



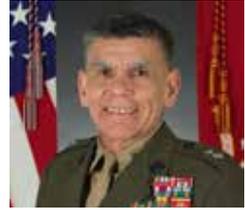
COMMANDER'S GUIDE TO ENVIRONMENTAL MANAGEMENT



UNITED STATES MARINE CORPS

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MARINE CORPS INSTALLATIONS COMMAND ENVIRONMENTAL POLICY STATEMENT

It is Marine Corps policy to comply with all applicable environmental requirements and to protect and sustain our installation natural and cultural resources in support of combat training and operational readiness. Marine Corps installations are key national defense assets which offer a unique and irreplaceable combination of ocean, coastal, riverine, inland, and airspace venues in which to train. Protecting these critical assets through sound environmental management is crucial for their continued and sustained availability for training. I expect our regions and installations to use the Marine Corps Environmental Management System (EMS) to achieve environmental compliance and sustainability goals and continually improve our performance. Our EMS reduces risk to the mission, sustains access to training environments, and protects the health and safety of Marines and their families. As part of the EMS, we commit to:

- Protecting human health and the environment by complying with all applicable environmental legislation, regulations, and policy and cleaning up past environmental contamination
- Conserving the natural, cultural, water, energy, fuel, material, manpower, and financial resources entrusted to us by the American people
- Following sustainable acquisition and procurement strategies and using environmentally preferable products
- Preventing pollution by minimizing waste and emissions, reducing consumption, and increasing recycling
- Completing appropriate reviews of the environmental impacts of Federal actions
- Collaborating with regulatory agencies, and engaging with the public to enhance environmental stewardship and build trust

The long-term viability of Marine Corps installations depends on effectively supporting and enhancing the training support mission while protecting and maintaining human health and the environment. I expect all personnel aboard our installations to support this commitment.

Semper Fidelis,

A handwritten signature in black ink that reads "J. G. Ayala".

Juan G. Ayala

*Major General, U.S. Marine Corps
Commander, Marine Corps Installations Command*



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CHAPTER 1: Environmental Legal and Policy Framework

Environmental laws are generally applicable to the Marine Corps to the same extent as to the general public and hold the Marine Corps Installation Commander accountable for activities conducted on and off the installation. This responsibility extends to all units and tenants that are part of the installation. Unit or tenant Commanders are responsible for all activities within their units and must support the Installation Commander's Environmental Program.

Federal and State agencies may impose significant financial penalties or restrict installation operations due to environmental violations. Most laws also impose criminal liability for willful or knowing violations, and some impose criminal liability for negligence. Installation Commanders can be convicted and/or penalized for wrongful acts committed within their organization, even when they are not direct participants in the act.

Installation Commanders should be familiar with the environmental requirements applicable to base infrastructure and command activities. Environmental requirements are defined in Federal laws and regulations, Executive Orders (EOs), and Department of Defense (DoD), Navy, and Marine Corps policies. Many States and local jurisdictions have their own environmental laws and regulations, some of which are more stringent than the Federal requirements, or require additional monitoring, inspection, or reporting procedures. In general, Marine Corps installations are also subject to these requirements.

MCO P5090.2A, Environmental Compliance and Protection Manual, covers environmental requirements and appropriate responses in detail. For specific information about environmental legal requirements, Installation Commanders should consult their Environmental Office and Legal Counsel/Staff Judge Advocate, and, if necessary, request support from environmental law specialists at the Eastern, Western, and Pacific Area Counsel Offices (EACO, WACO, and PACO). Subject matter experts at MCICOM/HQMC (LF) are also available to assist and advise as needed.



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CHAPTER 2: Environmental Responsibilities

Marine Corps Installation, Tenant, and Unit Commanders, at all levels, are responsible for ensuring environmental compliance within their commands, including training, execution, mitigation, and communication requirements. Commanders are responsible for their actions taken to meet applicable requirements, as well as outcomes resulting from inaction.



- **Installation Commanders.** Installation Commanders are responsible for overseeing environmental programs at their installation and ensuring that the installation complies with all applicable environmental requirements. Environmental Office staff and Legal Counsel support the Installation Commander in ensuring compliance. Environmental issues can quickly elevate to the highest levels of military and civilian leadership. Ensuring that the chain of command is informed – particularly when regulatory agencies are involved and/or when the issue has regional/national interest – ensures appropriate awareness and prioritization of resources.

ELEMENTS OF A SUCCESSFUL ENVIRONMENTAL PROGRAM

- ▶ Commitment to environmental compliance by the Installation Commander communicated to all installation personnel
- ▶ Knowledge of the environmental component of installation operations
- ▶ Knowledge of the environmental regulatory requirements
- ▶ Up-to-date management procedures
- ▶ Well-trained staff
- ▶ Effective working relationships with regulators
- ▶ Outreach with the local community
- ▶ Commitment to sound environmental stewardship as an aspect of federal leadership

- **Tenant Commanders.** Commanders of tenant organizations operating aboard Marine Corps installations are responsible for participating in the host Installation Commander's environmental programs and ensuring that the tenant command complies with all environmental requirements. The installation Environmental Office is available to assist Tenant Commanders.
- **Unit Commanders.** Unit Commanders are responsible for unit-level environmental performance and compliance with environmental requirements. Unit Commanders are also responsible for ensuring that unit personnel receive required environmental training.
- **Commanders of Marine Corps Activities Overseas.** Unlike installations on U.S. territory, Marine Corps activities overseas are not directly subject to the majority of Federal and State-level environmental requirements, although many DoD, Navy, and Marine Corps policy requirements apply overseas. The DoD Overseas Environmental Baseline Guidance Document (OEBGD) and country-specific Final Governing Standards (FGS) establish requirements for Marine Corps facilities in foreign countries. Commanders of overseas installations should consult with their Environmental Office and Legal Counsel/Staff Judge Advocate for information on country-specific compliance requirements, some of which may be more stringent than those discussed in this Guide. Planning considerations are governed by EO 12114, Environmental Effects Abroad (see Chapter 3 for more details).

COMMUNITY OUTREACH

Commanders are strongly advised to develop and maintain friendly and cooperative relationships with community stakeholders.

Communication, transparency, and trust are cornerstones of successful and enduring community relations and efficient implementation of Marine Corps environmental programs.

Establishing trust and confidence with leaders of local communities and non-governmental organizations (NGOs) helps with delivery of difficult messages and obtaining support and cooperation of stakeholders (e.g., response to a fuel spill that has damaged the environment).

Proactive leadership includes participation in environmental compliance, management, and conservation forums and other public venues. The Marine Corps' commitment to compliance with environmental requirements, as well as the stewardship of local, state, and federal natural and cultural resources has resulted in cooperative working relationships with regulators and a positive public image.





Marine Corps actions and investments that support recovery of endangered and threatened species are particularly recognized and appreciated by stakeholders. Innovative conservation practices, both on- and off-base, have protected the ability to train while also achieving Federal and Marine Corps environmental and conservation goals.

The National Environmental Policy Act of 1969 (NEPA) and other environmental laws and regulations specifically require meaningful public participation in the Federal decision-making process. Effective communication with the public may prevent or resolve potential conflicts.

Citizens usually contact their elected officials for information if they have a complaint or concern about the impact of Marine Corps activities on the community. The importance of public involvement in environmental programs cannot be overemphasized. Negative news coverage, citizen-generated congressional inquiries, and adverse public reaction can be avoided or mitigated when public involvement initiatives are coordinated by the professional communicators at the Public Affairs Office (PAO) and Community Plans and Liaison Office (CPLO). Installations can encourage proactive involvement with local governments and communities to minimize effects of adverse public opinion by:

- Establishing a proactive public involvement and information program to provide citizens with accurate information they may otherwise seek from elected representatives;

PUBLIC COMMUNICATIONS

The Public Affairs Office (PAO) should be the single source of information provided to the media. The Community Plans and Liaison Office (CPLO) and/or the Regional Environmental Coordinator (REC) should interact and exchange information with community stakeholders.

- Keeping elected officials informed of key aspects of the installation environmental program, particularly of proposed development actions (e.g., MILCON) or off-base training operations that could have effects on the environment; and
- Seeking opportunities to partner with local communities on events such as Earth Day or local clean-up efforts.

TRAINING AND EDUCATION

Environmental requirements impact nearly every Marine Corps occupational field, military occupational specialty, and operation. The Marine Corps Comprehensive Environmental Training and Education Program (CETEP) supports full compliance with environmental requirements, pollution prevention goals, and Environmental Management System (EMS) objectives by analyzing environmental training needs and integrating and executing professional development initiatives and training. CETEP's primary goal is to ensure that appropriate high quality environmental training and information are provided in the most efficient and effective manner, ensuring 100% of personnel are trained on and qualified for their environmental responsibilities.

TRAINING METHODS

- ▶ On-the-job training
- ▶ Turnover folders and SOPs that address environmental requirements
- ▶ Emergency plans and exercises
- ▶ Environmental awareness training for non-environmental staff
- ▶ Leadership education
- ▶ Web-based and classroom training

The Marine Corps has established environmental training managers (CETEP Coordinators) at each installation who are responsible for developing, executing,



and overseeing training. Ultimately, commanders at all levels are responsible for ensuring all Marines and civilian employees under their command meet their environmental and personal safety training requirements.

