

## CHAPTER 1. INTRODUCTION

**1.1 PURPOSE.** This guide provides information to the solid waste manager in his efforts to prepare a solid waste management plan (SWMP) at a Navy or Marine Corps activity.

**1.2 OBJECTIVE.** This guide assists personnel responsible for Solid Waste management to comply with current and future regulations. A SWMP is now a requirement set forth in OPNAVINST 5090.1A Chapter 10-6.1.4 which states: "**Commanding Officers of shore activities shall develop solid waste management plans** including source reduction and recycling programs and resource recovery facilities as required." Similarly, for the Marine Corps, the requirement is stated in Chapter 10 of the Environmental Compliance and Protection Manual MCO P5090.2. Installations outside the United States must abide by technical standards and practices of the host jurisdiction. This document does not review hazardous wastes practices except for hazardous wastes materials that might enter a solid waste stream, as in household cleaning chemicals. The DOD Overseas Environmental Baseline Guidance Document (OEBGD) was issued in September 1992. The final governing standards are to issued later in 1993. Until final governing standards become available, installations outside the United States shall comply with the requirements set forth in the OEBGD. Atlantic Division or Pacific Division of the Naval Facilities Engineering Command can provide assistance in this matter.

The SWMP Guide is a decision making process by which solid waste management is documented and implemented in compliance with the operational and procedural requirements of existing federal, state, and local laws.

**1.3 SCOPE.** This guide covers the process leading to the implementation of the SWMP and consists of five sections: (1) List of regulations and Department of Defense (DOD) instructions, (2) information collection process, (3) decision making process and options for waste stream evaluation, (4) how to prepare a SWMP, and (5) appendices which include tutorial samples for preparing a SWMP.

**1.4 HOW TO USE THIS GUIDE.** The user should start by reading Chapter 1 for the overall purpose and scope of the SWMP Guide. Chapter 2 provides the process for collecting information and record keeping for waste characterization. Chapter 3 sets analysis routines and available options for the SWMP. Chapter 4, Preparing the Installation SWMP, embodies the framework and components of what a SWMP should include. The components of Chapter 4 relate and correspond respectively to components of Appendix A, the sample SWMP. For example, Chapter 4, Section 4.2.4, consists of the responsibilities component. Appendix A, section 4.2.4, is the responsibilities component of the sample SWMP. Chapter 4 and Appendix A should be used in conjunction with one another. Chapter 5 outlines how to write the SWMP's implementation instruction. This guide may be used by in house personnel or by contractors to prepare the station SWMP. A sample statement of work is provided as Appendix B.

**1.5 STEPS FOR DEVELOPING AND IMPLEMENTING A SWMP.** The procedure for developing and implementing a SWMP begins with knowing all of the pertinent regulations, DOD instructions, applicable requirements, and available options for solid waste management. A comprehensive study of the entire solid waste management system is the best method for a SWMP development. Figure 1-1 is a recommended step-by-step planning guide.

