remodeled the nation's solid waste management system and laid out the basic framework of the current hazardous

waste management program.

The Act, which has been amended several times since 1976, continues to evolve as Congress alters it to reflect changing waste management needs. The Act was amended significantly on November 8, 1984, by the Hazardous and Solid Waste Amendments (HSWA), which expanded the scope and requirements of RCRA. HSWA was created largely in response to citizen concerns that existing

methods of hazardous waste disposal, particularly land disposal, were not safe. Because of their significance and differences in their implementation, HSWA provisions are emphasized throughout this manual. Congress also revised RCRA in 1992 by passing the Federal Facilities Compliance Act, which strengthened the authority to enforce RCRA at federal facilities. In addition, the Land Disposal Program Flexibility Act of 1996 amended RCRA to provide regulatory flexibility for the land disposal of certain wastes.

Today, the Act consists of 10 subtitles (see Figure I-2). Subtitles A, B, E, F, G, H, I, and J outline general provisions; authorities of the EPA Administrator; duties of the Secretary of Commerce; federal responsibilities; miscellaneous provisions; research, development, demonstration, and information requirements; underground storage tanks; and medical waste tracking. Other subtitles lay out the framework for the two major programs that comprise RCRA: Subtitle C (the hazardous waste management program) and Subtitle D (the solid waste program).

The text of the Act can be found at www.epa.gov/lawsregs/laws.

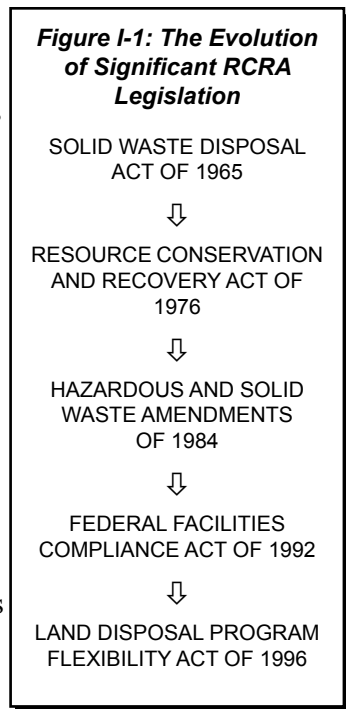


Figure I-2: Outline of the Act

<u>Subtitle</u>	<u>Provisions</u>
A	General Provisions
B	Office of Solid Waste; Authorities of the Administrator and Interagency Coordinating Committee
C	Hazardous Waste Management
D	State or Regional Solid Waste Plans
E	Duties of the Secretary of Commerce in Resource and Recovery
F	Federal Responsibilities
G	Miscellaneous Provisions
H	Research, Development, Demonstration, and Information
I	Regulation of Underground Storage Tanks
J	Standards for the Tracking and Management of Medical Waste

■ Regulations

The Act includes a Congressional mandate directing EPA to develop a comprehensive set of regulations. **Regulations**, or **rulemakings**, are issued by an agency, such as EPA, that translate the general mandate of a statute into a set of requirements for the Agency and the regulated community.

REGULATIONS

Legal mechanisms that establish standards or impose requirements as mandated by the Act. RCRA regulations are promulgated by EPA, published in the *Federal Register*, and codified in the Code of Federal Regulations.

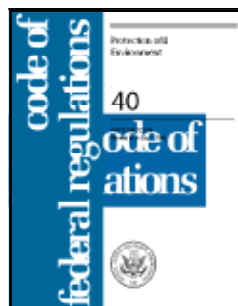
Regulations are developed by EPA in an open and public manner according to an established process. When a regulation is formally proposed, it is published in an official government

document called the *Federal Register* to notify the public of EPA's intent to create new regulations or modify existing ones. EPA provides the public, which includes the potentially regulated community, with an opportunity to submit comments. Following an established comment period, EPA may revise the proposed rule based on both an internal review process and public comments.

The final regulation is published, or promulgated, in the *Federal Register*. Included with the regulation is discussion of the Agency's rationale for the regulatory approach, known as preamble language. Final regulations are compiled annually and incorporated in the Code of Federal Regulations (CFR) according to a highly structured format based on the topic of the regulation. This latter process is called **codification**, and each CFR title corresponds to a different regulatory authority. For example, EPA's regulations are in Title 40 of the CFR. The codified RCRA regulations can be found in Title 40 of the CFR, Parts 239-282. These regulations are



often cited as 40 CFR, with the part listed afterward (e.g., 40 CFR Part 264), or the part and section (e.g., 40 CFR §264.10).