FUNDING PROCESS AND FINANCIAL REPORTING

Commanders must plan and program for environmental compliance, pollution prevention, restoration, and conservation costs. Commanders must also ensure that funding budgeted for environmental activities is executed to carry out required environmental activities. The Marine Corps developed and implemented a detailed process to identify, request, and track funding necessary to meet environmental requirements. Environmental management requirements are funded through two types of Operation and Maintenance, Marine Corps (O&M, MC) accounts managed by MCICOM/HQMC (LF):

- Base Operating Support Funds (OPBUD) are local funds for requirements that are foreseeable, routine, and easily estimated and budgeted. Installations must include environmental operating costs in their annual base operating budgets. Environmental OPBUD costs include civilian salaries, permits, fees, hazardous waste disposal, sampling, monitoring, analysis, training, travel, maintenance, supplies, equipment, materials, and other recurring costs. OPBUD funds also support locally-approved repair and construction projects with associated environmental drivers that fall within an installation's local funding threshold. These funds are advocated and validated by MCICOM/HQMC (LF).
- The Centrally-Managed Environmental Program (CMEP) Funds are administered by MCICOM /HQMC (LF) and provide funding for Environmental Projects and other Environmental Management requirements. The Environmental Projects Program (CMP10) funds environmentally-driven, Headquarters-approved repair and minor construction projects that exceed an installation's funding threshold and fall within Headquarters Facilities, Sustainment, Restoration and Modernization (FSRM) funding authority levels. The Environmental Management Program (CMP22) provides funding for all other non-recurring environmental requirements to include Marine Corps-wide environmental initiatives such as the Environmental Compliance Evaluation (ECE) Program.

MCICOM/GF-5 tracks and reports funding requirements to the Secretary of Navy, DoD, and Congress. Both OPBUD and CMEP funds must be obligated within the fiscal year in which they are budgeted.

Installations identify requirements and make OPBUD and CMEP funding requests through the Planning, Programming, Budget, and Execution (PPBE) cycle via the Status Tool for Environmental Programs (STEP), the Marine Corps



enterprise tool for PPBE. STEP is a tool to assist with the identification, assessment, validation, documentation, and tracking of all environmental resource requirements. STEP was developed to accurately define project costs, manpower costs and programmatic funding levels necessary to support Marine Corps compliance with all applicable Federal, State, and local laws and regulations; Executive Orders; and applicable international and overseas requirements. The tool promotes planning, programming, budgeting, and program execution at a detailed project level as well as at the programmatic level.

Commanders should also be familiar with other Marine Corps environmental funding sources, including:

- Military Construction funds, which require congressional approval and are used for construction projects that exceed HQMC FSRM funding authority levels.
- The Environmental Restoration, Navy account, which funds cleanup activities on Marine Corps facilities.
- Additional funding sources, including the Operation and Maintenance, Marine Corps Reserve (O&M, MCR) account for Reserve Centers; the Naval Working Capital Fund; reimbursable Agricultural Outlease, Forestry, and Fish and Wildlife Access Fees; Qualified Recycling Program revenues; and the Defense Logistics Agency, Defense Energy Support Center funds.

ENVIRONMENTAL LIABILITIES

An environmental liability is a probable and measurable future environmental cost resulting from activities related to environmental restoration, corrective action, future disposal, and/or closure of facilities and equipment. Cleanup costs must be driven by an environmental requirement and may include, but are not limited to, decontamination, decommissioning, site restoration, site monitoring, abatement, closure, and post closure.

DoD is required to report environmental liabilities in annual financial statements. Several laws require that financial statements be complete, accurate, and auditable. Marine Corps installations must identify, estimate, and report all environmental liabilities, ensuring that all cost estimates are auditable. The Naval Facilities Engineering Command assists Marine Corps installations in managing their environmental liability information.





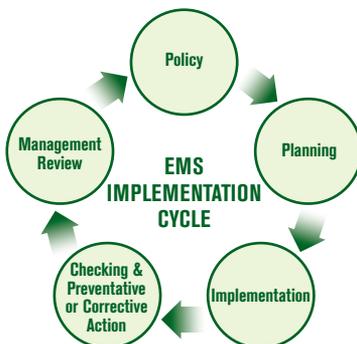
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CHAPTER 3: Environmental Support Programs and Tools

MCICOM/HQMC (LF) and Marine Corps installations have implemented environmental support programs and associated tools to ensure effective and efficient environmental management at all levels of the Marine Corps. This chapter summarizes Marine Corps environmental programs and tools that directly support Installation Commanders responsible for environmental management aboard their installations. Unit and Tenant Commanders generally perform activities (e.g., standard operating procedures, self-audits, reporting, etc.) to support and comply with environmental programs established aboard host installations.

MARINE CORPS ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

All environmental programs are managed under an overarching business process called the Marine Corps EMS, with requirements outlined in MCO P5090.2A, Chapter 2. An EMS is a systematic approach ensuring that the environmental activities of an organization are well managed, continuously improving, and sustaining operations of the Marine Corps installation. The strength of an EMS is in its systematic approach. Once the system is implemented, it should function independent of personnel turnover.



WHY IMPLEMENT AN EMS?

- ▶ Reduces risk to mission and the environment
- ▶ Aligns process owner responsibilities with environmental impacts
- ▶ Improves processes and promotes sustainability
- ▶ Enhances working relationships with the community and regulators

Under the Marine Corps EMS, environmental management is integrated into the overall way of doing business. Requirements are incorporated into operational and management decisions through cross-functional coordination and integrated planning. A fundamental principle of the EMS is that Marines and civilian personnel across all missions, activities, and functions are accountable for understanding and managing the environmental aspects and impacts of their jobs.

This systematic quality approach to management meets environmental requirements by:

- Assessing operational and management practices and their impacts on natural resources and mission effectiveness;
- Ensuring that environmental programs are “self-correcting;” and
- Committing to continual improvement of the environmental management program.

Installation commanders shall conduct an annual review of their EMS to assess how well it is functioning and to develop recommendations for improvement, as necessary.

ENVIRONMENTAL COMPLIANCE EVALUATION (ECE)

Every Marine Corps installation has an Environmental Office staffed with personnel responsible for environmental compliance and protection. MCO P5090.2A specifies actions and responsibilities required for each environmental program, to include conducting environmental audits through the ECE program. The Marine Corps ECE Program and its inspections provide the installation commander with a snapshot of the status of compliance with environmental requirements.

The ECE Program is designed to identify and correct compliance problems, reducing the potential for possible adverse regulatory actions and minimizing risks to human health and the environment. The ECE Program includes the following four components:

- **Benchmark ECEs.** Benchmark ECEs are HQMC-sponsored compliance inspections at Marine Corps installations. MCICOM schedules and conducts inspections of all environmental program areas at each installation on a three-year cycle. The ECE is coordinated through the installation Environmental Office.
- **Benchmark Plan of Action and Milestones (POA&Ms).** POA&Ms document corrective actions planned and implemented in response to compliance deficiencies identified in Benchmark ECEs. POA&Ms are developed by Environmental Office personnel in coordination with the deficiency owner.

INSTALLATION ECE TIMELINE

The ECE Program operates on a 3-year cycle. "Benchmark ECEs" are performed at one-third of the installations each year. Installations submit Benchmark POA&Ms during the same year as the Benchmark ECE and POA&M Annual Validations during the remaining two years of the cycle. Installation self-audits are performed annually.

- **Benchmark POA&M Annual Validations.** Each Commander should conduct an annual review and verification of the POA&M focused on outstanding deficiencies remaining from the Benchmark ECE. The annual validation of the Benchmark POA&M should not be confused with the installation self-audit program (see below).
- **Installation Self-Audit Program.** Overseen by the base environmental staff, the self-audit serves as a continuous internal mechanism for Installation Commanders to assess compliance within their fence lines, including all tenant commands and activities. The self-audit involves an annual assessment of conformance with the installation's EMS and the compliance status of every environmentally regulated activity on the base, including all tenant commands and activities.

REGULATORY INSPECTIONS

Federal, State, and Local regulatory authorities routinely inspect Marine Corps installations to evaluate compliance. Inspectors generally notify the Installation Commander regarding intent to inspect an installation; however, regulatory agencies are legally authorized to inspect Federal facilities at any time.

General measures to ensure readiness for regulatory inspections include the following:

- Ensuring that the Marine Corps ECE Program is effectively implemented at the installation,

ENVIRONMENTAL ENFORCEMENT ACTION RESPONSE - BEST PRACTICES

1. Immediately inform Marine Corps Installations Command Facilities Directorate (MCICOM(GF)) through the chain of command;
2. Request assistance from Regional/Installation Counsel Office, and other support agencies, as necessary;
3. Request any needed detail from the regulatory agency to determine compliance requirements and timetables;
4. Inform the Installation Public Affairs and Community Plans and Liaison Office (CPLO) if there are off-base or public implications;
5. Coordinate with or seek advice from the regional Naval Facilities Engineering Command (NAVFAC), as necessary;
6. Prepare and submit STEP project for each project requirement; and
7. Develop and implement a corrective action plan.

that previously identified problems have been corrected and well documented, and that copies of previous inspection reports are maintained;

- Establishing environmental points of contact (POCs) at all activities to the individual unit level, and training POCs to effectively communicate with inspectors; and
- Ensuring that environmental records and files are well maintained by the installation's Environmental Office and/or by the units.

Upon receiving a notice of a regulatory inspection, Installation Commanders should alert commands, tenants, and units expected to participate in the inspection. The alert should include pertinent details of the inspection and authorize full cooperation with the inspection team.

At the start of the inspection, the inspectors usually provide an in-brief to the Installation Commander or his designee and the installation's Legal Counsel or Staff Judge Advocate. It is also useful to request daily reviews of inspection activities to discuss developments and to plan for the next day. Installation environmental personnel who have knowledge of relevant environmental regulations and the activities being inspected should accompany inspectors through all phases of the inspection.