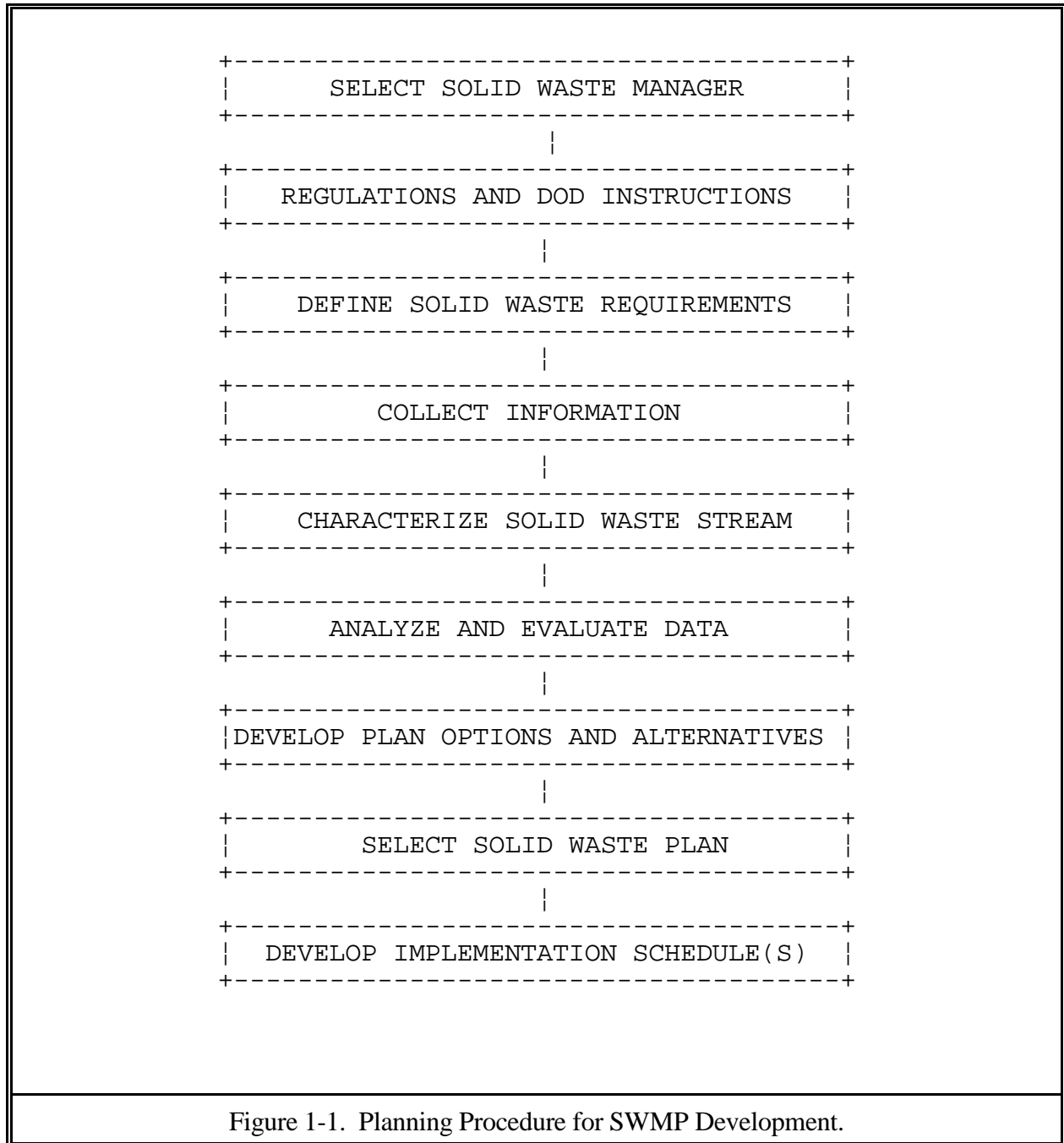


Figure 1-1. Planning Procedure for SWMP Development.

**1.6 REGULATIONS AND DOD INSTRUCTIONS.** Solid waste disposal activities at military installations must abide by federal, state, and local regulations. However, the states are given the right to apply more stringent solid waste regulations. Military policy is to abide by the most stringent of the applicable regulations.

### **1.6.1 Federal Regulations.**

- **The Federal Resource Conservation and Recovery Act (RCRA) of 1984** - Establishes public safety and health standards for the disposal of solid waste. The act encourages the conservation and recycling of solid waste with residual value. Subtitle D of RCRA establishes Federal standards for management of non-hazardous solid waste landfills; to encourage environmentally sound solid waste management practices, recycling of waste material, and resource conservation. Subtitle D has mandatory technical standards for non-hazardous solid waste disposal facilities.
  
- **The Solid Waste Disposal Act (SWDA) of 1976, as amended by RCRA** - Requires that Federal facilities comply with all federal, state, interstate, and local requirements concerning the disposal and management of solid wastes. Such requirements include permitting, licensing, and reporting. The SWDA encourages beneficial reuse of wastes through recycling and burning for energy recovery.
  
