

ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

CHAPTER 20

WATER QUALITY MANAGEMENT

|  | <u>PARAGRAPH</u> | <u>PAGE</u> |
|--|------------------|-------------|
| SECTION 1: INTRODUCTION  |                  |             |
| PURPOSE . . . . .  | 20100            | 20-3        |
| APPLICABILITY . . . . .  | 20101            | 20-3        |
| BACKGROUND . . . . .   | 20102            | 20-3        |
| FEDERAL STATUTES . . . . .   | 20103            | 20-4        |
| REQUIREMENTS . . . . .   | 20104            | 20-10       |
| TERMS AND DEFINITIONS . . . . .  | 20105            | 20-29       |
| SECTION 2: MARINE CORPS POLICY   |                  |             |
| GENERAL . . . . .  | 20200            | 20-37       |
| POINT SOURCE CONTROL . . . . .   | 20201            | 20-37       |
| NONPOINT SOURCE CONTROL . . . . .  | 20202            | 20-39       |
| SEPTAGE TREATMENT AND DISPOSAL . . . . .                                   | 20203            | 20-39       |
| GROUNDWATER PROTECTION . . . . .   | 20204            | 20-39       |
| SEWAGE SLUDGE USE AND DISPOSAL . . . . .                                   | 20205            | 20-40       |
| DREDGE AND FILL OPERATIONS . . . . .                                       | 20206            | 20-40       |
| OCEAN DUMPING . . . . .  | 20207            | 20-42       |
| COASTAL ZONE MANAGEMENT ACT (CZMA)<br>CONSISTENCY DETERMINATIONS . . . . . | 20208            | 20-42       |

ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

PARAGRAPH   PAGE

SECTION 3: RESPONSIBILITIES

|   |       |       |
|---|-------|-------|
| CMC (LF) . . . . .  | 20300 | 20-43 |
| CG/CO OF MARINE CORPS INSTALLATIONS<br>AND COMMANDER MARINE FORCES<br>RESERVE (COMMARFORRES) . . . . .                                    | 20301 | 20-43 |
| COMMANDERS RESPONSIBLE FOR DISCHARGES TO<br>FEDERALLY OWNED TREATMENT WORKS (FOTW) AND<br>PUBLICLY OWNED TREATMENT WORKS (POTW) . . . . . | 20302 | 20-46 |

ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

CHAPTER 20

WATER QUALITY MANAGEMENT

SECTION 1: INTRODUCTION

20100. PURPOSE. This chapter establishes Marine Corps policy and responsibilities for compliance with Federal water pollution control requirements for water quality management (WQM) programs. Chapter 16 of this Manual discusses specific provisions for preventing and controlling surface and groundwater pollution and for the protection of drinking water supplies. For information on the planning, prevention, and control of water pollution from oil discharges and hazardous substance (HS) releases, see chapter 7 of this Manual.

20101. APPLICABILITY. See paragraph 1101.

20102. BACKGROUND. Marine Corps operations that are regulated through the WQM program include the following:

1. Sanitary or industrial wastewater discharged directly to receiving waters or through an on-base Marine Corps Owned Treatment Works (MCOTW).
2. Sanitary or industrial wastewater discharged to an off-base POTW or to a treatment plant of another DoD activity.
3. Stormwater runoff associated with industrial or construction activities discharged to receiving waters.
4. Range operations which result in nonpoint source pollution.
5. Agricultural, silvicultural, and grazing operations, including outleases, which contribute to polluted runoff or groundwater contamination.
6. Sewage sludge generation, processing, use, and disposal practices.
7. Facilities involved in the transfer, storage, and transportation of petroleum, oil, and lubricants (POL) which, because of their location, could reasonably be expected to cause

substantial harm to the environment by discharging into navigable waters or on the adjacent shoreline.

8. Hazardous material storage areas and other regulated storage areas where runoff is likely to occur.

20103. FEDERAL STATUTES

1. Water Quality Act (WQA) of 1965 (Public Law 89-234), Water Quality Improvement Act of 1970 (Public Law 91-224), Federal Water Pollution Control Act (FWPCA) of 1972, as Amended by Clean Water Act (CWA) of 1977 (33 U.S.C. 1251 et seq.)

a. The WQA provides Federal assistance for the establishment and enforcement of jurisdictional water quality standards for surface waters. It was amended in 1970 by the Water Quality Improvement Act to prohibit releases of oil and sewage into navigable waters. The FWPCA made the Environmental Protection Agency (EPA) responsible for setting nationwide effluent standards on an industry-by-industry basis. This Act provided effluent and water quality standards, and instituted a permit system for the regulation of oxygen-demanding pollutant discharges. In 1977, the CWA Amendments refocused the enforcement tools of the FWPCA on the control of toxics. The CWA amended the permit system, which is now the National Pollutant Discharge Elimination System (NPDES), a nationwide permit program administered by the EPA. The CWA was amended in 1987 to include the regulation of stormwater runoff, and to strengthen enforcement mechanisms. The intent of the CWA is to restore and protect the integrity of the Nation's waters by controlling discharges of pollutants, including oil and hazardous substance spills, into those waters.

b. The CWA identifies the following two national goals:

(1) To eliminate the introduction of pollutants into waters of the United States; and

(2) To develop water quality which protects and propagates fish, shellfish, and wildlife and provides for recreation in and on the water.

c. To attain these goals, the EPA has identified conventional, nonconventional, and toxic pollutants and the degrees of technology that must be applied to remove these pollutants from point and nonpoint sources of wastewater. Point

source discharge requirements are implemented through the NPDES, or through state programs that have been authorized by the EPA. Nonpoint source discharges are regulated through state WQM programs. The CWA also authorizes the EPA to promulgate pretreatment standards for industrial sources discharging effluents to POTW's.

d. Important statutory requirements of the CWA are summarized as follows:

(1) Section 208 requires the preparation of area-wide waste treatment management plans. These plans must contain alternatives for waste treatment management and must apply to all wastes generated within the area involved.

(2) Section 301 provides that the discharge of any pollutant by any person (including Federal installations) into waters of the United States is unlawful without a discharge permit and adherence to any permit requirements.

(3) Section 302 establishes requirements for the development of water quality related effluent limitations. These limits are calculated for a particular section of a receiving water and applied to one or more point sources by inclusion in an NPDES permit. These limits are more stringent than general water quality standards or categorical industry effluent limits.

(4) Section 303 requires states to develop and revise water quality standards and implementation plans for interstate and intrastate waters. These standards are used to determine effluent discharge limits in NPDES permits.

(5) Section 304(1) requires states to develop a list of impaired waters due to point source discharges of toxic pollutants and a determination of which point sources are responsible for the discharges. This section requires the imposition of an Individual Control Strategy for the toxic pollutant(s) within the NPDES permit in order to reduce the concentration of the toxic pollutant(s), which would enable the receiving water to meet its designated water quality standard.

(6) Section 306 requires the development of National Standards of Performance for new and existing sources of industrial wastewater from specified industrial categories. Categories relevant to Marine Corps operations include electroplating, metal finishing, metal products and machinery,

landfill leachate and incinerators, waste treatment, transportation equipment cleaning, and industrial laundries.

(7) Section 307 establishes a list of toxic pollutants and requires the development of effluent and pretreatment standards for those pollutants.

(8) Section 308 establishes the EPA's right to enter and inspect any facility subject to the CWA provisions. It also specifies requirements for permittees to monitor discharges and to establish and maintain appropriate records and reports.

(9) Section 309 provides for Federal enforcement of the CWA, to include filing of Notices of Violation, issuing compliance orders, and bringing civil suits in United States District Courts against violators. This section also specifies criminal penalties of up to \$25,000 per day and/or 1 year imprisonment for negligent violations; up to \$50,000 per day and/or 3 years imprisonment for knowing violations; and up to \$250,000 per day and/or 15 years imprisonment for an individual or up to \$1,000,000 for an organization that knowingly endangers human life or causes serious bodily injury. Until a complete sovereign immunity waiver similar to that contained in the Federal Facilities Compliance Act (FFCA) is placed into the CWA by Congress, Marine Corps policy specifies that penalties levied under the CWA will not be paid.

(10) Section 311 addresses oil and HS liability. It requires the development of a National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The NCP provides the organizational structure and procedures for preparing for, and responding to, oil discharges and releases of HS's, contaminants, and pollutants. This section further provides that the President (and installation commanders as duly appointed representatives) act on behalf of the United States to recover all costs for restoring or replacing natural resources damaged by such discharges and releases.