When an inspection is complete, the regulatory inspectors usually provide the Installation Commander with an exit briefing summarizing findings. If an inspection reveals that an installation does not comply with environmental regulations, the agency may issue an informal indication (oral) or a formal notice of violation (NOV) (typically a letter) of the enforcement action. The command must respond appropriately to avoid potentially significant consequences, such as fines, consent orders, or further adverse actions.

Informal Indication of an Enforcement Action. Often, a prompt and complete response to an informal indication of an enforcement action reduces the severity of any formal action taken by the regulatory agency. Upon receipt of an informal or oral indication of noncompliance, the Installation Commander should consult with Counsel immediately to determine the legal obligations. Regional Counsel Offices and some installations have environmental law specialists to advise Commanders on legal aspects of environmental issues.

Formal Notice of an Enforcement Action. The regulatory agency may issue a formal NOV or other enforcement action notice. The notice will describe the noncompliant aspects of the operations or facility and will establish periods to achieve compliance, but not how to achieve compliance. Generally, the regulatory agency will allow 30 days to respond to a formal notice. Most enforcement actions can and should be negotiated and resolved with the regulatory agency. Commanders should work with Counsel to resolve enforcement actions.



Compliance Agreements/Consent Orders. Federal or State regulatory agencies may negotiate a compliance agreement or consent order if an installation fails to respond adequately or in a timely manner to the enforcement action. Compliance agreements and consent orders are mutually agreed-upon or mandated corrective action plans between the installation and regulatory agency.

Civil and Criminal Penalties. Failure to implement environmental requirements effectively has operational implications and can create legal liabilities for Installation Commanders. While it is rare for DoD officials to be held personally liable for environmental law violations, each enforcement mechanism may expose Installation Commanders to liability.

MCICOM/HQMC (LF) Notification. When significant environmental damage or immediate adverse publicity for the Marine Corps is likely, the command must notify MCICOM GF-5 by telephone and/or e-mail on the same day of the potential enforcement notification. In cases where an Enforcement Action or NOV is issued, a copy of the enforcement must be uploaded to the MCICOM/HQMC (LF) reporting tool.

Public Availability of Marine Corps Compliance Information. The general public can retrieve enforcement and compliance information about DoD facilities through regulatory agency websites. It is important that information contained on these websites accurately reflect the Marine Corps enforcement and compliance status. Installations should regularly monitor the Environmental Protection Agency's Online Targeting Information System (<http://www.epa.gov/idea/otis>, registration required) and Enforcement and Compliance History Online (ECHO) (<http://www.epa.gov/echo>) websites to ensure compliance data for the installation



are current and accurate, and should work with regulatory authorities to correct inaccuracies. The ECHO website “Significant Non-Compliance” (SNC) category has recently received considerable public and DoD attention, and such a finding needs to be addressed appropriately as soon as possible.

RANGE ENVIRONMENTAL VULNERABILITY ASSESSMENT (REVA)

To effectively carry out its mission, the Marine Corps must conduct real-time, realistic training involving tactics, procedures, equipment, and personnel on operational ranges. To ensure long term sustainment of these training areas while protecting the surrounding environment, the Marine Corps established the REVA program. REVA is a proactive program that supports Marine Corps and Department of Defense sustainable range goals and policies, but is not required by law or regulation. The goal of REVA is to identify potential releases or threat of releases of chemicals from munitions items to off-range areas, provide early identification of environmental issues, and assist installations to formulate long-term range sustainment plans. Operational ranges that are addressed under REVA include target/impact areas, firing points, small arms ranges, and training areas, as well as areas with historical munitions use within operational range boundaries.

The REVA process includes data collection; development and use of models to assess the potential for munitions chemicals to impact human health and the environment; environmental or geophysical sampling (if necessary); risk assessments (if necessary); and documentation of results in summary reports, which are made available to the public. REVA evaluates all operational ranges at a minimum of every five years.

ENVIRONMENTAL PLANNING

MCICOM/HQMC (LF) encourages coordinating environmental planning with other planning actions on installations, including Installation Master Plans, Range Management Plans, Joint Land Use Plans, Encroachment Control Plans, among others. The linchpin of this coordination is NEPA in the U.S., territories and possessions, and EO 12114 overseas (e.g., U.S. Exclusive Economic Zone [EEZ], Global Commons, Foreign Nations).

NEPA and EO 12114 require Federal agencies to consider potential environmental effects in planning and decision-making for major proposed actions and identify reasonable alternatives. Both NEPA and EO 12114 require rigorous analysis and documentation; NEPA also requires meaningful public involvement in the decision-making process. The level of analysis under NEPA or EO 12114 depends on the scope of the planned project, degree of public concern, and the extent or significance of the impact on the environment.

Environmental planning stresses an interdisciplinary approach to problem solving, requiring consideration of effects on all relevant aspects of the human and natural environment. During the NEPA or EO 12114 review, Marine Corps project proponents must consider the relationship of the project to all of the other requirements discussed in this Guide.

In the first phase of the NEPA or EO 12114 process, the Marine Corps—as the lead Federal agency—prepares a Request for Environmental Impact Review (REIR) to determine whether significant environmental impacts are anticipated and whether revisions can be made to the proposed action to eliminate these impacts. The REIR process results in a determination of the required level of NEPA analysis.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS

- **Categorical Exclusion (CATEX).** CATEXs are broad categories of actions for which there is little or no potential for significant effects on the environment, and neither an environmental assessment nor an environmental impact statement is required. MCO P5090.2A Chapter 12 provides a list of the 45 DoN CATEXs and a list of extraordinary circumstances where a CATEX may not be appropriate.
- **Environmental Assessment (EA).** An EA is required for proposed actions that have the potential for significant environmental impacts (i.e., that do not qualify for a CATEX, but it is also not clear if an Environmental Impact Statement should be prepared). If an EA indicates that no significant environmental impacts are anticipated, a Finding of No Significant Impact (FONSI) is issued to document reasons why an action will not have an appreciable effect on the environment and why an Environmental Impact Statement will not be



prepared. Public input is required as part of the EA process (see MCO P5090.2A, Chapter 12) and the FONSI must be made available to the affected public. Signature authority for the FONSI is delegated to installation commanders for actions on their installations and to CG MARFORRES for actions on Reserve installations.

- **Environmental Impact Statement (EIS).** An EIS is required if the EA indicates that significant environmental impacts are anticipated or public controversy over the proposed action is expected. The EIS must contain a full, fair, and concise discussion of all significant environmental impacts relating to a proposed action. Federal Agencies are required to solicit public and regulatory comments to assist in developing alternatives to the proposed action that may result in reduced environmental impacts. The EIS process is completed with a Record of Decision (ROD), signed by the Assistant Secretary of the Navy (EI&E), that informs the public of the Marine Corps' decision to implement or to not implement the proposed action. The ROD is a public record documenting consideration and selection of alternatives for implementation and commits the action proponent to appropriate mitigation, if necessary, to minimize environmental harm.

NEPA and several other federal laws require that federal agencies attempt to mitigate the impacts of their actions on the environment. Funding for mitigation measures must be programmed by the action proponent, either through a line

item on a DD1391 for a proposed MILCON project, or using installation O&M funds. Implementation of mitigation measures required under the auspices of a permit (e.g., wetland permit) or other legally binding agreement, and identified in the NEPA decision document, must be tracked by the installation or region to ensure adequate implementation.

Meaningful public involvement is also an important part of the NEPA process; the degree of public involvement depends on the level of NEPA documentation required. Preparation of EISs requires a formal public involvement program including public notices, a public scoping process, and public meetings to inform the public and provide them opportunities to review and comment on the proposed action.

EO 12114, ENVIRONMENTAL EFFECTS ABROAD

EO 12114, *Environmental Effects Abroad of Major Federal Actions*, January 4, 1979, furthers the purpose of NEPA with respect to Marine Corps actions that may significantly affect the environment outside the United States. Title 32 CFR Part 187 and DoD Directive 6050.7 establish policy, procedural measures, and other actions for DoD officials to implement EO 12114.

EO 12114 applies to actions that Marine Corps directly or indirectly carries out or directly funds, unless exempted by DoD Directive 6050.7. It does not include actions in which the United States participates in an advisory, information-gathering, representational, or diplomatic capacity but does not implement or fund the action; actions taken by a Foreign Government or in a Foreign Nation in which the United States is a beneficiary of the action, but does not implement or fund the action; or actions in which Foreign Governments use funds derived indirectly from United States funding.

REQUIREMENTS FOR ENVIRONMENTAL CONSIDERATIONS—GLOBAL COMMONS

An **Overseas Environmental Assessment (OEA)** is an environmental analysis similar to an EA under NEPA. The objective of an OEA is to document the environmental consequences of a proposed action, allowing the reviewing authority to determine whether or not the effects of the action will cause significant harm to the environment. If the action will affect the environment in the U.S. EEZ or the Global Commons and it is unknown whether the action will cause significant harm to the environment, the action proponent shall prepare an OEA.

An **Overseas Environmental Impact Statement (OEIS)** is an environmental analysis similar to an EIS under NEPA. The objective of an OEIS is to document the environmental consequences of a proposed action that may cause significant

harm to the environment. Action proponents shall prepare an OEIS for proposed major Marine Corps actions that would cause significantly harm to the environment in the U.S. EEZ or the Global Commons.

At present, there are no approved overseas CATEXs.