Although this relationship between an Act and the regulations is the norm, the relationship between HSWA and its regulations differs

slightly. Congress, through HSWA, not only provided EPA with a general mandate to promulgate regulations, but also placed explicit instructions in the Statute to develop certain regulations. Many of these requirements are so specific that EPA incorporated them directly into the regulations. HSWA is all the more significant because of the ambitious schedules that Congress established for implementation of the Act's provisions. Another unique aspect of HSWA is that it established **hammer provisions**, or statutory requirements that would go into effect automatically (with the force of regulations) if EPA failed to issue regulations by certain dates.

The interpretation of statutory language does not end with the codification of regulations. EPA further clarifies the requirements of the Act and its regulations through guidance documents and policy.

The RCRA regulations can be found at www.epa.gov/epawaste/laws-regs.

■ Guidance and Policy

Guidance documents are issued by EPA primarily to provide direction for implementing and complying with regulations. They are essentially “how to” documents. For example, the regulations

GUIDANCE = How To

Documents developed and issued by EPA to provide instructions on how to implement the requirements of either the Act or regulations.

in 40 CFR Part 270 detail what is required in a permit application for a hazardous waste management facility, while the guidance for this Part suggests how to evaluate a permit application to ensure that all information

has been included. Guidance documents also elaborate on the Agency’s interpretation of the requirements of the Act.

Policy statements, on the other hand, specify operating procedures that should generally be followed. They are mechanisms used by EPA program offices to outline the manner in which the RCRA programs are implemented. For example, EPA’s Office of Resource Conservation and Recovery (ORCR) may issue a policy outlining what actions should generally be taken to achieve RCRA corrective action cleanup goals. In many cases, policy statements are addressed to the staff working on implementation, but they may also be addressed to the regulated community.

POLICY = Should Do

Statements developed by EPA outlining a position on a topic or giving instructions on how a procedure should be conducted.

RCRA: HOW IT WORKS

To provide an overall perspective of how RCRA works, each waste program is briefly summarized here. Later, the Subtitle D (solid waste) program is discussed before the Subtitle C (hazardous waste) program. Although this is alphabetically out of order, the structure is designed for better understanding by the reader.

■ Subtitle D — Solid Waste

RCRA Subtitle D focuses on state and local governments as the primary planning, regulating,

and implementing entities for the management of nonhazardous solid waste, such as household garbage and nonhazardous industrial solid waste. EPA provides these state and local agencies with information, guidance, policy, and regulations through workshops and publications to help states and the regulated community make better decisions in dealing with waste issues, to reap the environmental and economic benefits of source reduction and recycling of solid wastes, and to require upgrading or closure of all environmentally unsound disposal units. In order to promote the use of safer units for solid waste disposal, EPA developed federal criteria for the proper design and operation of **municipal solid waste landfills** (MSWLFs) and other solid waste disposal facilities. Many states have adopted these criteria into their state solid waste programs.

■ Subtitle C — Hazardous Waste

RCRA Subtitle C establishes a federal program to manage hazardous wastes from **cradle to grave**. The objective of the Subtitle C program is to ensure that hazardous waste is handled in a manner that protects human health and the environment. To this end, there are Subtitle C regulations for the generation, transportation, and treatment, storage, or disposal of hazardous wastes. In practical terms, this means regulating a large number of hazardous waste handlers. As of 2009, EPA had on record approximately 460 treatment, storage, and disposal facilities (TSDFs); 18,000 transporters; and 14,700 large quantity generators (LQGs).

The Subtitle C program has resulted in perhaps the most comprehensive regulations EPA has ever developed. The regulations first identify the criteria to determine which solid wastes are hazardous, and then establish various requirements for the three categories of hazardous waste handlers: generators, transporters, and TSDFs. In addition, the Subtitle C regulations set technical standards for the design and safe operation of TSDFs. These standards are designed to minimize the release of hazardous waste into the environment. Furthermore, the regulations for TSDFs serve as the basis for developing and issuing the permits required by the Act for each facility. Permits are essential to making the Subtitle

C regulatory program work, since it is through the permitting process that EPA or a state applies the technical standards to TSDFs.

One of the primary differences between Subtitle C and Subtitle D is the type of waste each regulates. Subtitle C regulates only hazardous waste, a subset of solid waste, whereas Subtitle D primarily regulates nonhazardous solid waste.

WHO IS INVOLVED IN RCRA?