(11) Section 313(a) states that Federal agencies, their facilities, and personnel are subject to, and must comply with, all Federal, state, and local requirements, administrative authority, process, and sanctions respecting the control and abatement of water pollution. It exempts Federal personnel from personal liability for civil penalties arising from performing official duties and limits the liability of the United States to only "civil penalties arising under Federal law or imposed by a state or local court to enforce an order or the process of such

court." The President may exempt any effluent source of any Federal installation from CWA compliance if he determines it is in the express interest of the United States to do so; however, no exemption may be granted from requirements promulgated for categorical industries under section 306 and toxic pollutants under section 307.

(12) Section 319 requires states to establish nonpoint source (NPS) pollution management programs. These management programs must identify the best management practices (BMP) for reducing specific types of NPS pollution, identifying programs to implement the BMP's, developing a schedule with annual milestones for implementing the BMP's, certifying that the state has adequate legal authority for administering and enforcing the program, and identifying sources of assistance and funding.

(13) Section 401 requires that any applicant for a Federal license or permit to conduct an activity that may result in a discharge to navigable waters must provide to the permitting agency a certification from the state in which the discharge will originate that any such discharges will comply with applicable CWA provisions. The applicant must provide an opportunity for the certifying state or agency to review the manner in which the facility will operate to ensure that effluent limits will not be violated.

(14) Section 402 establishes the NPDES-permit program.

(15) Section 403 establishes ocean discharge criteria.

(16) Section 404 establishes requirements for the issuance of permits by the Army Corps of Engineers (COE) for discharges of dredged or fill material into navigable waters.

(17) Section 504 provides authority to the EPA to bring suit in United States District Courts to immediately restrain any person (including Federal facilities) from causing or contributing to a discharge alleged to imminently and substantially endanger human health or welfare.

(18) Section 505 provides for citizen suits against any person (including the United States) who allegedly is violating an effluent standard or an order issued by the EPA or a state with respect to such a standard or limitation.

2. Oil Pollution Act (OPA) of 1990 (Public Law 101-380, 33 U.S.C. 2701 et seq.)

a. This Act prohibits harmful discharges of oil and HS's into waters of the United States or discharges which may affect natural resources owned or managed by the United States.

b. The OPA requires owners or operators of tank vessels and facilities to develop and submit appropriate facility response plans (see chapter 7 of this Manual) because their locations might cause substantial harm by discharging oil or HS's into the environment.

3. Safe Drinking Water Act (SDWA) of 1974 (42 U.S.C. 300(f) et seq.)

a. This Act and its amendments prescribe treatment and distribution control strategies for abating the contamination of drinking water. For more information on drinking water systems and conservation, refer to chapter 16 of this Manual.

b. Part C of the SDWA prescribes the protection of underground sources of drinking water. It establishes three groundwater protection programs for which the states should assume the primary responsibility. These programs are:

(1) The Underground Injection Control (UIC) Program. The purpose of this program is to regulate the injection of fluids into underground strata which could affect groundwater supplies.

(2) The Sole Source Aquifer Program. The purpose of this program is to designate and protect aquifers which are the sole or principal source of drinking water for an area and which, if contaminated, would create a significant hazard to public health.

(3) The Wellhead Protection (WHP) Program. The purpose of this program is for states to protect wellhead areas from contaminants which may have an adverse effect on the health of persons using wells for drinking water within that area.

4. Rivers and Harbors Act of 1899 (3 U.S.C. 407 et seq.). Sections 9 and 10 of this Act provide authority to the COE to issue or deny permits for construction of dams, dikes, or other structures in, or ones that will affect, navigable waters of the United States.

5. Marine Protection, Research, and Sanctuaries Act (MPRSA) of 1972, as Amended (33 U.S.C. 1401 et seq. and 16 U.S.C. 1431 et seq.)

a. This Act, also known as the Ocean Dumping Act, restricts the dumping of all types of materials which would adversely affect human health and welfare or the marine environment, originating from within and outside the United States, into ocean waters. It further prohibits ocean disposal of biological, chemical, and radiological warfare agents, high level radioactive waste, and medical waste.

b. The Act establishes a system for the issuance of permits by the EPA, under section 102, and by the COE, under section 103, for ocean disposal of dredged materials. Section 104 contains conditions for permits issued by the EPA and the COE. Section 104B of the MPRSA banned ocean disposal of sewage sludge or industrial waste after December 31, 1991.

6. CZMA of 1972 (16 U.S.C. 1451 et seq.)

a. This Act plays a significant role in water quality management, particularly with regard to nonpoint source pollution. State coastal zone management programs approved under the Act incorporate flood control, sediment control, grading control, and stormwater runoff control statutes. Under the CZMA, a Federal action that affects any land, water use, or natural resource of the coastal zone must be accomplished as consistently as possible with the enforceable policies of the approved state management programs (15 CFR 930.32). This requirement applies to activities conducted both within or outside the coastal zone if there are impacts in the coastal zone.

b. These state programs must be considered when addressing water pollution impacts of Marine Corps projects. Assistance in determining compliance requirements in specific situations may be requested from the CMC (LF).

c. In their coastal zone management program, states must list activities which directly affect the coastal zone and, therefore, require a consistency determination. Installations should review this list to identify activities applicable to their installation which are likely to require a consistency determination.

7. Resource Conservation and Recovery Act (RCRA) of 1976 (42 U.S.C. 6901 et seq.)

a. This Act prescribes technical requirements for preventing leachate migration from solid or hazardous waste (HW) disposal sites to groundwater.

b. Section 3023, as implemented under the FFCA, defines and regulates FOTW's, which include Marine Corps domestic wastewater treatment plants. This section prohibits introducing any HW into an FOTW, specifies conditions under which an FOTW without a RCRA permit may receive industrial wastewaters, and discusses enforcement procedures.

c. Section 7003 provides authority to the EPA to bring suit in United States District Court to immediately restrain any person (including Federal facilities) from causing or contributing to a discharge alleged to imminently and substantially endanger human health or the environment.

20104. REQUIREMENTS

1. General

a. Statutory Requirements. The CWA requires compliance by Federal installations with all requirements, substantive and procedural, that are applicable to the control and abatement of water pollution. The CWA makes it illegal for any Marine Corps installation to discharge any pollutant, other than when such discharge is in compliance with effluent standards, treatment technology requirements, or other procedural requirements.

b. Regulatory Requirements

(1) Applicable requirements include Federal, state, and local regulations. The remainder of this section summarizes many of the significant Federal regulations pertaining to water quality management.

(2) Authorized EPA, state, or other regulatory officials who have presented proper credentials must be allowed to enter Marine Corps facilities at reasonable times to examine or copy records, inspect facilities and monitor equipment, and sample any wastewater or stormwater which the activity is required to monitor. Designated representatives of the CG/CO should accompany the officials during these site visits.

c. Executive Order (EO) Requirements. EO 12088, Federal Compliance with Pollution Control Standards, October 13, 1978, requires executive agencies, including the military departments, to comply with applicable requirements of Federal laws, including the CWA. The EO requires each agency to submit to the Office of Management and Budget an annual plan for environmental pollution control with cost estimates for the design, construction, management, operation, and maintenance of Federal facilities.

d. DoD Requirements. DoD has established the DON as the DoD Executive Agent for implementation of the CWA.

## 2. Point Source Control

a. Definition (40 CFR 122). A point source is any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

### b. Discharge Permits

(1) Titles 40 CFR 122 and 40 CFR 125 require NPDES permits for all point source discharges into waters of the United States. Discharges must comply with all terms and conditions of EPA, state, and locally issued permits.

(2) For installations with discharge points located in states that have not been authorized to administer all or parts of CWA programs, NPDES permits must be requested from, and issued by, the EPA. If a state has a separate water pollution permit program, Marine Corps installations must, when required, obtain a state permit as well as an EPA permit for point sources regulated under that program.

(3) For all discharge points located in states that have EPA-approved NPDES programs, permit applications must be filed with, and issued by, the appropriate state agency.