REQUIREMENTS FOR ENVIRONMENTAL CONSIDERATIONS— FOREIGN NATIONS AND PROTECTED GLOBAL RESOURCES

The provisions of EO 12114 and DoD Directive 6057.7 apply to major federal actions undertaken by the Marine Corps that would cause significant impact to the environment of a Foreign Nation that is not involved in the action. (The focus is on the geographical location of the environmental impact and not on the location of the action.) There are two types of environmental documents:

1. **Environmental studies.** An environmental study is prepared for a cooperative action and not a unilateral action undertaken by the United States. It may be bilateral or multilateral, and it is prepared by the United States in conjunction with one or more foreign nations, or by an international body or organization in which the United States is a member or participant.
2. **Environmental reviews.** An environmental review is prepared by the Marine Corps either unilaterally or in conjunction with another Federal agency. An environmental review is a concise survey of the important environmental issues involved. It includes identification of these issues, and a review of what if any consideration has been or can be given to the environmental aspects by the United States and by any foreign government involved in taking the action.

MARINE CORPS NEPA REQUIREMENTS

- **Air Quality Impacts.** The Clean Air Act requires that installations determine whether their actions conform to State or Federal plans to reduce air pollution before implementing them. If the installation with the proposed action is in an area that does not meet Federal or local clean air standards, this determination should be conducted with NEPA analysis for any proposed action.
- **State Requirements.** State regulations require environmental analysis for certain actions. Marine Corps actions that require permits from State or local agencies may also be subject to these State requirements. In most cases, an EA prepared under the NEPA process may be used to satisfy State-level planning requirements. If preparation of an EIS is required, coordinate with State agencies to ensure that the State requirements are satisfied.



EXECUTIVE ORDERS AND DOD NEPA REQUIREMENTS

An extensive list of applicable EOs and directives can be found in the appendix.

- EO 12898 requires Federal agencies to address environmental justice considerations during the NEPA review process to ensure that major Federal actions do not have disproportionate impacts on minority and low-income populations.
- EO 12114 and DoD Directive 6050.7 establish policy and procedures for Federal agencies and DoD officials to consider the significant effects of their actions on the environment outside the United States.



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CHAPTER 4: Environmental Compliance and Restoration

MCICOM, the MCI Regions and Marine Corps installations have implemented environmental compliance and restoration programs in response to requirements in environmental laws, regulations, and policies. The environmental requirements described below apply to most Marine Corps installations and facilities.

COMPLIANCE

The Clean Air Act, Clean Water Act, and Safe Drinking Water Act, and other statutes establish compliance requirements for installations, such as permitting requirements, procurement rules, and environmental standards.

SOURCES OF ENVIRONMENTAL PROGRAM AREA INFORMATION

Information on environmental compliance programs and responsibilities is detailed in MCO P5090.2A and is readily available from installation Environmental Office staff. Other environmental program area information is available on the internet, including webpages maintained by the Environmental Protection Agency (EPA), such as <http://www.epa.gov/gateway/learn>.

AIR QUALITY

Clean air is essential for public health, maintaining quality of life, and to operate and sustain Marine Corps installations. Pollution emitted into the atmosphere negatively affects air quality and can limit the ability of Marine Corps installations to conduct tests and training in support of the military mission. Air quality at Marine Corps installations is affected by geography, weather conditions, and pollution sources on and off the installation. Marine Corps installations typically contain many emission sources (e.g., boilers, generators, vehicles, equipment, painting, and de-painting activities) that are subject to regulation.

The Clean Air Act was established to protect the quality of our Nation's air resources and promote public health and quality of life. This Act and a combination of Federal, State, and local-level implementing regulations improve air quality and prevent air pollution by establishing air emissions standards and controls.



Installation Environmental Offices are responsible for obtaining and tracking air quality permits and other requirements for Marine Corps facilities. Air quality requirements generally fall within five categories:



■ **Air Quality Standards and Permits.**

The Environmental Protection Agency (EPA) established standards to reduce emissions of six criteria pollutants: carbon monoxide, lead, ozone, oxides of nitrogen, sulfur dioxide, and particulates. States implement regulatory programs to enforce attainment of the emissions standards. Marine Corps installations hold permits that regulate air pollutant sources. In addition, Marine Corps installations must demonstrate that new or modified emissions sources will meet State requirements. Potential air quality impacts are assessed during the planning process for new Federal actions under NEPA.

■ **Hazardous Air Pollutants (HAPs) Regulation.**

Through Section 112 of the Clean Air Act, EPA established standards to minimize emissions of hazardous air pollutants that cause cancer or other serious health effects. Associated regulations affect a broad range of Marine Corps activities, including operation and maintenance of facilities, vehicles, aircraft, and other equipment and weapon systems.

■ **Stratospheric Ozone Protection.**

Some refrigerants (e.g., certain air conditioning coolants) and fire suppressants (e.g., halon) commonly in use at Marine Corps installations are ozone-depleting substances (ODS) that are detrimental to the Earth's ozone layer. DoD Instruction 4715.4 and EOs 13514 and 13423 require Federal facilities to eliminate the reliance on ODS and to find suitable replacements.

■ **Alternative Fuel Vehicles Requirements.**

The Federal Government is required to ensure that a portion of vehicles acquired each year use alternative fuels. The use of alternative fuel vehicles reduces dependency on imported oil

and drives technological advancements. Viable alternative vehicle technologies include electric, bio-fuel, and natural gas powered vehicles. EO 13423 and EO 13514 (via the DoD Strategic Sustainability Performance Plan, SSPP) establishes metrics for alternative fuel vehicles and alternate fuels.



■ Greenhouse Gases

Reduction. EPA continues to develop Greenhouse Gases (GHG) emissions regulations and standards to reduce their harmful effects on climate change. EO 13514 establishes goals and a framework for reporting and reducing GHGs across all Federal Agencies, and the DoD SSPP defines specific reduction targets for the Department. GHG emissions primarily result from the combustion of fossil fuels, so GHG reductions directly rely upon energy strategies and initiatives to: increase energy conservation and efficiencies; reduce fossil fuel consumption; and promote the use of renewables.



DRINKING WATER QUALITY

Drinking (or potable) water is a critical resource for Marine Corps installation communities. The quality of drinking water drawn from surface and ground water sources depends on geography, local soil properties, and the effects of human activity. Contaminants of potential concern include microbial, inorganic, organic, and radioactive materials in source waters, and lead, copper, and disinfection byproducts in water distribution systems. The Installation Environmental Office should work with the Utilities/Public Works offices to ensure compliance with all drinking water program requirements.



The Safe Drinking Water Act regulates the quality of water provided by Marine Corps installations and other public water suppliers to protect consumers from harmful contaminants. Water conservation requirements are also applicable.

- **Drinking Water Quality Regulations.** The Safe Drinking Water Act establishes water quality provisions:

- **Water Quality Standards.** EPA and State regulatory agencies set enforceable maximum contaminant levels for drinking water and standards for water treatment techniques and technologies to remove contaminants.
- **Public Notification and Consumer Confidence Reports.** Marine Corps public water systems must provide public notice to consumers when maximum contaminant levels are exceeded or other regulatory requirements are not met. Operators of community water systems must prepare and provide consumers with annual Consumer Confidence Reports on the quality of the water delivered by the system.
- **Water System Operator Certification.** State regulations implement certification programs to establish minimum standards for operators of certain types of water systems. Marine Corps installations must ensure that water system operators meet established certification standards.
- **Other Water Quality Requirements.** There are several other programs under the Safe Drinking Water Act that are in place to help protect water sources and to keep contaminants from entering drinking water systems. These include the Underground Injection Control program, Water System Vulnerability Assessment requirements, and the Cross-Connection Control program. State regulatory agencies also implement source-water protection programs to determine the susceptibility of public water systems to contamination from surrounding land areas. Installation Environmental Offices are responsible for working with the installation's Public Works/Facilities department related to any drinking water program within the command.



- **Lead in Priority Areas.** MCO P5090.2A requires each installation to test for lead in all drinking water coolers and outlets in priority areas, primary and secondary schools, child development centers, and youth and teen centers.
- **Water Conservation Rules.** The Energy Policy Act establishes water conservation requirements for Federal agencies, including maximum water use standards for plumbing fixtures and the implementation of certain water conservation measures. EO 13423 requires Federal agencies to reduce water consumption and periodically report on progress meeting water conservation metrics. EO 13514 updates and builds on EO 13423 with more stringent water efficiency rules.

HAZARDOUS WASTES, SUBSTANCES, AND MATERIALS

Marine Corps installations operate numerous practices that use hazardous materials and generate hazardous wastes. In general:

- Hazardous materials are materials used in Marine Corps industrial processes that pose a threat to human health or the environment if released in significant amounts to the environment.
- Hazardous wastes are waste products generated by Marine Corps activities that may be a substantial hazard to human health or the environment when improperly treated, stored, transported, or disposed.

Hazardous Materials are subject to environmental regulations. All personnel have a responsibility to ensure these materials are handled in accordance with applicable laws. The management, storage, transportation, treatment, and emergency response procedures for hazardous materials are regulated under several statutes:

- **Hazardous Waste Management.** Subtitle C of the Resource Conservation and Recovery Act (RCRA) defines hazardous wastes and establishes requirements for their management and minimization. Facilities that generate, transport, treat, store, or dispose of hazardous wastes must obtain identification numbers from EPA. Such facilities are classified as “large quantity generators” or “small quantity generators”



COMMON HM AT MARINE CORPS INSTALLATIONS

- ▶ Gas cylinders
- ▶ Oils and greases
- ▶ Paints
- ▶ Antifreeze
- ▶ Solvents

GENERATOR CLASSIFICATION

Large Quantity Generator

- ▶ Installations generating 1,000 kg or more of HW per month
- ▶ Can accumulate HW up to 90 days onsite without a storage permit

Small Quantity Generator

- ▶ Installations generating more than 100 kg but less than 1,000 kg of HW per month
- ▶ Can accumulate HW up to 180 days onsite without a storage permit

Conditionally Exempt Small Quantity Generator

- ▶ Installations generating 100 kg or less of HW per month

depending upon the amount of hazardous waste generated. Each category has its own specific requirements. All hazardous waste generators, unless exempted, must treat, store, or dispose of their hazardous wastes at permitted facilities. Any facility generating more than specified amounts of hazardous or acutely hazardous wastes (as defined by RCRA) must certify that it has a program to minimize waste generation. A Marine Corps installation should have a hazardous waste minimization program as part of its Pollution Prevention Program.