The RCRA program involves many people and organizations, all with varying roles. Congress and the President set overall national direction for the RCRA program through amendments to the Act. EPA, through its Office of Solid Waste and Emergency Response (OSWER), translates this direction into operating programs by developing regulations, guidance, and policy.

Site-specific implementation of the RCRA program is the responsibility of the EPA regions and states. Hazardous and solid waste programs have mechanisms through which states can exercise key program responsibilities. Initial federal responsibilities vary among the different programs.

Under Subtitle D, EPA established minimum criteria for MSWLFs and required each state to gain approval for their MSWLF permitting program through an approval process that ensures that the state's program meets minimum federal criteria. Most of the Subtitle D solid waste program is overseen by the states, and compliance is assured through state-issued permits.

State involvement in the Subtitle C program is similar to involvement in the Subtitle D program. Under Subtitle C, in the authorization process, EPA reviews a state's hazardous waste program and, if it is at least as stringent as the federal program, grants the state authority to implement its own program in lieu of the federal program. These states are known as authorized states.

The **regulated community** that must understand and comply with RCRA and its regulations is a large, diverse group. It includes not only facilities typically thought of as hazardous waste

generators, such as industrial manufacturers, but also government agencies and small businesses, such as a local dry cleaner generating small amounts of hazardous solvents, or a gas station with underground petroleum tanks.

Lastly, the general public plays a key role in RCRA by providing input and comments during almost every stage of the program's development and implementation, through rulemaking participation and comments on TSDF permits.

RCRA TODAY

Ensuring responsible waste management practices is a far-reaching and challenging undertaking that engages EPA Headquarters and regions, state agencies, tribes, and local governments, as well as everyone who generates waste. EPA has largely focused on building the hazardous and municipal solid waste programs and fostering a strong societal commitment to recycling and pollution prevention. Since the enactment of RCRA, EPA has built a comprehensive cradle-to-grave regulatory program for hazardous waste management; authorized forty-eight states to implement RCRA; set national baseline standards for municipal solid waste landfills; identified priority pollutants on which to focus hazardous waste reduction efforts; worked in successful partnerships to reduce waste, promote recycling, and build markets for recycled-content products; and provided education and technical assistance.

■ Looking to the Future

In the future, EPA will maintain and build on the effective hazardous and municipal waste programs already in place. At the same time, EPA must increase efforts in resource conservation, sustainability, and safe materials management. Safe waste management and cleanup remain the critical foundation to protect human health and the environment. EPA now relies on a largely complete regulatory structure for hazardous and municipal waste and proven implementation programs to ensure safe management. EPA will assess potential threats from wastes and address critical program improvements in the most effective manner, either

through regulatory changes, cooperative voluntary efforts, or other means.

Striving for sustainability and materials management are long-term challenges. EPA will look beyond the traditional definition of waste to determine how programs fit into, and can benefit from, a life cycle approach to ensure that chemicals and materials are managed protectively, in all stages of use and discard. In addition, waste issues must be considered beyond the nation's boundaries to maximize environmental results and achieve sustainability and safe materials management. A top priority is to reduce the generation of industrial and municipal waste and to conserve resources while reducing environmental impacts. Through the Resource Conservation Challenge (RCC), EPA is undertaking a broad spectrum of efforts to encourage waste minimization, pollution prevention, energy recovery, and recycling. Where necessary, this may require refining the current regulatory system. However, the scope of EPA's regulatory work is narrower and relies more on improving compliance with the existing regulations. There are only two remaining rulemakings to complete the hazardous waste regulatory structure and 1984 statutory mandates. Other regulatory activities are primarily targeted to simplify and add flexibility and facilitate resource conservation and pollution prevention.

EPA believes a key to success for RCRA and for improving the corrective action program will be building new partnerships and coalitions with government agencies, businesses, interest groups, and the public. While EPA has made great strides in working in true partnership with the states, more remains to be done. The goal of faster, more efficient cleanups will continue, and new corrective action goals will focus on the activities that precede completion of final corrective action, remedy selection, and construction. Encouraging facilities to achieve corrective action goals helps move the program toward success and

provides increased protection against exposure to contaminants that have been released from corrective action facilities.