(4) Any discharge that will continue after its discharge permit expires must be re-permitted prior to the expiration date of the current permit. A new permit application must be forwarded to the permitting agency no later than 180 days (90 days for stormwater discharges resulting from construction

activity) prior to the permit expiration date. In the case of complex permits, such applications should be filed well in advance of the 180 day (or 90 day) requirement. To meet these deadlines, installations must allow sufficient time to collect the required information and prepare the application.

(5) All permit applications and required reports must be prepared in the format prescribed by the permitting agency.

(6) Any monitoring records, including all original strip chart recordings for continuous monitoring, instrumentation and calibration, maintenance records, and laboratory test results pursuant to sampling, must be retained for a minimum of 3 years at the installation where monitoring is performed, if not otherwise prescribed.

(7) The owner of a treatment plant which continually fails to meet its discharge permit limits can be subject to enforcement actions by the permitting agency and to citizen suits filed in a United States court.

c. Industrial Wastewater Treatment and Direct Discharge Requirements

(1) Marine Corps Owned Industrial Wastewater Treatment Plants (IWTP) and other industrial based activities with direct discharge into receiving waters must obtain and comply with an NPDES permit.

(2) Direct discharges from oil/water separators must be permitted, monitored, and reported under the NPDES program. The installation of wash water recycling equipment (a pollution prevention technology) is the preferred method of treating and reusing air and ground equipment wash rack effluent. Where the installation of recycling equipment is not practical, wash rack discharges when aircraft or vehicles are being washed should be valved to oil/water separators which discharge to the sanitary sewer and valved to drainage ditches at all other times so that stormwater runoff does not overload the sanitary sewer system. Oil transfer and storage facility storm waters should be directed through an oil/water separator prior to discharge.

(3) When new NPDES permit standards are promulgated, Marine Corps Owned IWTP's and other industrial activity dischargers may not be able to comply automatically with the new standards. If the discharger determines it cannot meet the new standard, it must begin to upgrade its treatment processes to

meet the deadline for compliance with the new standards. If the discharger cannot meet the required compliance date, it should negotiate a new date in a Consent Order with the appropriate regulatory agency.

d. Discharge to FOTW's

(1) Industrial discharges to an FOTW will meet all applicable general and categorical pretreatment standards contained in 40 CFR 403 and 40 CFR 405 through 471, respectively, as appropriate. After the effective date of any new pretreatment standards for toxic substances, affected sources will comply within the time frame designated by the appropriate agency.

(2) If necessary, an FOTW can impose limitations more stringent than the categorical pretreatment standards on industrial activities which discharge to it, in order to prevent interference with treatment plant operations, to prevent pass-through of pollutants to receiving waters, to prevent sewage sludge contamination, to prevent workers from being exposed to health hazards, and to prevent a violation of the FOTW's NPDES permit. The repeated inability of an FOTW to meet its discharge permit limits, due to an industrial activity's failure to pretreat its waste, can result in enforcement actions against both the FOTW and the industrial activity.

(3) Industrial activities discharging to an FOTW will notify the FOTW operator of any substantial change in quantity or type of pollutants discharged and of any spills, releases, or slug discharges of any substance which could adversely impact the FOTW, its personnel, or the effluent discharged from the treatment works.

(4) FOTW's discharging to United States waters must be designed, constructed, operated, and maintained to comply with all effluent limitations as prescribed by discharge permits.

e. Discharge to POTW's

(1) Discharges to a POTW must meet all applicable general and categorical pretreatment standards. After the effective date of any new pretreatment standards for toxic substances, affected sources must comply within the timeframe designated by the permitting authority.

(2) A POTW controls discharges received from Marine Corps installations or activities through local ordinances, sewer use

contracts, and/or discharge permits. These control mechanisms often require the user to monitor its industrial discharges into the sewer, to pretreat certain categories of wastes, to notify the treatment plant of substantial changes to the quantity or quality of the influent, and to take other administrative or procedural actions as necessary.

(3) Dischargers to a POTW usually pay user fees commensurate with the waste load contributed. New sources to such systems may also be required to share in the capital costs for increasing the capacity of the POTW's collection, treatment, and disposal facilities.

(4) Under the CWA, states have established certain areas for which a regional approach to wastewater treatment is necessary. Such areas have developed section 208 management plans that detail collection and treatment works requirements, timetables for accomplishment of the plan, and requirements for individual participants. Since approved plans are binding on Marine Corps installations within the region, it is imperative that close liaison be established with these planning organizations.

f. Hazardous Pollutant Discharges

(1) In 40 CFR 116, the EPA identifies a list of HS's regulated under the CWA. Title 40 CFR 117 presents the reportable quantities for releases of these HS's. Chapter 9 discusses prevention of HS discharges that may result from accidental spills on land or into waters of the United States.

(2) A POTW which has an NPDES permit is deemed to have a RCRA permit (Permit by rule, 40 CFR 270.60(c)), and it may accept HW for treatment, provided that certain recording, manifesting, and reporting criteria are met. POTW's are prohibited from treating a HW by section 3023(b) of the FWPCA.

(3) POTW's have a "domestic sewage exclusion" (40 CFR 261.4(a)(1)) that allows domestic sewage and other wastes, even HW's, that pass through the POTW to be excluded from the definition of a solid waste and thus are exempt from RCRA regulation. POTW's have a similar but conditional "domestic sewage exclusion" (FWPCA section 3023(a)(1-4)), which would allow a waste, even if originally hazardous, to pass through the POTW and escape RCRA regulation if it has first been processed at a separate wastewater treatment unit (40 CFR 260.10(120)) to meet the applicable industrial categorical pretreatment standards of

40 CFR 405-471. The FFCA excluded solid or dissolved wastes which meet one of the following conditions:

- (a) Those subject to a pretreatment standard promulgated in subchapter N (40 CFR 405 through 471) for which the source is in compliance.
- (b) Those covered under a pretreatment standard which the EPA is scheduled to promulgate by 1999.
- (c) Those not prohibited from land disposal because they have been pretreated in accordance with RCRA section 3004(m).
- (d) Those originating from a location which generates less than 100 kilograms of HW per month.

g. Stormwater Discharges

(1) The 1987 CWA amendments established greater regulation of stormwater discharges; the implementing regulations in 40 CFR 122.26 became effective in December 1990. Stormwater discharges from a point source are subject to NPDES permitting if the discharges are associated with industrial activity or are specifically identified as contributing to a violation of water quality standards. The regulations require an NPDES permit for such stormwater discharges made directly to receiving waters or to a municipal storm sewer that is separate from the municipal sanitary sewer. The regulations exclude discharges of stormwater to a combined sewer system or to a POTW.

(2) Applications for an NPDES stormwater permit can be submitted either through the individual permit application process or through a general permit. Installations should coordinate with regional EPA offices and cognizant state regulatory agencies to access the applicability of general or individual permit procedures.

(a) Operators of facilities with stormwater discharges associated with industrial activity which do not obtain coverage under a general permit or which are not eligible for a general permit must submit an individual permit application. The information required for an individual application includes a site drainage map, a narrative description of the site that identifies potential pollutant sources, and quantitative testing data. Stormwater discharges that cannot be authorized by general permits include those:

- 1 With existing effluent guideline limitations for stormwater;
- 2 With an existing NPDES individual or general permit for stormwater discharges; or
- 3 Which are, or may reasonably be expected to be, contributing to a violation of a water quality standard.

(b) Title 40 CFR 122.26(c) specifies the EPA's individual stormwater permit application procedures and information requirements. Applications must be submitted 180 days before the discharge begins or 90 days before the construction activity is due to begin. State regulations generally parallel those of the EPA in requiring that a permit application be filed with the appropriate permitting authority.

(c) General permits are intended to cover the majority of stormwater discharges associated with industrial activity. Dischargers seeking to be covered by a general permit must file a Notice of Intent (NOI) with the appropriate permitting authority. The NOI requirements for the general permit usually address only general information and typically do not require the collection of monitoring data. Title 40 CFR 122.28 provides information regarding general permit NOI filing requirements. The EPA published its final NPDES stormwater multi-sector general permit for industrial activities in the September 29, 1995, Federal Register.

(3) Industrial activities and facilities which can contaminate stormwater and to which these regulations apply may occur on Marine Corps installations. These activities and facilities include HW treatment, storage, and disposal facilities; scrap and waste material processing and recycling facilities; landfills; sewage sludge land application sites; petroleum bulk oil stations and terminals; airfields; wastewater treatment plants with a design capacity of one million gallons per day or greater; and construction activities.