- **Federal Facility Compliance.** The Federal Facilities Compliance Act requires that Federal facilities comply with all provisions of hazardous waste laws and regulations, and directs EPA, in consultation with DoD, to issue regulations on the application of the Resource Conservation and Recovery Act to military conventional and chemical munitions.
- **Hazardous Substance Spills and Releases.** The Comprehensive Environmental Response, Compensation, and Liability Act, the Resource Conservation and Recovery Act, and the Clean Water Act regulate hazardous substances if released and regulate the cleanup of past improper hazardous waste disposal.
- **Storage and Transportation of Hazardous Materials.** Occupational Health and Safety Administration regulations establish specific requirements for the storage and management of hazardous materials. U.S. Department of Transportation regulations define hazardous materials and include requirements for shipping.
- **Treatment Exemptions.** The Land Disposal Program Flexibility Act of 1996 exempts hazardous waste from Resource Conservation and Recovery Act regulations if it is treated to a point where it is no longer hazardous and then disposed of in a regulated industrial wastewater treatment facility, municipal sewage treatment plant, or is treated in a “zero discharge” facility.
- **Emerging Contaminants.** Emerging contaminants are those that present potential health or environmental risks but lack regulatory standards. DoD Instruction 4715.18 establishes policy for the identification, assessment, and risk management of emerging contaminants.

STORAGE TANKS

Storage tanks are widely used to store petroleum products, chemicals, and wastes and are generally regulated only if used to store a regulated hazardous waste or petroleum products. Storage tanks include both underground and aboveground tanks.



Storage tank design and operation are subject to regulation. Any one or combination of tanks that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground is regulated as an underground storage tank. Regulated aboveground storage tanks are generally defined as bulk storage containers or storage tanks that are not clearly identified as underground tanks, are normally located on or above the surface of the ground, and have a capacity of 55 gallons or greater. Most aboveground storage tanks must comply with requirements in the Spill Prevention, Control, and Countermeasure plan. However, State definitions of regulated tanks can be much more restrictive.

- **Underground Storage Tanks.** Subtitle I of the Resource Conservation and Recovery Act, as amended by the Hazardous and Solid Waste Amendments, establishes a comprehensive regulatory program for underground storage tanks containing regulated substances. The single greatest concern with underground storage tanks is that a leak could contaminate groundwater, the primary source of drinking water for many communities. Subtitle I also requires owners of underground storage tanks to notify State authorities of tank usage information and requires EPA to issue regulations governing detection, prevention, and correction of leaks from underground storage tanks, including financial responsibility requirements and new tank performance standards. Many States have promulgated additional underground storage tank regulations. The Energy Policy Act of 2005 updated many provisions of Subtitle I, by requiring new procedures for inspections, operator training, delivery prohibition, secondary containment and financial responsibility, and cleanup of releases that contain oxygenated fuel additives.

- **Used Oil and Hazardous Waste Tanks.** Subtitle C of the Resource Conservation and Recovery Act sets standards for storage tanks containing used oil and for tanks used to store or treat hazardous waste. These requirements apply to both underground and aboveground storage tanks.
- **Storage Tank Design, Operation, and Management Provisions.** The Underground Storage Tank Compliance Act of 2005 requires underground storage tank inspection, operator training, containment design, spill cleanup, and certain operational requirements. The Act specifically waives Federal facilities' immunity for fees, civil sanctions and fines, and criminal actions related to owning, managing, and overseeing underground storage tanks.
- **Spill Prevention, Control, and Countermeasure.** The Oil Pollution Prevention Regulation, promulgated under the Clean Water Act, as amended by Oil Pollution Act, includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires non-transportation related facilities with aggregate aboveground storage capacity greater than 1,320 gallons or a completely buried storage capacity greater than 42,000 gallons and a reasonable expectation of a discharge into or upon navigable waters of the United States or adjoining shorelines to prepare, amend, and implement Spill Prevention, Control, and Countermeasure Plans. The Emergency Planning and Response section of this Guide contains additional requirements pertaining to emergency preparedness.

TOXIC SUBSTANCES

Asbestos, lead, and radon potentially pose significant risks to human health and are regulated under a wide number of Federal and State regulations. Because of the human health risk, these programs may be under the purview of Safety or Facilities sections. These personnel should work closely with the Environmental staff to ensure that all applicable regulations are followed.

Asbestos

Asbestos is a group of naturally occurring fibrous minerals that are strong, extremely durable, and highly resistant to heat and most chemicals. In the past, asbestos was used extensively for thermal, acoustical, and decorative purposes, and is commonly found in boiler and pipe insulation, floor and ceiling tiles, appliances, and brake linings. Airborne asbestos fibers present a substantial health hazard, as the fibers can be inhaled and become lodged in lung tissue, where they cause scarring and inflammation, and can lead to various diseases, including lung cancer. Buildings constructed or remodeled between 1945 and 1978 are likely to contain asbestos.



Asbestos is regulated under several Federal statutes and State-level implementing regulations. Many State and local government asbestos standards are more stringent than the Federal standards.

- **Asbestos in Schools.** The Asbestos Hazard Emergency Response Act requires school systems to identify areas where asbestos poses hazards to humans, prepare management plans to reduce those hazards, and maintain a proactive asbestos management program to ensure that all asbestos containing materials remain in good condition and undisturbed by students, faculty, and staff. Additionally, asbestos must be removed from a building prior to demolition or renovation, and asbestos workers and others working in commercial and public buildings must receive asbestos training and accreditation.
- **Hazardous Air Pollutants Standards.** Clean Air Act requirements specify work practices for the removal, handling, processing, and disposal of asbestos-containing material during renovation and demolition of buildings and structures.
- **Asbestos in Drinking Water.** The Safe Drinking Water Act includes standards for asbestos in drinking water. The regulations apply to community water systems and specify maximum acceptable contaminant levels. Public notification is required if these levels are exceeded.

- **Worker Exposure, Consumer Products, and Asbestos Waste.** The Occupational Safety and Health Administration sets limits for asbestos exposure on the job. The Consumer Product Safety Commission regulates asbestos in consumer products and has banned its use in drywall patching compounds, ceramic logs, and clothing. EPA regulates the management and disposal of asbestos-containing wastes.
- **Marine Corps Asbestos Safety Program.** Marine Corps policy is to eliminate asbestos exposure by substituting non-asbestos-containing materials or, where this is not feasible, by using engineering and administrative controls and personal protective equipment. To implement Occupational Safety and Health Administration and EPA requirements, the Marine Corps asbestos safety program requires precautionary measures, health practices, and training and certification for personnel conducting asbestos removal or encapsulation projects.

Lead

Lead is a naturally occurring metal that can cause serious health problems when ingested or inhaled. Although lead can be found in many environments, lead exposure is most common from human activities. In the past, lead compounds were commonly used in paints as pigment. Buildings constructed or remodeled before 1978 are likely to contain lead paint. Lead is also used in batteries, radiation shielding, plumbing, and ammunition.



Lead is regulated through several environmental programs:

- **Lead in Paint.** The Toxic Substances Control Act and implementing rules require that renovators working or operating in an environment where they may create dust that contains lead to be certified by EPA or authorized State Renovation, Repair, and Painting Programs.
- **Lead in Drinking Water.** The Safe Drinking Water Act requires monitoring, reporting, and maintenance of drinking water lead concentrations below a certain threshold set forth in EPA's Lead and Copper Rule. In addition, it is Marine Corps policy that lead testing be conducted on all drinking water coolers and outlets in priority areas, specifically, primary and secondary schools, child development centers, and youth and teen centers.
- **Lead in Air.** The Clean Air Act (CAA) regulates lead emissions from stationary and mobile sources. The major sources of lead regulated under the CAA are leaded aviation gasoline, incinerators, and utilities.

- **Lead in Waste.** The Resource Conservation and Recovery Act governs the treatment, storage, and disposal of hazardous wastes containing lead.

Radon

Radon is a naturally occurring, colorless, odorless, radioactive, and carcinogenic gas resulting from uranium degradation in the earth. It may be found in indoor air and drinking water, especially when the water supply source is ground water.

EPA recommends remediation for radon levels greater than 4 picocuries per liter (pCi/L) of air. The Marine Corps action level for radon is 4 pCi/L.

- **Radon in Federal Buildings.**

The Toxic Substances Control Act requires Federal agencies to conduct a study of radon levels in Federal buildings and provide results to EPA. Federal buildings using nonpublic water sources (such as wells or other groundwater) are also required to evaluate radon contamination in water. All Marine Corps facilities must use the Navy Radon

Assessment and Mitigation Program (NAVRAMP), approved by EPA, for identifying, mitigating, and preventing radon contamination. Buildings with indoor radon levels greater than 200 pCi/L must be mitigated within three weeks; buildings with indoor radon levels above 4 pCi/L must be mitigated within two years. Marine Corps installations must also incorporate preventative practices and radon reduction techniques into the design and construction of new facilities.