■ Conserving Natural Resources

EPA will continue to help society reduce the amount and toxicity of wastes that facilities generate and promote safe recycling and energy recovery. A successful materials management approach will assess risks and ensure that harmful chemicals do not enter the environment throughout the life cycle of material handling. Resources that simply become waste are not available for future generations, and extraction and harvesting of resources can have long-term environmental impacts. Despite protective waste management programs, toxic chemicals can still find their way into the environment throughout the life cycle of materials. Persistent, bioaccumulative, and toxic chemicals released into the environment can present long-term risks to human health and the environment, even in small quantities. The challenge is to mobilize industries, state and local agencies, communities, and the public through collaborative efforts and by harnessing regulatory incentives to minimize threats to human health and the environment. The RCC will be the main vehicle by which EPA works to meet this challenge. The main objectives for conserving natural resources are reducing priority chemicals, stimulating product stewardship and recycling, fostering the transition to materials management,

forming partnerships, promoting recycling and safe energy recovery from waste, and engaging consumers and under-served communities.

■ Preventing Future Waste Problems

EPA will sustain and enhance effective state programs for hazardous, municipal, and industrial waste management and EPA regional implementation to ensure protective management



tailored to the full spectrum of wastes that facilities generate. The large universe of waste generators and treatment, storage, and disposal facilities (TSDFs) subject to hazardous and solid waste requirements presents a substantial challenge. EPA intends to identify unaddressed significant risks from current and new wastes and waste management practices and incorporate flexibility, and ensure that all wastes are managed protectively without unnecessary costs. The main objectives for preventing future waste problems are setting national goals for hazardous waste management facilities, supporting state implementation of hazardous and solid waste programs, building tribal capacity, maintaining and updating the federal regulatory programs, assisting industries to comply and move beyond compliance, engaging stakeholders, and improving waste and materials management.

■ **Cleaning up Problems from Past Practices**

EPA will continue to facilitate protective, practical completion of cleanups at hazardous waste TSDFs and help develop and/or strengthen state and tribal waste cleanup programs. These cleanups present a challenge because several thousand RCRA facilities have potentially released hazardous waste to the environment. In addition, cleanup may be costly and can take considerable time. EPA hopes to achieve timely cleanups at high priority facilities and create an environment in which all stakeholders can work together using a variety of tools and cleanup programs. The main objectives for cleaning up problems from past practices are controlling human exposures and groundwater releases, promoting mechanisms for flexible cleanups, supporting a “one cleanup program” framework, promoting revitalization and reuse, and supporting the tribal open dump cleanup and prevention program.

OUTLINE OF THE MANUAL

The remainder of this manual details the three RCRA programs briefly discussed in this introduction. The manual also describes two other

components of RCRA: the federal procurement and medical waste tracking programs. In addition, the manual discusses the interrelationships between RCRA’s Subtitle C program and other environmental statutes, as well as RCRA’s public participation provisions. To supplement this technical description of the RCRA regulatory program, the manual also contains appendices that present important RCRA forms and paperwork requirements and a glossary (for the reader’s convenience, the terms that appear in this glossary have been bolded throughout the text).

SUMMARY

RCRA was passed in 1976, as an amendment to the Solid Waste Disposal Act of 1965, to ensure that solid wastes are managed in an environmentally sound manner. The goals of RCRA have changed over time as EPA has implemented the program. The current goals are:

- To protect human health and the environment from the potential hazards of waste disposal
- To conserve energy and natural resources
- To reduce the amount of waste generated
- To ensure that wastes are managed in an environmentally sound manner
- Prevent future problems caused by irresponsible waste management
- Clean up releases of hazardous waste in a timely, flexible, and protective manner.

To achieve these goals, EPA will rely heavily on three programs:

- The current regulatory framework already in place
- Collaborative partnerships with stakeholders, such as those developed under the Resource Conservation Challenge
- The RCRA corrective action program.

There are several components of RCRA:

- Act – The law that describes the kind of waste management program that Congress wants to establish. The Act also provides the Administrator of EPA (or his or her designee) with the authority to implement the Act.
- Regulations – The legal mechanism that establishes standards or imposes requirements as mandated by the Act. RCRA regulations are promulgated by EPA, published in the *Federal Register*, and codified in the CFR.
- Guidance – Documents developed and issued by EPA to provide instructions on how to implement requirements of either the Act or regulations.
- Policy – Statements developed by EPA outlining a position on a topic or giving instructions on how a procedure should be conducted.

RCRA continues to change with amendments to the Statute. HSWA, in particular, significantly expanded both the scope and detailed requirements of the Act, especially in the context of the land disposal of hazardous wastes. Congress, EPA, states, regulated entities, and the general public are involved in developing and implementing the RCRA program.

EPA continues to improve the RCRA program by using measurable results to identify and promote new initiatives, such as encouraging waste minimization, improving the federal/state partnership in the hazardous waste program, and aiding state and local governments in reaping the environmental and economic benefits of source reduction and recycling.