(4) Installations discharging to a separate municipal storm sewer system serving a population of 100,000 or more must submit notification information to the operator of the municipal storm sewer system.

(5) In general, the EPA and state stormwater discharge permit regulations require the permittee to:

(a) File a permit application or NOI.

(b) Determine if any nonstormwater discharges occur. Certain nonstormwater discharges are authorized, such as water from fire fighting activities, hydrant flushing, street cleaning, air-conditioning and compressor condensates, and lawn watering. For other nonstormwaters, the discharger must develop a list of illicit discharges discovered and submit it to the regulatory agency. The agency determines which discharges may be permitted and under what conditions. Any discharges that cannot be permitted must be eliminated. Coordination with Federal and state regulatory agencies is essential to determine applicable requirements.

(c) Prepare and implement a stormwater pollution prevention plan (SWPPP). The plan's objectives should be to identify pollution sources potentially affecting stormwater discharge quality and to describe and implement practices to minimize and control pollutants from the industrial facility. The process for developing an SWPPP includes the following four steps: 1) formation of a qualified pollution prevention team; 2) assessment of potential stormwater pollution sources; 3) selection and implementation of appropriate BMP's and controls; and 4) periodic examination of the plan's effectiveness. Further information is provided in the EPA publication Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices. Chapter 15 of this Manual provides additional information regarding general pollution prevention.

(d) As required by the permit, monitor the discharges, report the results to the permitting authority, and maintain required records.

(e) Comply with any effluent limits placed within the permit.

(6) The EPA's Guidance Manual for the Preparation of NPDES Permit Applications for Stormwater Discharges Associated with Industrial Activity (EPA-505/8-91-002) provides an overview of the permitting process and information regarding the permit application requirements.

#### h. Waste Disposal Sites

(1) Collected stormwater runoff from waste disposal sites, such as landfills, sewage sludge monofills, and land

application sites, is regulated under an NPDES permit as noted in paragraph 20104.3(f).

(2) Leachate from waste disposal sites must be tested for the hazardous characteristics listed in 40 CFR 261 to determine which disposal method can be used. Landfill leachates have been found to contain high concentrations of toxic organic compounds, metals, and conventional and nonconventional pollutants.

(a) Hazardous leachate must be treated or disposed of in accordance with requirements specified for HW (see chapter 10 of this Manual).

(b) Nonhazardous leachate from waste disposal sites may need to be pretreated prior to discharge to an FOTW or a POTW. Direct discharges of nonhazardous leachate to receiving waters must be permitted under the NPDES. The EPA will propose effluent guidelines and pretreatment for the landfill leachate and incinerator category (40 CFR 437) in 1997. Until those standards are promulgated, the general pretreatment standards (40 CFR 403) apply to leachate discharged to an FOTW or a POTW. The permitting authority will develop treatment and permit requirements for leachate discharged to receiving waters depending upon the quantity and nature of the leachate and its potential impact on the environment.

i. Non-NPDES Discharge Permits

(1) Sanitary and industrial wastewaters and stormwater may be disposed of in a nondischarging manner. Examples of such instances are evaporation/transpiration ponds, leach fields, spreading basins, and land application systems.

(2) Such discharges are not regulated under the NPDES program, but are normally regulated under a state permit program, such as California's "Waste Discharge Requirements." These state permits usually contain limitations and conditions similar to those in NPDES permits, such as monitoring, reporting, and recordkeeping requirements, flow restrictions, pollutant limits, etc. Noncompliance with these state permit conditions is subject to enforcement action by the permitting authority.

3. NPS Control

a. Regulatory Citation. The EPA regulations in 40 CFR 130 specify requirements for NPS management programs. These regulations incorporate CWA section 208 requirements for

development of area-wide waste treatment management plans. They also include CWA section 319 requirements for states to establish NPS pollution management programs through WQM plans.

b. State WQM Plan. The plan must describe the nonregulatory and regulatory programs, activities, and BMP's selected to control NPS pollution where necessary to protect or achieve approved water body uses. The plan must identify BMP's to be employed to reduce specific types of NPS pollution, identify programs to implement the BMP's, develop a schedule with annual milestones for implementing the BMP's, certify that the state has adequate legal authority for administering and enforcing the program, and identify sources of assistance and funding.

c. Contributors to NPS Pollution

(1) Most NPS pollution results from unchannelled runoff of stormwater, snowmelt, or irrigation. This runoff picks up contaminants from tilled land, urban and suburban areas, construction sites, timber harvest areas, mine drainage, and other disturbed areas.

(2) Aboard Marine Corps installations, nonpoint sources include agricultural, silvicultural, and grazing operations (including outleaves), firing and training range operations, construction sites, industrial activities without discrete point source conveyances, parking lot and roof runoff, and runoff from lawn maintenance activities, such as fertilizer and herbicide applications, in residential and other garrison areas.

d. Discharge Permits. The EPA and the states do not require discharge permits for nonpoint sources of pollution.

e. BMP's

(1) Where required by states, installations must implement BMP's to control NPS pollution. If not required, installations should implement BMP's as resources allow.

(2) BMP's which can be implemented to reduce NPS pollution include, but are not limited to, the following:

(a) Pollution prevention, such as performing maintenance and storing materials under cover;

(b) Wet and dry stormwater detention and retention ponds with sedimentation manholes and inverted elbows to trap sediments and floatable items;

(c) Constructed wetlands;

(d) Grassed swales;

(e) Forest buffers from 50 to 100 feet wide along streams; and

(f) Fabric screens and hay bales at construction sites to reduce erosion and trap sediments prior to discharge.

f. Waste Disposal Sites

(1) To prevent surface water contamination, 40 CFR 258.25 requires that runoff from the active portion of the landfill unit not cause a discharge of pollutants into waters of the United States, including wetlands, which violates any requirements of the CWA, including NPDES requirements.

(2) Similarly, 40 CFR 258.27(b) prohibits any discharge of a nonpoint source of pollution to waters of the United States, including wetlands, which violates any requirement of an area-wide or state-wide WQM plan that has been approved under CWA section 208 or 319.

(3) If stormwater runoff and uncontrolled leachate discharges to surface waters occur, they must be controlled by an NPDES permit.

g. Reference. The EPA Seminar Publication entitled Nonpoint Source \Watershed Workshop (EPA/625/4-91/027) provides in-depth information for developing and implementing nonpoint source pollution control projects.

4. Septage Treatment and Disposal

a. Regulatory Citations

(1) The EPA regulations define domestic septage as "either liquid or solid material removed from a septic tank, cesspool, portable toilet, type III marine sanitation device, or similar treatment works that receives only domestic sewage." Septage that does not meet this definition must be handled and disposed of per 40 CFR 257.

(2) Septage which is land applied must meet the requirements in 40 CFR 503.

b. Septic Tank Management. The EPA regulations for UIC in 40 CFR 146 apply to septic tanks and cesspools which are class V wells by virtue of their drain fields. They contain requirements for construction, operating, monitoring, and reporting.

c. References

(1) The EPA publication entitled Guide to Septage and Disposal (EPA/625/R-94/002) provides concise, practical information on septic tank management and the handling, treatment, and disposal of septage.

(2) The EPA Handbook on Septage and Disposal (EPA-625/6-84-009) presents a review of available design, performance, operation and maintenance, cost, and energy information pertaining to receiving, treatment, and disposal of septage.

5. Groundwater Protection

a. General. Another goal of programs which regulate point and nonpoint sources of water pollution is to prevent groundwater contamination from those sources. Specifically, the WQM plans, UIC program, and WHP program ensure that groundwater sources for drinking water are protected from contamination. Chapter 18 of this Manual provides information regarding groundwater protection requirements applicable to underground storage tanks (UST).

b. State WQM Plans

(1) State WQM plans identify and develop programs to control groundwater pollution resulting from disposal of pollutants on land or in subsurface excavations. States can require installations to monitor groundwater around landfills, leaking UST sites, firing ranges, wastewater oxidation and percolation ponds, septic tank leach fields, fire training pits which use waste fuel, HW storage sites, etc.

(2) States may issue Non-NPDES-discharge permits with pollutant limits intended to protect underlying aquifers from contaminants contained in the discharge using the state WQM plan as the basis for the permit limitations.

c. UIC Program

(1) Title 40 CFR 144 - 148 contains the UIC program regulations. Chapter 16 of this Manual summarizes these regulations and highlights important requirements.