- **Code of Federal Regulations (CFR) and Guidelines:**
  - 29 CFR 1910; Occupational Safety and Health Standards
  
  - 40 CFR 240-241; Thermal Processing of Solid Wastes and for the Land Disposal of Solid Wastes
  
  - 40 CFR 243; Solid Waste Storage and Collection
  
  - 40 CFR 244; Solid Waste Guidelines for Beverage Containers
  
  - 40 CFR 245; Resource Recovery Facilities
  
  - 40 CFR 246; Source Separation for Materials Recovery Guidelines
  
  - 40 CFR 247; Procurement of Products That Contain Recycled Material
  
  - 40 CFR 248; Federal Procurement of Building Insulation Products Containing Recovered Materials
  
  - 40 CFR 250; Federal Procurement of Paper and Paper Products Containing Recovered Materials

- 40 CFR 255; Identification of Regions and Agencies for Solid Waste Management
- 40 CFR 257; Criteria for Classification of Solid Waste Disposal Facilities and Practices
- 40 CFR 258; Criteria for Municipal Solid Waste Landfills
- 40 CFR 259; Medical Waste Regulations
- **Energy Security Act (Public Law 96-294)** - One portion of the Act deals with municipal waste-to-energy facilities and the securing of loans to speed their implementation.
- **Clean Air Act (Public Law 101-549, November 15, 1990), Section 112** - gives authority to the EPA to set emission standards for hazardous air pollutants. In 1973, a standard for control of asbestos fibers was issued as part of the National Emission Standards for Hazardous Air Pollutants. Regulations addressing asbestos disposal in solid waste landfills are included in the CAA, Section VI, Special Pollutants.
- **Federal Property and Administrative Services Act of 1949, Section 203** - contains provisions on the sale of recyclable materials.

### **1.6.2 DOD Regulations.**

- **DOD Directive 4165.60 of 4 October 1976**, "Solid Waste Management - Collection, Disposal, Resource Recovery and Recycling Program" - Provides DOD policies and procedures relative to the DOD comprehensive solid waste program.
- **SECNAVINST 4860.44F, Commercial Activities.** Navy activities shall not compete with a locally available commercial recycling industry which offers a total solid waste resource recovery system. Every effort shall be made to use the established commercial industry.
- **NAVMEDCOMINST 6280.1**, Instruction of infectious waste management for Navy medical treatment facilities.
- **Navy: OPNAVINST 5090.1A**, "Environmental & Natural Resources Program Manual," Chapter 10, requires all Navy installations to comply with federal, state, and local solid waste management requirements by developing a SWMP to implement source reduction and recycling plans, developing a qualified recycling program (QRP) to segregate scrap metal, high-grade paper, corrugated containers, and aluminum cans.
- **Marine Corps: MCO P5090.2, "Environmental Compliance and Protection Manual," Chapter 10**, requires all Marine Corps installations within the United States and its territories and

possessions to comply with federal, state, and local solid waste management requirements as described above.

- **Marine Corps: MCO 4860.3**, provides guidance for solid waste collection, storage, and disposal.
- **Navy: DESIGN MANUAL 5.10**, "Civil Engineering Solid Waste Disposal" - is used by qualified engineers and is a selection of a base-specific disposal methods of solid waste.
- **Navy: NAVFAC P-442**, "Economic Analysis Handbook" provides guidance for the establishment/disestablishment of resource recovery/source separation programs.
- **The Military Construction Codification Act (Public Law 97-214) of 1982** - applies to recycling programs at military installations. Section 6 contains a provision that allows net proceeds from the sale of recyclable materials to be used by Navy or Marine Corps installations for certain purposes.
- **NAVFACENGCOM MO-213**, "Solid Waste Management" provides guidance on requirements, maintenance, and operation of solid waste collection, storage, disposal, recycling, and energy recovery systems.
- **DOD OVERSEAS ENVIRONMENTAL BASELINE GUIDANCE DOCUMENT (OEBGD)**, provides guidance for installations in foreign locations. The final governing standards are to be issued in September 1993. Guidance may be obtained from CINCPACFLT, CINCLANTFLT, COMLANTNAVFACENGCOM, or COMPACNAVFACENGCOM.

**1.6.3 State Regulations.** For example, California Assembly Bill (AB) 939 requires counties in the state of California to divert 25 percent of their solid waste by 1995 and 50 percent by the year 2000 in each case from landfill facilities through source reduction, recycling, or composting activities.

California Senate Bill (SB) 1223 establishes comprehensive State programs designed to increase recycling and encourage the development of commercial markets for recyclable materials.

**1.6.4 County and City Regulations.** The state places the burden of action and responsibility to meet the state diversion requirements on the county and city. The county and city public works solid waste divisions shall develop plans and ordinances to reduce the waste disposed of at the county and city landfills.