- **Radon in Drinking Water.** EPA has proposed standards for radon in drinking water, and although the rule is not final, the Marine Corps follows this guidance. The rule applies to community water systems and proposes maximum contaminant levels requirements for multimedia mitigation program plans to address radon in indoor air.

NAVY RADON ASSESSMENT AND MITIGATION PROGRAM IMPLEMENTATION

Testing

- ▶ Screening: Evaluates radon levels in a sample of at-risk buildings
- ▶ Assessment: If any elevated radon levels are identified during screening, evaluates every building that contains personnel for over four hours/day
- ▶ Monitoring: Periodically monitors significantly renovated structures and structures with installed mitigation systems to ensure radon levels are below 4 pCi/L

Mitigation

- ▶ Installs and maintains mitigation systems to reduce radon levels below EPA and Navy recommended action level of 4 pCi/L

Prevention

- ▶ Ensures new building design and construction include appropriate radon reduction techniques

WATER QUALITY

Maintenance of the environmental quality of surface and underground water resources is necessary to sustain their uses for drinking water supplies, aquatic and wildlife support, and recreational purposes. Water quality can be impacted by human activities. Primary sources of pollution include wastewater discharges, stormwater discharges, and widespread stormwater runoff.

Water quality programs eliminate or mitigate impacts on our water resources. Primary legislative drivers for water quality programs at Marine Corps installations are the Clean Water Act, the Coastal Zone Management Act, and their associated implementing regulations.

- **Water Quality Standards and Permits.** The intent of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. To accomplish these goals, States established enforceable standards specifying the amount of pollutants that a water body can receive from all contributing sources of pollution. Marine Corps installations are generally issued operating permits specifying pollutant discharge limits. Installation operations typically subject to discharge permit conditions include domestic sewage, industrial wastewater, and stormwater systems. Stormwater permits generally require stormwater pollution prevention plans and the implementation of best management practices. Marine Corps installations that send wastewater to a publicly owned treatment works (POTW) (e.g., a regional or municipal wastewater plant) are subject to pretreatment standards.
- **Spill and Release Prevention.** The Clean Water Act prohibits discharges or spills that either cause a sheen on receiving waters or shorelines or result in sludge deposits beneath the surface of the water. The Oil Pollution Act amends the Clean Water Act to expand oil-spill prevention activities, improve preparedness and response capabilities, and ensure that organizations are responsible for damages from spills.
- **Protection of Coastal Areas.** The Coastal Zone Management Act, administered by the National Oceanic and Atmospheric Administration, provides for management of the Nation's coastal resources and balances economic development with environmental conservation. State coastal zone management programs incorporate flood control, sediment control, and stormwater-runoff control requirements. Federal actions that affect any land, water, or natural resources



of the coastal zone must be consistent with State programs to the maximum extent practicable.

- **Stormwater Management.** Marine Corps policy requires Low Impact Development (LID) designs in construction and renovation projects. LID is a set of best management practices (BMPs) that use vegetation and retention technologies to reduce volume and pollutant loading of stormwater, minimizing the need for downstream management.

STORMWATER BEST MANAGEMENT PRACTICES

- ▶ Store pollutants under cover and perform routine maintenance
- ▶ Use fabric screens and hay bales at construction sites
- ▶ Construct wet and dry detention and retention ponds
- ▶ Develop constructed wetlands, grassed swales, and forest buffers

ENVIRONMENTAL RESTORATION

Environmental Restoration is a comprehensive DoD program that identifies, investigates, and cleans up contamination on DoD properties from past waste disposal practices and spills. The Naval Facilities Engineering Command (NAVFAC) executes the Marine Corps Environmental Restoration Program. Marine Corps installations are responsible for oversight and advocacy for environmental restoration sites on their installations. The Environmental Restoration Program is designed to implement the requirements and procedures of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

The Environmental Restoration Program includes two components:

- **Installation Restoration Program**, which identifies and remediates past releases of pollutants or contaminants.
- **Munitions Response Program**, which investigates and cleans up unexploded ordnance and chemicals that were released from munitions items at ranges that are no longer operational on active installations.

The Department of Defense has established goals for the cleanup of past hazardous waste sites that are applicable to Marine Corps installations.

RESTORATION PROGRAM RESOURCES

Additional information and guidance on the Environmental Restoration Program is available in the Navy Environmental Restoration Program Manual (NERP, https://portal.navy.mil/portal/page/portal/NAVFAC/NAVFAC_VWV_PP/NAVFAC_NFESC_PP/ENVIRONMENTAL/ERB/ERP) and the Defense Environmental Restoration Management Guidance (http://www.denix.osd.mil/derp/upload/DERP_MGT_GUIDANCE_0901.pdf).



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CHAPTER 5: Pollution Prevention and Spill Planning and Response

The Pollution Prevention Program identifies and implements methods to reduce the quantities and toxicity of wastes generated, released, or disposed of by Marine Corps installations. For example, by substituting a nonhazardous cleaning product for a hazardous product, the quantity and toxicity of resulting wastes is reduced.

Pollution prevention also drives reduced solid waste generation through reuse, recovery, and recycling initiatives.



Pollution prevention focuses on reducing or eliminating pollution at its source through (1) increased efficiency in the use of raw materials, energy, water, and other resources; (2) purchase of materials with recycled content; (3) substitution of less hazardous materials; (4) improved hazardous material management; and (5) onsite reuse or recycling of waste. Pollution prevention goals are applicable across many environmental program areas.

The Marine Corps Pollution Prevention Program includes the following goals:

- Reduce the amount of hazardous materials used and hazardous wastes generated through control in procurement, supply, distribution, and use;
- Establish methods for substituting materials that are nonhazardous or less hazardous in nature;
- Develop and incorporate technologies or materials that reduce impacts on the environment and human health;
- Increase diversion of compostable and organic material from the waste stream;

- Implement integrated pest management and other appropriate landscape management practices;
- Comply with EPCRA reporting requirements;
- Seek pollution prevention solutions to compliance issues;
- Develop and implement pollution prevention plans; and
- Encourage pollution prevention awareness through the Marine Corps Comprehensive Environmental Training and Education Program (CETEP).

Several requirements govern the Marine Corps Pollution Prevention Program:

- The **Pollution Prevention Act** sets National policy, but does not impose requirements. It establishes a preferred hierarchy for pollution prevention initiatives:
 - Pollution should be prevented or reduced at the source;
 - Pollution that cannot be prevented should be recycled in an environmentally safe manner;
 - Pollution that cannot be prevented or recycled should be treated in an environmentally safe manner; and
 - Disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner.
- The **Resource Conservation and Recovery Act (RCRA)** requires hazardous waste generators to certify that the installation has a program to minimize the amount and toxicity of wastes generated and that the installation's storage, treatment, or disposal methods minimize threats to human health and the environment.
- The **Emergency Planning and Community Right-to-Know Act (EPCRA)** requires that the public receive timely and comprehensive information about possible or potential hazards associated with toxic chemical releases. It also requires that information on chemical inventories and releases be submitted to the Environmental Protection Agency.
- The **Energy Policy Act** requires Federal agencies to increase the usage of alternative fuel vehicles, reduce energy and water consumption, and increase energy efficiency.
- **Executive Order (EO) 13423 and 13514** require that Marine Corps contractors provide information needed by their installation to comply with the Pollution Prevention Act, the Emergency Planning and Community Right-to-Know Act. EO 13423 requires DoD facilities to reduce or eliminate the quantity of toxic and hazardous materials purchased, used, and disposed of; to reduce the quantity of solid waste disposed; and to maintain cost-effective waste prevention and recycling programs.

- **DoD Instruction 4715.4** establishes DoD pollution prevention policies and responsibilities for toxic chemical releases, hazardous waste generation, solid waste reduction and recycling, and alternative fuel vehicle acquisitions.

SOLID WASTE AND RESOURCE RECOVERY

Solid Waste is nonhazardous garbage, refuse, trash, rubbish, sludge from a wastewater or water supply treatment plant or air pollution control facility, or any other discarded material. It includes solid, semi-solid, liquid, or gaseous material resulting from industrial, construction, commercial, mining and agriculture operations, and from any community or residential activities.



EO 13423, EO 13514, and DoD policy require installations to achieve solid waste diversion goals by implementing integrated solid waste management plans that employ the following hierarchy of approaches and technologies for managing solid waste: source reduction, reuse, donation, recycling, composting/mulching, incineration for volume reduction with energy recovery, other forms of volume reduction, and landfilling. Reuse and recycling of solid waste is generally more cost effective than disposal by landfilling or incineration.

Marine Corps installations must properly manage and dispose of solid waste in accordance with various Federal, State, and local requirements to include:

- **Solid Waste Disposal Act** establishes solid waste disposal and management requirements applicable at Federal installations, including provisions for permitting, licensing, reporting, and the beneficial reuse of wastes through recycling and burning for energy recovery.
- **Resource Conservation and Recovery Act** addresses the management of municipal and solid waste and encourages the increased use of product separation, source reduction, and recycling to reduce solid waste volume.
- **Federal Facilities Compliance Act** requires Federal facilities to comply with all Federal, State, interstate, and local requirements concerning the disposal and management of solid waste.
- **10 U.S.C. 2577** authorizes military installations that have established a Qualified Recycling Program (QRP) to retain proceeds from the sale of recyclable materials for the purpose of covering QRP costs and, potentially, funding projects for pollution abatement, energy conservation, occupational safety and health activities, and/or transfer to MCCS for morale, welfare, and recreation activities.

■ **Clean Air Act** regulates disposal of asbestos waste in landfills.