(2) Installations must pay special attention to class V wells, which include certain septic system wells and cesspools, stormwater drainage wells, and dry wells used for waste disposal. To continue to operate these wells under the permit by rule, the installation must submit to the permitting authority an inventory of all wells located on the installation. Improperly managed wells can contaminate groundwater used by the installation for its drinking water supplies.

d. WHP Program

(1) This locally administered program protects community drinking water wells and well fields from contamination sources. Chapter 16 summarizes these regulations and highlights important requirements.

(2) An installation which derives its potable water from on-base wells should survey its agricultural, commercial, industrial, residential, and other activities to identify and locate operations with the potential to release pollutants into the underlying groundwater.

e. References

(1) The EPA Technical Assistance Document, A Review of Sources of Groundwater Contamination from Light Industry (EPA 440/6-90-005), addresses the potential impacts of contamination from light industrial activities on WHP areas. Light industry sectors covered by this document and found at Marine Corps installations include metal products and machinery, scrap material recycling, transportation equipment maintenance, automotive and truck repair, and highway de-icing.

(2) The EPA document, A Groundwater Information Tracking System with Statistical Analysis Capability (EPA/625/11-91/002), provides software and instructions to implement a comprehensive database system designed to store, analyze, and report data generated during groundwater monitoring programs required by RCRA, CERCLA, and the SDWA.

6. Sewage Sludge Use or Disposal

a. Regulatory Citations

(1) The EPA regulations in 40 CFR 268 provide standards for the land disposal of sewage sludge determined to be hazardous under 40 CFR 261.

(2) The EPA regulations in 40 CFR 258 provide the requirements for disposal of sewage sludge in a municipal solid waste landfill.

(3) The EPA regulations in 40 CFR 240 provide the requirements under which sewage sludge may be co-fired in an incinerator with other wastes.

(4) The EPA regulations in 40 CFR 503 provide the standards for the use and disposal of nonhazardous sewage sludge. These standards apply to the following:

(a) Any installation which prepares sewage sludge, applies sewage sludge to land, or fires it in a sewage sludge incinerator, and to the owner/operator of a surface disposal site;

(b) Any sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator;

(c) The exit gas from a sewage sludge incinerator stack; and

(d) The land where sewage sludge is applied, a surface disposal site, and a sewage sludge incinerator.

(5) The EPA regulations in 40 CFR 257 provide the standards for the disposal of nonhazardous sewage sludge on land when the sewage sludge is not disposed through a practice regulated under 40 CFR 503.

b. Permit Requirements

(1) An FOTW, which is classified under 40 CFR 122.2 as a "treatment works treating domestic sewage," must submit an NPDES permit application to comply with the provisions of 40 CFR 503. The application must be submitted to the appropriate permitting authority (either the EPA, or the state, if it has an EPA-approved sludge management program).

(2) For the operation of a sewage sludge incinerator, a Clean Air Act permit application must be submitted to the appropriate permitting authority.

c. Land Application Requirements

(1) Land application includes the spraying or spreading of sewage sludge onto the land surface, the injection of sewage sludge below the land surface, or the incorporation of sewage sludge into the soil so that it can condition the soil or fertilize crops or vegetation.

(2) Marine Corps installations which apply bulk sewage sludge to the land, prepare sewage sludge for application to land off site, sell or give away sewage sludge or a sewage sludge-derived product in a bag or other container, or apply domestic septage to the land must comply with the requirements in 40 CFR 503, subpart E. These requirements include adherence to pollutant ceiling concentrations, cumulative and annual pollutant loading rates, and monthly average pollutant concentrations; management practices; operational standards for pathogens and vector attraction reduction; and monitoring, recordkeeping, and reporting, depending on the quality of the sludge.

d. Surface Disposal

(1) Surface disposal involves the disposal of sewage sludge in an active sewage sludge unit. It does not include the treatment or storage of sewage sludge on land in preparation for ultimate use or disposal.

(2) If the same sewage sludge is stored at a site for more than 2 years, the permitting authority can determine that the storage site has become an active sewage sludge unit unless the installation can explain extenuating circumstances for delaying disposal.

(3) Marine Corps installations which dispose of sewage sludge at an active sewage sludge unit must comply with the requirements in 40 CFR 503, subpart C. These requirements include proper location of an active sewage sludge unit; submission of closure and post closure plans 180 days prior to closure of the unit; sewage sludge pollutant concentrations; management practices; operational standards for pathogens and vector attraction reduction; and monitoring, recordkeeping, and reporting.

e. Pathogens and Vector Attraction Reduction. The EPA regulations in 40 CFR 503, subpart D, provide the following requirements for pathogen and vector attraction reduction in sewage sludge:

(1) Class A pathogen control requirements for application of bulk sewage sludge to a lawn or garden or when sewage sludge is sold or given away in a bag or other container.

(2) Either class A requirements or class B requirements with appropriate site restrictions for application of bulk sewage sludge to agricultural land, forest land, a public contact site, or a reclamation site or for disposal in an active sewage sludge unit.

(3) Appropriate pH treatment and/or site restrictions when domestic septage is applied to agricultural or forest land or a reclamation site.

(4) At least one of the appropriate vector attraction reduction requirements in 40 CFR 503.33 for all forms of land application or disposal of sewage sludge or domestic septage.

f. Incineration

(1) Marine Corps installations which fire sewage sludge in a sewage sludge incinerator must comply with the requirements in 40 CFR 503, subpart E. These requirements include adherence to National Emission Standards for beryllium and mercury in 40 CFR 61, subparts C and E, respectively; pollutant limits for arsenic, cadmium, chromium, lead, and nickel as calculated by the appropriate equations in 40 CFR 503.43; operational standards for total hydrocarbons or carbon monoxide; management practices; and monitoring, recordkeeping, and reporting.

(2) Compliance with pathogen and vector attraction reduction requirements is not required for facilities which fire sewage sludge in a sewage sludge incinerator.

7. Dredge and Fill Operations

a. Permits

(1) Installations which intend to construct a dam, dike, dock, pier, or other structure, or to dredge, fill, or otherwise alter or modify navigable waters or wetlands must apply to the COE district engineer or authorized state agency for an

individual permit, unless the discharge is allowed under a nationwide or regional general permit.

(2) The EPA and COE regulations in 40 CFR 230 and 33 CFR 320, respectively, explain the basis of the dredge and fill permit system:

(a) 33 CFR 321 explain regulations for a COE permit to construct a dam or dike.

(b) 33 CFR 322 contains regulations for a COE permit to construct a structure in, or one that will affect, waters of the United States.

(c) 33 CFR 323 sets forth regulations for a COE permit to discharge dredged or fill material in waters of the United States.

(d) 33 CFR 325 specifies application requirements for individual COE permits.

(e) 33 CFR 330 contains regulations regarding general nationwide permits.

(f) 40 CFR 233 provides procedures on state permit programs regulated by the EPA for discharge of dredged or fill material.

(3) If the district engineer determines that a water quality certification for the proposed activity is necessary under CWA section 401, the district engineer will inform the installation of this requirement. The installation must obtain a state certificate indicating that the activity complies with applicable state effluent limitations, water quality related effluent limitations and standards, water quality implementation plans, and toxic effluent limitations. If the state includes any monitoring requirements, these must be forwarded to the COE district engineer for consideration with the permit application.

(4) An installation which is located within a state operating under an approved coastal zone management program must ensure that the proposed activity is consistent with the state CZMA management program. If the proposed activity is not consistent with the state CZMA program, the district engineer cannot make a decision on the permit application until the installation and the state have implemented the procedures specified in the CZMA for resolving their disagreements.

(5) The COE and states with EPA-approved dredging control programs may issue a general permit applicable for 5 years to categories of similar actions that will cause minimal environmental effects either singularly or cumulatively. The general permit may be issued on a state, regional, or national basis. Projects covered by a general permit do not require individual permits, although some additional individual requirements, such as revocation or modification for specific activities due to adverse environmental impact, may be applied by the COE or states on a case-by-case basis.

b. Permit Exemptions

(1) Normal agricultural, silvicultural, and ranching activities, such as plowing, cultivating, minor drainage, harvesting, and water conservation practices are exempt from regulation under CWA section 404.

(2) Federal construction projects specifically authorized by Congress for which an Environmental Impact Statement (EIS) has been written and submitted to Congress do not require COE or state permits, as specified in section 404(r) of the CWA.

c. Discharges of Dredged or Fill Material

(1) Discharges of dredged or fill material into waters under COE jurisdiction must comply with Federal regulations and the terms of the individual or general permit issued for that activity.

(2) Discharges into waters under the jurisdiction of states with approved dredging control programs must comply with applicable state permits and discharge regulations, including state fee schedules.

(3) Disposal site selection may entail field sampling and analyses. An elutriate and bioassay test may be required to determine if the proposed dredged materials should be classified as polluted or unpolluted. Other surveys, including site monitoring, may be required at disposal sites before, during, and after discharge of the dredged or fill material.

8. Ocean Disposal

a. Prohibited Disposal. Ocean disposal of other than dredged material, including any materials collected from Marine

Corps installations or units, is prohibited by the MPRSA unless authorized by an EPA permit.

    b.    Permits

1. No permit may be issued for ocean disposal of biological, chemical, and radiological warfare agents, high level radioactive waste, and medical waste.

(2) Under section 102 of the MPRSA, the EPA is the authority for issuing all permits for the transportation from the United States, or for the transportation from Outside the Continental United States Marine Corps installations, of any material for the purpose of dumping it in ocean waters at locations where the EPA Administrator determines such dumping will not unreasonably degrade or endanger human health or the marine environment.

(3) Under section 103 of the MPRSA, the COE is the authority for issuing all permits for the transportation of dredged material that will be disposed of in ocean waters. Installations which intend to transport or contract for the transportation of dredged material for ocean disposal must apply to the COE district engineer for an individual permit. EPA Regional Administrators have the authority to review, to approve or to disapprove, or to propose conditions upon Dredged Material Permits for ocean dumping. The EPA regulations for reviewing these COE permits are specified in 40 CFR 225.

(4) The EPA and COE regulations in 40 CFR 220 and 33 CFR 324, respectively, explain the basis of the ocean disposal permit systems:

(a) The 33 CFR 325 specifies application requirements for individual COE ocean disposal permits.

(b) The 40 CFR 221 contains EPA permit application requirements.

(c) The 40 CFR 222 sets forth EPA regulations pertaining to approval of ocean dumping permit applications.

(d) The 40 CFR 227 provides EPA regulations pertaining to evaluation of permit applications for the ocean dumping of material.

(5) Permit applications must be accompanied by an Environmental Assessment (EA) which includes an examination of the environmental impact criteria set forth in 40 CFR 227, subpart B.

c. Reporting and Recordkeeping. The EPA regulations in 40 CFR 224 require permittees to maintain appropriate records and to submit periodic reports to the EPA Administrator.

9. CZMA Consistency Determinations

a. Regulatory Citation. The National Oceanic and Atmospheric Administration regulations in 15 CFR 930 implement the CZMA. Marine Corps actions affecting the coastal zone must be as consistent as possible with approved state management plans, unless such consistency is prohibited based upon requirements of existing laws applicable to the installation and the mission of the Marine Corps. Actions affecting the coastal zone include those that take place outside the coastal zone but affect any land or water use or natural resource within the coastal zone. Chapter 11 of this Manual provides further information regarding the CZMA and its applicable regulations.

b. Consistency Determination. The consistency determination may employ any format as long as it complies with the requirements contained in 15 CFR 930, subpart C. A consistency determination must be prepared for the following:

- (1) Development projects within the coastal zone (15 CFR 930.33),
- (2) Nondevelopment projects within the coastal zone which may affect the coastal zone, and
- (3) Installation- or unit-sponsored actions taking place outside the coastal zone but which may impact the coastal zone.

20105. TERMS AND DEFINITIONS

1. BMP. Methods, measures, or practices selected by an agency to meet its nonpoint source control needs including, but not limited to, structural and nonstructural controls and operation and maintenance procedures (40 CFR 130).

2. Coastal State. A state of the United States in, or bordering on, the Atlantic, Pacific, or Arctic Ocean, the Gulf of Mexico,

Long Island Sound, or one or more of the Great Lakes. This term also includes Puerto Rico, the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and the Trust Territories of the Pacific Islands, and American Samoa (section 304, CZMA).

3. Coastal Waters. In the Great Lakes area, the waters within the jurisdiction of the United States consisting of the Great Lakes, their connecting waters, harbors, roadsteads, and estuary-type areas such as bays, shallows, and marshes; in other areas, those waters, adjacent to the shorelines, which contain a measurable quantity or percentage of sea water, including, but not limited to, sounds, bays, lagoons, bayous, ponds, and estuaries (section 304, CZMA).

4. Coastal Zone. The coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the waters therein and thereunder) that strongly influence each other and that remain close to the shorelines of the several coastal states, as well as islands, transitional and intertidal areas, salt marshes, wetlands, and beaches (section 304, CZMA).

5. Designated Uses. Those uses specified in water quality standards for each water body or segment whether or not they are being attained (40 CFR 131). Such uses can include public water supply, contact recreation, noncontact recreation, cold water fishery, warm water fishery, shellfishing, etc.

6. Discharge

a. Under NPDES, the addition of any pollutant or combination of pollutants to waters of the United States from any point source (40 CFR 122).

b. Under OPA, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping, excluding NPDES-permitted discharges identified under section 402 of the CWA (40 CFR 110).

7. Disposal Site. An interim or ultimately approved and precise geographical area within which the dumping of wastes into the ocean is permitted under specified conditions (40 CFR 228).

8. Dredged Material. Material that is excavated or dredged from waters of the United States (33 CFR 323).

9. Dumping. A disposal and discharge of material, which does not include any effluent from any outfall structure, that is

regulated under the provisions of the CWA, under the provisions of section 13 of the Rivers and Harbors Act, or under the provisions of the Atomic Energy Act. Dumping does not mean a routine discharge of effluent incidental to the propulsion of, or operation of motor-driven equipment on, vessels (40 CFR 220).

10. Effluent Limitation. Any restriction imposed by the acting director (EPA Regional Administrator or state NPDES-approved program director, as appropriate) on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean (40 CFR 122).

11. FOTW. A facility that is owned and operated by a department, agency, or instrumentality of the Federal Government, which treats wastewater, a majority of which is domestic sewage, prior to discharge in accordance with a permit issued under section 1342 of the FWPCA.

12. Fill Material. Any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a water body (33 CFR 323).

13. Indirect Discharger. A nondomestic discharger introducing pollutants to a publicly owned treatment works (40 CFR 122). For the purposes of this Manual, an indirect discharger would include any industrial activity which discharges non sanitary wastewater or waste into a MCOTW.

14. IWTP. A wastewater treatment facility that discharges treated industrial effluent directly or indirectly into waters of the United States.

15. Load or Loading. An amount of matter (material) or thermal energy that is introduced into a receiving water. Loading can be either man-caused (pollutant loading) or natural (natural background loading) (40 CFR 130).

16. Material. Matter of any kind or description, including, but not limited to, dredged material; solid waste; incinerator residue; garbage; sewage; sewage sludge; munitions, radiological, chemical, and biological warfare agents; radioactive materials; chemicals; biological and laboratory waste; wrecked or discarded equipment; rock; sand; excavation debris; and industrial, municipal, agricultural, and other waste (40 CFR 220). This term does not include sewage from vessels as defined in section 312 of the CWA.

17. NPDES. The national program for issuing, modifying, revoking, reissuing, terminating, monitoring, and enforcing permits and for imposing and enforcing pretreatment requirements under sections 307, 402, 318, and 405 of the CWA. The term includes approved state, interstate, or tribal programs (40 CFR 122).

18. Nonpoint Source Discharges. Discharges, typically in the form of runoff, that are not conveyed through a single point source. Major operations that result in nonpoint source discharges include agricultural activities, grazing, timber harvesting, construction, range activities, and improper waste disposal practices.

19. Ocean Waters. Waters of the open seas lying seaward of the baseline from which the territorial sea is measured, including the waters of the territorial sea, the contiguous zone, and the oceans (40 CFR 220).