■ **EO 13423 and EO 13514** require agencies to increase solid waste diversion, maintain waste prevention and recycling programs, and implement sustainable practices for pollution and waste prevention and recycling. They establish goals for reducing the production of solid waste, increased recycling of materials, procurement of environmentally preferable products, and the use of post-consumer products. Commanders must ensure that they are complying with requirements pertaining to proper retention of recycling revenue.

■ **DoD Instruction 4715.4** requires all installations and commands, where cost effective, to establish or participate in a QRP and divert recyclable materials from the nonhazardous solid waste stream. It also requires implementation of an accounting and control system and allows Installation Commanders to sell recyclables and other materials directly or consign them to the Defense Logistics Agency (DLA) Disposition Services for sale.

■ **DoD Strategic Sustainability Performance Plan (SSPP)** presents DoD's goals and sustainability performance expectations over the next decade, establishing the path by which the Department will enhance its ability to achieve the mission, lower life cycle costs, and advance technologies and practices that further the sustainability goals of the Nation.

SUSTAINABLE PRACTICES

- ▶ Use of renewable energy and reductions in GHG emissions
- ▶ Increases in energy and water efficiency
- ▶ Procurement of "green" products and services
- ▶ Minimization of chemicals of environmental concern
- ▶ Integrated solid waste management and reduction

SPILL PLANNING AND RESPONSE

Emergency spill planning and response programs reduce the risks of pollutant releases to the environment by establishing procedures for installations to respond to incidents quickly and appropriately. Elements of emergency spill planning and response programs include management plans, procedures, and test exercises for release prevention and emergency response.



Marine Corps installations must develop communication and strategic plans to respond to pollutant release incidents and must inform the public regarding the storage of certain hazardous substances.

- **Discharges of Pollutants to U.S. Waters.** The Clean Water Act and related requirements regulate the discharge of pollutants into U.S. waters. Installations must establish procedures and organizational structure to respond to pollutant releases, coordinate with State and local government and public/private interest groups, and notify regulatory authorities for certain pollutant releases. The Clean Water Act also mandates the development and implementation of Spill Prevention Control and Countermeasure Plans. The Oil Pollution Act expands Clean Water Act prevention and response requirements for oil spills. Facilities must develop Facility Response Plans to establish response capabilities and contingency plans for worst-case discharges.
- **Hazardous Substance Releases.** The Comprehensive Environmental Response, Compensation, and Liability Act sets threshold values for releases of hazardous substances (“reportable quantities”) that, when met or exceeded, trigger reporting requirements to the appropriate Federal and State agencies. The Act also mandates Spill Contingency Plans for facilities that store oil and hazardous substances.
- **Emergency Planning and Public Information.** The Emergency Planning and Community Right-to-Know Act encourages emergency spill planning and requires facilities to inform the public about possible hazards of chemicals present at the facility. Most notably, in the event of a release of an extremely hazardous substance (as defined by the Act), installations must immediately notify State and local emergency response planners. The Act also establishes reporting requirements for chemical inventories and releases, as well as State and local coordination in planning responses to chemical emergencies.
- **Hazardous Waste Facilities and Storage Tanks.** The Resource Conservation and Recovery Act requires owners of hazardous waste facilities to develop management plans for spill prevention and cleanup and establishes requirements for prevention, detection, and correction of releases from underground storage tanks. The Clean Air Act requires procedures and risk management plans to prevent and minimize the consequences of accidental releases.
- **Health and Safety.** The Occupational Health and Safety Administration establishes various training requirements for personnel involved in hazardous substance cleanup and emergency response operations.





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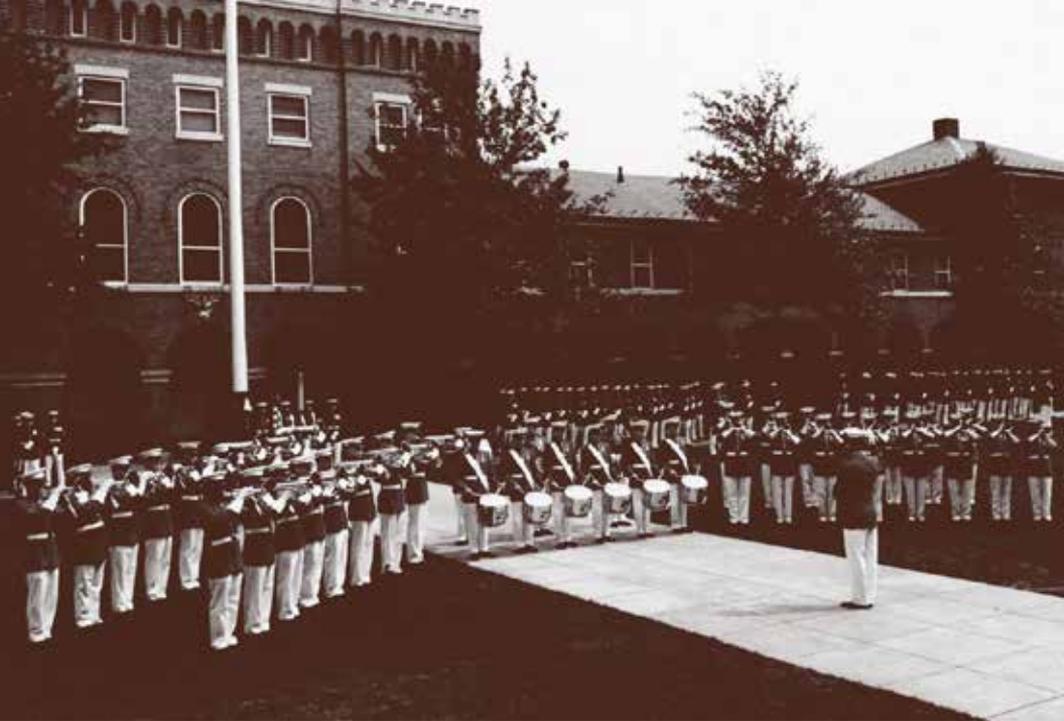
CHAPTER 6: Conservation

Land entrusted to the Marine Corps often includes significant natural and cultural resources. By engaging in integrated planning to encourage the sustained use of these resources, the Marine Corps preserves the land, water, management and airspace needed for military readiness while maximizing environmental protection. Effective stewardship of these resources enables achievement of environmental protection goals while furthering the military mission. Conservation planning includes NEPA compliance (see Chapter 3 of this Guide), compliance with EO 12114 (overseas actions), and general integration of environmental concerns into facilities planning for Marine Corps installations.

CULTURAL RESOURCES

Cultural resources include archaeological sites; historic structures and objects; historic records and photographs; cemeteries; sacred sites; or properties of traditional, religious, or cultural significance to Native American tribes or Native Hawaiian organizations. The Marine Corps' unique military heritage also is reflected in historic buildings and monuments on Marine Corps installations. Conservation of these resources requires identification, evaluation, and management. Proper planning and full consideration of cultural resources will allow the Marine Corps to meet mission requirements and stewardship responsibilities.

Installations with significant cultural resources are required to prepare and implement an Integrated Cultural Resources Management Plan (ICRMP) to establish a program to identify, evaluate, protect, and preserve resources of cultural value.



Federal laws require conservation of the following categories of cultural resources:

- **Historic Properties.** The National Historic Preservation Act requires Federal agencies to preserve historic properties and manage Federally-owned or -controlled historic properties in the spirit of stewardship. These responsibilities include determining the effects of Federal undertakings on designated historic properties and establishing a preservation program to identify, evaluate, and nominate properties for the National Register of Historic Places. Marine Corps installations overseas must take into account the effects of Federal undertakings on any property on the World Heritage List or the applicable country's equivalent of the National Register.
- **Archaeological Resources.** The Archaeological Resources Protection Act (ARPA) requires Marine Corps installations to protect archaeological resources and sites on public, Native American tribal, or Native Hawaiian lands. Permits are required for the excavation or removal of artifacts from Federal lands. Specified Native American Tribes or Native Hawaiian organizations must also be notified if significant religious or cultural sites will be affected. ARPA also allows federal agencies to prosecute individuals that disturb or damage archaeological sites, or unlawfully take artifacts from sites on federal lands. Conservation Law Enforcement Officers are authorized to make arrests under the authority of ARPA.

- **Native American Graves and Associated Items of Cultural Patrimony.** Under Native American Graves Protection and Repatriation Act requirements, discovery of suspected Native American or Native Hawaiian human remains during a Federal undertaking requires immediate cessation of activity for a minimum of 30 days, and consultation with Native American Tribes or Native Hawaiian organizations. The excavation of sites that may contain such human remains, funerary objects, sacred objects, or items of cultural patrimony requires notification and consultation with appropriate Native American or Native Hawaiian groups. Federal agencies are also required to repatriate Native American or Native Hawaiian remains and items of cultural patrimony to the appropriate tribe, organization, or individual.
- **American Indian Religious Sacred Sites.** To comply with the American Indian Religious Freedom Act, Federal agencies must consult with native traditional religious leaders to consider Native American religious values. Agencies should permit access to sacred sites, when possible.

NATURAL RESOURCES

Natural resources include watersheds, wetlands, natural landscapes, soils, forests, and associated fish, vegetation, and wildlife. Marine Corps installations are located in a variety of landscapes to allow Marines to train in the environments that they may encounter on the battlefield. Natural resource management is necessary to protect “environmental services,” such as protection of drinking water resources, soil erosion control, and pollutant remediation. Natural resource management is also needed to protect habitat for plants and animals, including threatened and endangered species. The Marine Corps must use and preserve natural resources with a long-term focus to ensure their availability to support current and future mission training needs.