20. Permit

a. Under NPDES, an authorization, license, or equivalent control document issued by the EPA or an approved state to implement the requirements of 40 CFR 122, 123, and 124. Permit includes an NPDES general permit, but does not include any permit which has not yet been the subject of final agency action, such as a draft permit or a proposed permit (40 CFR 122).

b. Under the CWA section 404 program, a written authorization issued by an approved state to implement the requirements of 40 CFR 233, or by the Marine Corps under 33 CFR Parts 320 - 330, which includes general permits, as well as individual permits (40 CFR 232).

21. Point Source. Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, and vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff (40 CFR 122).

22. Pollutant. Dredged spoil, solid waste, incinerator residue, filter backwash, 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. A pollutant is not 1) "sewage from vessels" as defined in section 312 of the CWA or 2) water, gas, or other material that is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well. In this case the well used either to facilitate production or for disposal purposes is one approved by authority of the state in which the well is located; however, the state must determine that such injection or disposal will not result in the degradation of ground or surface water resources (40 CFR 122).

23. Pretreatment. The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or introducing such pollutants into a POTW. The reduction or alteration may be accomplished by physical, chemical, or biological processes, operational process changes, material substitutions, or by other approved means.

24. POTW. Any device or system (including recycling and reclamation) used in the treatment of municipal sewerage or industrial wastes of a liquid nature which is owned by a state or municipality. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment (40 CFR 122).

25. Runoff. Water that drains overland from any part of a facility.

26. Sediment. Solid material, such as clay, gravel, mud, silt, sand, and organic matter that moves from its site of origin and settles to the bottom of a water course or water body.

27. Septage. The liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or from a holding tank when the system is cleaned or maintained (40 CFR 122).

28. Sewage Sludge. Any solid, semisolid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. It includes, but is not limited to, solids removed during primary, secondary, or advanced wastewater treatment; scum, septage, portable toilet pumpings; type III marine sanitation device pumpings; and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during incineration of sewage sludge (40 CFR 122).

29. Sewage Sludge Use or Disposal Practice. The collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge (40 CFR 122).

30. Territorial Sea. The belt of seas measured from the baseline, in accordance with the Convention on the Territorial Sea and the Contiguous Zone (the line of ordinary low water located along the coast that is in direct contact with the open sea and the line marking the seaward limits of inland waters), and extending seaward at a distance of 3 nautical miles (40 CFR 230).

31. Treatment Works Treating Domestic Sewage. A POTW, FOTW, or any other sewage sludge or wastewater treatment device or system, regardless of ownership, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge (40 CFR 122).

32. Toxic Pollutant. Any pollutant listed as toxic under section 307(a)(1) of the CWA or, in the case of sludge use or disposal practices, any pollutant identified in regulations implementing section 405(d) of the CWA (40 CFR 122). Toxic pollutants include those that have been determined by the EPA as causing death, disease, behavioral abnormalities, cancer, genetic mutations, physical deformities, or physiological malfunctions.

33. Underground Injection. A well injection which consists of the subsurface emplacement of fluids through a bored, drilled, or driven well, or through a dug well, where the depth of the well dug is greater than the largest surface dimension (40 CFR 144).

34. Wasteload Allocation. The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution (40 CFR 130).

35. Water Quality Standards. Provisions of state or Federal law which consist of a designated use or uses for the waters of the United States, and water quality criteria for such waters based upon such uses (40 CFR 130).

36. Waters of the United States. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, perennial and intermittent streams,

mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. The use, degradation, or destruction of these waters could affect interstate or foreign commerce, including waters used for recreational, industrial, or other purposes (e.g., fishing, harvesting shellfish, etc.); impoundments of waters otherwise defined herein; tributaries of waters identified above; the territorial seas; and wetlands adjacent to waters identified above (33 CFR 328).

37. Whole Effluent Toxicity. The aggregate toxic effect of an effluent measured directly by a toxicity test (40 CFR 122). Toxicity tests can be conducted to measure "acute" and "chronic" toxic effects.



ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

CHAPTER 20

WATER QUALITY MANAGEMENT

SECTION 2: MARINE CORPS POLICY

20200. GENERAL

1. Marine Corps installations in the United States will comply with all substantive and procedural WQM regulations established by the EPA or those states that have been granted primary enforcement responsibility.
2. Marine Corps installations within foreign countries will comply with the applicable Final Governing Standards (FGS)/Japan Environmental Governing Standards or the Overseas Environmental Baseline Guidance Document if no FGS has been published.

20201. POINT SOURCE CONTROL

1. Marine Corps policy directs the reduction or elimination of wastewater treatment and disposal needs through a pollution prevention program. This program should examine and implement wastewater volume and pollutant reductions through process changes, materials substitution, cooling water recycling, water conservation practices and equipment, wastewater reclamation and reuse, and wastewater collection system maintenance and renovation to decrease groundwater infiltration and stormwater inflow. Ensure that the environmental management hierarchy (EMH) is employed, pollution prevention alternatives evaluated, and life-cycle cost impacts assessed, in evaluating and selecting projects that address compliance requirements. The Pollution Prevention Act establishes the following order of preference for the EMH:
  - a. Source reduction,
  - b. Recycling,
  - c. Treatment, and
  - d. Disposal.
2. The use of a regional or municipal POTW will be the preferred method for wastewater collection, treatment, and disposal

whenever an analysis of life-cycle costs and environmental impacts indicates that the use of a POTW is more economical and environmentally beneficial than constructing/upgrading and operating an FOTW. Economic components used in the analysis should include any capital cost contributions to the POTW for a prorated share of system capacity; continuing user fees and surcharges; pretreatment costs; and FOTW capital; operation and maintenance costs, including expenses for permit fees, monitoring, utilities, equipment repair and replacement; solids handling and disposal; chemical usage; and personnel staffing, training, and certification. The environmental analysis should include surface and groundwater quality and quantity issues, threatened and endangered species impacts, and archaeological, cultural, and natural resources issues.

3. The installation and operation of Marine Corps owned wastewater treatment and disposal facilities are authorized whenever a municipal system or other alternatives are not available or cost-effective.

4. The Marine Corps encourages wastewater reclamation for reuse; this option should be studied during planning for the construction of new wastewater facilities or for renovation, expansion, or the upgrading of existing facilities. Reuse options pertain to industrial wastewater recycling, aquifer recharge, constructed wetlands, wildlife habitat mitigation or enhancement; and to the irrigation of parade decks, athletic fields, golf courses, forests and tree lines, and garrison and residential landscaping; and to outleased areas used for agriculture, silviculture, or grazing.

5. Job descriptions for Marine Corps wastewater treatment plant and collection system operators must require a state certification, or license, or the ability to obtain and maintain a certification or license as a condition of employment at all facilities where state certification requirements apply, as stipulated in the Federal Personnel Manual (Supplement 271-1, subchapters 3-4, "License and Credentials").

6. The CMC (LF) supports funding for annual refresher training for all plant and collection system operators, especially for safety-related courses. Training sources include the EPA, state environmental and health departments, local colleges and universities, extension courses, and private firms.

7. Marine Corps laboratories which perform wastewater and stormwater analyses as required in permit monitoring conditions

must be certified under applicable regulations of the Federal, state, or local permitting authority, if required. Appropriate chain of custody procedures will be used to track samples collected for analysis. The 40 CFR 136 contains EPA test procedures for analyzing water pollutants.

20202. NONPOINT SOURCE CONTROL

1. Marine Corps installations must implement BMP's to control nonpoint source pollution.
2. Stormwater from military construction projects that increase impervious surfaces must be managed in accordance with state regulations and engineering practices that manage the quantity and quality of stormwater runoff.
3. Lease terms for agricultural, silvicultural, and grazing operations will include requirements for implementing BMP's for pesticide, fertilizer, and erosion controls to reduce contaminated runoff.

20203. SEPTAGE TREATMENT AND DISPOSAL

1. Marine Corps installations with septic tanks will ensure that these tanks do not contaminate adjacent surface waters or groundwaters.
2. A periodic inspection program must be developed to determine when pumping is required and if any structural defects, such as broken baffles or cracked pipes, exist. The recommended frequency is every 4 to 5 years.
3. Marine Corps installations may select their own preferred method of septage disposal. If land disposal is selected, the installation or its contractor must adhere to the requirements in 40 CFR 503.

20204. GROUNDWATER PROTECTION

1. Underground injection of wastes will be used only as a last resort at Marine Corps installations after all other disposal alternatives have been considered and rejected as unfeasible. Any underground injection well, including those within class V,

will be operated in compliance with the UIC program and applicable permits.

2. Marine Corps installations will inventory all class V wells to determine whether pollutants are discharged into underlying aquifers. Class V wells include certain septic system wells and cesspools, stormwater drainage wells, and dry wells used for waste disposal, such as those found in motor pools.

20205. SEWAGE SLUDGE USE AND DISPOSAL

1. The preferred method of sewage sludge disposal is the beneficial use at land application sites, as regulated under 40 CFR 503. This method requires the effective pretreatment of industrial wastes, including proper management of oil/water separators, to prevent contamination of sewage sludge. An effective monitoring program is also necessary to ensure compliance with subpart B requirements.

2. If sewage sludge is transported off site for disposal, the installation will ensure that the disposal agent acts in accordance with applicable regulations and permits.

20206. DREDGE AND FILL OPERATIONS

1. Marine Corps installations proposing to undertake any action requiring a COE permit must apply to the COE District Engineer for the district in which the proposed activity is to be conducted. The installation may request assistance from the cognizant Naval Facilities Engineering Command Engineering Field Division/Activity (EFD/EFA) in preparing and submitting the permit application. Applications for COE permits are normally initiated by the EFD/EFA at the 35 percent design stage. Whenever a potential requirement for a COE permit under this section is identified, initiate consultation with the CMC (LF).

2. A National Environmental Policy Act (NEPA) analysis must be conducted for any actions that will require an individual permit for dredge and fill activities or the loss of wetlands. Because this process is complex and lengthy, it must be initiated well in advance of developing and filing the permit applications. Further information on the NEPA process is provided in chapter 12 of this Manual.

3. COE permits are required by Marine Corps installations for the following actions:
  - a. The construction of a dam or dike (33 CFR 321);
  - b. The construction of a structure in, or one that will affect, waters of the United States (33 CFR 322);
  - c. Dredging projects for navigation to enhance morale, welfare, and recreational activities (33 CFR 322);
  - d. The discharge of dredged or fill material into the navigable waters of the United States, including wetlands (33 CFR 323); and
  - e. The transportation of dredged material for dumping in ocean waters (33 CFR 323).
4. Existing disposal sites, approved by the COE, should be used wherever possible. Proposed new disposal sites should be identified and reported to the cognizant COE district engineer for evaluation and approval 2 to 3 years before project initiation.
5. If a land disposal site is proposed, consideration must be given to the liquid runoff and leaching potential of undesirable chemical constituents and to any NPDES-permit requirements. Requests for revalidation of existing permits for maintenance dredging and disposal must be received by the COE at least 6 months prior to expiration of the permit.
6. A permit for maintenance dredging will include an expiration date that will not extend more than 10 years from the issue date. A request for renewal from the COE must be filed with the cognizant District Engineer at least 1 year before expiration.
7. The COE or the supporting EFD/EFA may be requested, on a cost-reimbursable basis, to prepare or assist in the preparation of an EA/EIS for projects requiring a COE permit.
8. Early planning for dredge spoil disposal site selection, preparation, and use is essential to avoid unnecessary costs and delays.

20207. OCEAN DUMPING. Except in emergency situations (e.g., jet fuel dumped from aircraft in an emergency situation to safeguard life), ocean dumping may be authorized only on a case-by-case basis by the EPA. Requests for such authorization must be accompanied by an EA (see chapter 12). Full compliance with EPA regulations (40 CFR 220-229) is required.

20208. COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY DETERMINATIONS. Marine Corps installations must review proposed actions to identify those that directly affect the coastal zone. For all activities affecting the coastal zone, provide a consistency determination to the appropriate state agency at least 90 days prior to final approval for the activity.

ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

CHAPTER 20

WATER QUALITY MANAGEMENT

SECTION 3: RESPONSIBILITIES

20300. CMC (LF)

1. Provide information and advice to installation commanders and tenants regarding proposed and final rules and regulations pertaining to WQM and uniformly apply Marine Corps policy as set forth in the Manual.
2. Assist installations in resolving disputes with Federal, state, local, and foreign regulatory agencies as required.
3. Conduct special environmental compliance and protection studies with regard to water quality management to assist in establishing policy or initiating actions.
4. Ensure, through field visits and the Environmental Compliance Evaluation Program, Marine Corps cooperation and compliance with Federal, state, and local regulatory agencies with regard to water quality regulations.
5. Track Marine Corps progress toward meeting established water quality goals.

20301. CG/CO OF MARINE CORPS INSTALLATIONS AND COMMANDER MARINE FORCES RESERVE (COMMARFORRES)

1. Identify and submit to the CMC (LFL) and the CMC (LFF) project documentation and funding requests for water quality management facilities that are required to maintain compliance with applicable existing and emerging regulations and permits. Program and budget for personnel, equipment, materials, training, and monitoring required to comply with water quality management requirements. Pay appropriate Federal, state, and local fees. Ensure that the EMH is employed, pollution prevention alternatives evaluated, and life-cycle cost impacts assessed, in evaluating and selecting projects that address compliance requirements.

2. Ensure that all required Federal, state, and local permits are applied for and obtained. Sign certifications and permit applications, as required, for construction of all water quality management projects.
3. Ensure that a base or station order is written to implement the specifications of this chapter. This requirement can be accomplished either by writing a comprehensive base order to implement all of this Manual, or by writing a separate base order to implement the contents of this chapter alone.
4. Identify and submit to the CMC (LFL) and (LFF) project documentation and funding requests for wastewater sources, collection systems, and treatment facilities that are required to maintain compliance with applicable existing and emerging regulations and permits. Program and budget for personnel, equipment, materials, training, and monitoring required to comply with wastewater treatment requirements.
5. Ensure that all required Federal, state, and local permits are applied for and obtained. Sign certifications and permit applications, as required, for construction of all wastewater treatment projects.
6. Identify applicable effluent limitations, new toxic pollutant effluent standards, pretreatment standards, wastewater discharge problems associated with solid waste disposal sites, and nonpoint source requirements pursuant to regional plans under section 208 of the CWA.
7. Coordinate the review of all projects for the construction of new or upgraded treatment works with the appropriate EPA, state, and regional offices to ensure early identification of discharge permit conditions and limits, siting restrictions, innovative treatment alternatives, wastewater reclamation criteria, and sewage sludge use or disposal options.
8. Use innovative treatment technology where technically and economically feasible in the designs for the construction of new or the upgrading of existing wastewater treatment plants.
9. Ensure that management programs and controls exist to comply with applicable regulations, permit limits, monitoring, recordkeeping, and reporting requirements for wastewater and stormwater discharges from point and nonpoint sources.

10. Identify training and certification needs for operators of treatment and collection system facilities, and allocate needed resources.
11. Use municipal or regional wastewater collection and disposal systems to the maximum extent feasible.
12. Maintain a liaison with the COE and state or area-wide planning organizations to ensure that Marine Corps interests are considered during regional wastewater treatment planning or to facilitate dredge/fill projects.
13. If responsible for operation of a FOTW:
  - a. Notify the cognizant permitting agency of any changes in wastewater input to the treatment plant that may affect the ability of the plant to comply with applicable requirements.
  - b. Operate and maintain the collection system, treatment works, and effluent discharge facilities to ensure compliance with applicable permit requirements.
14. Provide the resources for monitoring, sampling, and testing, as well as for maintaining and demonstrating compliance with permit and pretreatment requirements; maintain records of all monitoring information.
15. Identify pollution prevention measures, devices, systems, and procedures to reduce the total generation of wastewater volume and pollutants.
16. Ensure that adequate access to wastewater generating and treatment facilities is provided to the EPA, state, and local pollution control authorities for the purpose of waste stream sampling and the inspection of operations and records.
17. Ensure that coordination occurs as appropriate with the Safety Office in matters relating to wastewater discharges, sewage sludge use or disposal, dredge and fill operations and, POL management.

20302

ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

20302. COMMANDERS RESPONSIBLE FOR DISCHARGES TO FEDERALLY OWNED TREATMENT WORKS (FOTW) AND PUBLICLY OWNED TREATMENT WORKS (POTW)

1. Comply with all applicable pretreatment requirements. This includes providing the necessary resources for monitoring, sampling, recordkeeping, and reporting.
2. Implement procedures to notify operators of treatment works receiving Marine Corps discharges of any changes in discharges or of accidental pollutant discharges.

20-46