Threatened Species: Likely to become endangered within the foreseeable future throughout all or a significant portion of its range

Endangered Species: In danger of extinction throughout all or a significant portion of its range

Several laws and related regulations establish provisions for the protection of natural resources:

- **Conservation Programs on Military Installations.** The Sikes Act recognizes the importance and value of natural resources on military lands and seeks to ensure that these resources are protected and enhanced in the context of the needs of military operations. Under the Sikes Act, military installations in the United States are required to develop and implement Integrated Natural Resource Management Plans (INRMPs) in cooperation with the U.S. Fish and Wildlife Service and State fish and

wildlife agencies. The INRMP should serve as the primary, overarching guide for natural resource management to not only meet regulatory requirements and implement best management practices, but also to sustain and enhance training lands. The Act also requires military installations to provide public access to natural resources for outdoor recreation, hunting, and fishing, as appropriate and consistent with the military mission, safety and security concerns. Program areas addressed in the INRMP may include the following as appropriate;

- Threatened, Endangered, and Candidate Species Programs
- Marine Mammal and Coral Reef Community Conservation
- Wetlands, Watersheds, and Coastal Conservation
- Forest Management
- Outdoor Recreation, Hunting, and Fishing
- Agricultural Out-Leasing
- Non-native and Invasive Species Control
- Wild Land Fire Management
- Erosion Control
- Conservation Law Enforcement
- Migratory Bird Management
- Bird Aircraft Strike Hazard
- Grounds and Landscape Management
- Outreach and Education

- **Endangered Species Protection.** The Endangered Species Act protects federally listed species and conserves the ecosystems upon which threatened and endangered species depend. Endangered species are those species that are in danger of extinction. Threatened species are those likely to become endangered within the near future. The National Marine Fisheries Service and the U.S. Fish and Wildlife Service provide oversight and enforcement of the act, as well as issue Biological Opinions regarding Federal activities to authorize limited amounts of “take” related to otherwise lawful activities.





Federal agencies must use their various authorities to further the purposes of the ESA as well as consult with the U.S. Fish and Wildlife Service regarding actions that may affect listed species to ensure that Federal actions do not jeopardize their existence.

Installation natural resource managers should be the primary point of reference with the U.S. Fish and Wildlife service when any threatened, endangered, or otherwise listed species is involved.

- **Migratory Bird Protection.** The Migratory Bird Treaty Act (MBTA) prohibits the take of migratory birds. Further, *EO 13186* clarifies that Federal agencies have the responsibility to avoid or minimize the negative impacts of their action on migratory birds, and to take active steps to protect birds and their habitats. While take of migratory birds is authorized for military readiness activities, the effects of these activities to bird populations must be evaluated and monitored. Impacts to migratory bird populations due to other non-readiness activities such as routine facilities maintenance, construction or other actions should be evaluated in conjunction with respective NEPA review.
- **Other Wildlife Protection.** Various other wildlife species and habitats are protected under specific federal regulations such as the Bald and Golden Eagle Protection Act (BGEPA), Marine Mammal Protection Act (MMPA), Coral Reef Protection Act or the Magnusen-Stevens Fisheries Conservation Act. These regulations have specific assessment, monitoring and permitting requirements that should be closely coordinated with ongoing environmental planning and assessments under NEPA.

- **Coastal Zone Protection.** The Coastal Zone Management Act (CZMA) and its amendments require Federally-funded actions in the coastal zone to be consistent with State-established coastal zone management programs. The coastal zone includes ocean waters and adjacent land. The CZMA calls upon States and Tribes with Federally-approved coastal zone management programs to develop and implement coastal nonpoint pollution control programs.
- **Forestry.** Forest resources on military lands are managed for a variety of reasons: to provide access to training lands, promote sustainable forest resources, conserve habitat and ecological integrity, and protect water quality. While generating revenue from forest resources is not a primary driver for managing forests on Marine Corps lands, it may provide a valuable revenue source that can be used to support conservation programs.
- **Agricultural Outlease.** Outleases of military lands for agricultural purposes may provide a means of both accomplishing land management goals as well as generating revenues that can supplement natural resource conservation budgets.
- **Wetlands and Waterways.** The Clean Water Act requires wetland and waterway protection and requires Federal agency plans to be consistent with State nonpoint source pollution abatement plans. In addition, *EOs 11990 and 11988* require Federal agencies to avoid adverse impacts or modifications to wetlands and floodplains. Federal agencies must take action to identify and protect wetlands and floodplains, minimize the risk of flood loss and the destruction of wetlands, and preserve and enhance their natural and beneficial values. Military construction and other activities may often have impacts to wetlands or other waters protected under the Clean Water Act. Impacts to these resources should be identified during the NEPA planning process, to ensure proper permits and mitigation are identified.
- **Invasive Species Control.** Invasive species, either flora or fauna, can cause significant damage to natural ecosystems. While control of exotic, non-native or other invasive species is not directly derived by any one specific federal regulation, it may be one of the most important and effective land management techniques to sustain resources and ultimately support regulatory compliance. Invasive species can be detrimental to native fish, wildlife and plant populations, increase risk of wild fires, disrupt natural hydrology leading to flooding or even decreasing water supplies in arid environments. Loss of habitat or predation due to invasive species is one of the leading causes of species declines that may warrant protection under the ESA. Control of invasive species requires long-term, sustained effort.

- **Climate Change Adaptation.** Climate change may have an effect on any one of the natural resources management areas listed above. DoD and USMC policies require INRMPs to assess the potential impacts of climate change to natural resources on USMC installations, in a regionally consistent manner, to the extent practicable, and using the best available science and tools. As part of ecosystem-based management, policies require the use of an adaptive management approach to manage natural resources and respond to climate change.

ENCROACHMENT MANAGEMENT

MCO 11011.22B, Policy and Procedures for Encroachment Control Management, requires installations to prepare Encroachment Control Plans and to coordinate development of those plans with Natural and Cultural Resources Conservation Programs to include the Installation Integrated Natural and Cultural Resources Management Plans. Encroachment Control Plans preparation and execution is the responsibility of the installation's Community Plans and Liaison Office (CPLO). Regional and installation Encroachment Control Programs may include Encroachment Partnering initiatives that could involve interaction with the state or local government, regional conservation forums, or private landowners from either an endangered species or incompatible land-use perspective. Installations are encouraged to develop Encroachment Management Action Teams to provide situational awareness and ensure coordination with overlapping programs, to avoid duplication of effort, follow HQMC policy, and to produce quality plans. The CPLO should be the single point of reference for community relations issues and coordination with local and State governments concerning encroachment issues.





A

APPENDIX

ACRONYMS

ARPA	Archaeological Resources Protection Act
ASN (EI&E)	Assistant Secretary of the Navy (Energy, Installations & Environment)
BGEPA	Bald and Golden Eagle Protection Act
CAA	Clean Air Act
CATEX	Categorical Exclusion
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CETEP	Comprehensive Environmental Training and Education Program
CFR	Code of Federal Regulations
CG	Commanding General
CMEP	Centrally-Managed Environmental Program
CMP10	Environmental Projects Program
CMP22	Environmental Management Program
CPLO	Community Plans and Liaison Office
CZMA	Coastal Zone Management Act
DLA	Defense Logistics Agency
DoD	Department of Defense
EA	Environmental Assessment
EACO, WACO, and PACO	Eastern, Western, and Pacific Area Counsel Office
ECE	Environmental Compliance Evaluation
ECHO	Enforcement and Compliance History Online
EEA	Environmental Executive Agent
EEZ	Exclusive Economic Zone
EIS	Environmental Impact Statement
EMS	Environmental Management System

EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-To-Know Act
ESA	Endangered Species Act
FGS	Final Governing Standards
FONSI	Finding of No Significant Impact
FSRM	Facilities, Sustainment, Restoration and Modernization
GF	Facilities Directorate
GHG	Greenhouse Gas
HAZCOM	Hazard Communication
HQMC	Headquarters Marine Corps
ICRMP	Integrated Cultural Resources Management Plan
INMRP	Integrated Natural Resources Management Plan
LF	Logistics Facilities
MARFORRES	Marine Corps Forces Reserve
MBTA	Migratory Bird Treaty Act
MCCS	Marine Corps Community Services
MCICOM	Marine Corps Installations Command
MCO	Marine Corps Order
MILCON	Military Construction
MMPA	Marine Mammal Protection Act
NAVFAC	Naval Facilities Engineering Command
NEPA	National Environmental Policy Act of 1969
NERP	Navy Environmental Restoration Program
NGO	Non-Governmental Organization
NOV	Notice of Violation
NRT	National Response Team
O&M, MC	Operation and Maintenance, Marine Corps
O&M, MCR	Operation and Maintenance, Marine Corps Reserve
ODS	Ozone-Depleting Substances
OEA	Overseas Environmental Assessment
OEBGD	Overseas Environmental Baseline Guidance Document
OEIS	Overseas Environmental Impact Statement
OPBUD	Base Operating Support Funds
OPNAVINST	Office of the Chief of Naval Operations Instruction
PAO	Public Affairs Office
POA&M	Plan of Action and Milestones
POC	Point of Contact
POTW	Publicly Owned Treatment Works

PPBE	Planning, Programming, Budget, and Execution
QRP	Qualified Recycling Program
RCRA	Resource Conservation and Recovery Act
REC	Regional Environmental Coordinator
REIR	Request for Environmental Impact Review
REVA	Range Environmental Vulnerability Assessment
ROD	Record of Decision
SNC	Significant Non-Compliance
SSPP	Strategic Sustainability Performance Plan
STEP	Status Tool for Environmental Programs

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