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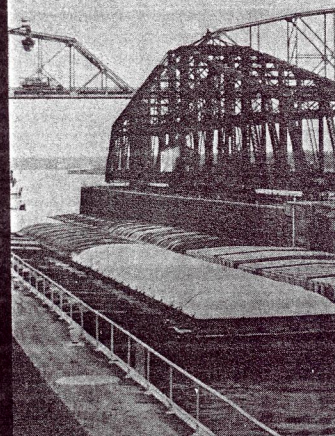
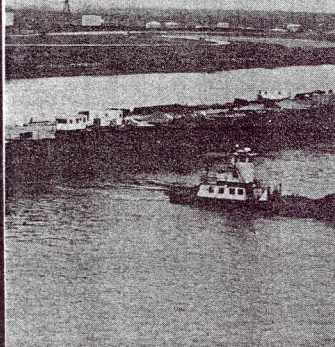
**APPLICABILITY OF ENVIRONMENTAL LAWS
TO REMR ACTIVITIES**

by

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Problem Area		Problem Area	
CS	Concrete and Steel Structures	EM	Electrical and Mechanical
GT	Geotechnical	EI	Environmental Impacts
HY	Hydraulics	OM	Operations Management
CO	Coastal		

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PREFACE

The study reported herein was authorized by Headquarters, US Army Corps of Engineers (HQUSACE), under Civil Works Research Work Unit 32339, "Evaluation of Environmental Impacts for REMR." The study was part of the work under the Environmental Impacts Problem Area of the Repair, Evaluation, Maintenance, and Rehabilitation (REMR) Research Program. The Overview Committee at HQUSACE for the REMR Research Program consists of Mr. John R. Mikel, Mr. Bruce L. McCartney, and Dr. Tony C. Liu. Problem Area Monitor for the study was Mr. Mikel.

The study was conducted by Mr. Jim E. Henderson and Ms. Linda D. Peyman of the Resource Analysis Group (RAG), Environmental Resources Division (ERD), Environmental Laboratory (EL), US Army Engineer Waterways Experiment Station (WES). The work was conducted under the direct supervision of Mr. William J. Hansen, Chief, RAG, and under the general supervision of Dr. C. J. Kirby, Chief, ERD, and Dr. John Harrison, Chief, EL. Problem Area Leader for the Environmental Impacts Problem Area is Dr. Jerome L. Mahloch, EL. Program Manager for REMR is Mr. William F. McCleese, Concrete Technology Division, Structures Laboratory, WES. This report was edited by Ms. Jamie W. Leach, Information Technology Laboratory, WES.

COL Allen F. Grum, USA, was the previous Director of WES. COL Dwayne G. Lee, CE, is the present Commander and Director. Dr. Robert W. Whalin is the Technical Director.

CONTENTS

	<u>Page</u>
PREFACE	1
PART I: INTRODUCTION	4
Background	4
Purpose	5
Scope and Method	5
Use of This Report	8
PART II: COMPLIANCE STATUTES	9
National Environmental Policy Act	9
Clean Water Act	11
Clean Air Act	13
Resource Conservation and Recovery Act	15
Fish and Wildlife Coordination Act	16
Endangered Species Act	16
National Historic Preservation Act and Reservoir Salvage Act/ Archaeological and Historic Preservation Act	18
PART III: STATUTES APPLICABLE IN CERTAIN CASES	20
Marine Protection, Research, and Sanctuaries Act	20
Coastal Zone Management Act and Estuary Protection Act	21
Marine Mammal Protection Act	21
Federal Insecticide, Fungicide, and Rodenticide Act	22
Wild and Scenic Rivers Act	22
Protection of Wetlands, Executive Order No. 11990	24
Floodplain Management, Executive Order No. 11988	24
PART IV: SECONDARY ENVIRONMENTAL LAWS	25
Toxic Substances Control Act	25
Federal Land Policy and Management Act	25
Soil and Water Resources Conservation Act	26
Watershed Protection and Flood Prevention Act	26
Farmland Protection Act	26
Land and Water Conservation Fund Act	26
Forest and Rangeland Renewable Resources Planning Act; National Forest Management Act	26
Surface Mining Control and Reclamation Act	27
Rivers and Harbors Act of March 3, 1899	27
Water Resources Planning Act	27
Submerged Lands Act	27
Coastal Barrier Resources Act	27
Federal Water Project Recreation Act	28
Development of Reservoir Areas for Future Resources of Timber	28
Environmental Effects Abroad of Major Federal Actions, Executive Order No. 12114	28
Anadromous Fish Conservation Act	28
Bald Eagle Act	29
Migratory Bird Conservation Act	29
Migratory Bird Treaty Act	29
Historic Sites Act	29

	<u>Page</u>
Antiquities Act	29
American Folklife Preservation Act	30
Archaeological Resources Protection Act	30
Native American Religious Freedom Act	30
Federal Nonnuclear Energy Research and Development Act	30
PART V: SUMMARY.	31
REFERENCES.	34
APPENDIX A: NOTATION	A1

APPLICABILITY OF ENVIRONMENTAL LAWS TO REMR ACTIVITIES

PART I: INTRODUCTION

Background

1. The Federal commitment to conserve, protect, and enhance the natural and human environment developed from diverse commercial and social requirements for use of natural resources and from public beliefs and values about the environment and the proper use of natural resources (Ortolano 1984). Within the political and legal process, the interaction of publicly held values and efforts for increased resource use has resulted in numerous and diverse laws and regulations affecting both private sector resource use and Federal agency actions. In compliance with these environmental laws, Federal agencies are both regulated and function as the regulators (Environmental Protection Agency (EPA)* 1984). Corps of Engineers (CE) planning, construction, and operations and maintenance (O&M) functions comply with environmental requirements either by the same process as private actions, e.g. permit, or by special provisions of interagency agreements.

2. The Repair, Evaluation, Maintenance, and Rehabilitation (REMR) Research Program was initiated to provide CE personnel with state-of-the-art procedures and products for repair and maintenance of CE civil works projects. These repair and maintenance activities encompass diverse types of actions such as underwater mapping of channels, concrete repair, procedures to control erosion, seepage, and scour; and rehabilitation of navigation locks.

3. The environmental effects of REMR activities are addressed or regulated by numerous environmental or natural resource statutes. REMR activities may have an impact on environmental resources, utilize hazardous or regulated substances, or involve actions requiring permits or licenses. The type, magnitude, and resource setting for REMR activities, and O&M functions in general, are extremely varied. The environmental changes caused by these activities are similarly diverse in magnitude, duration, and significance.

* For convenience, abbreviations are listed in the Notation (Appendix A).

For instance, underwater repair of concrete structures may produce undetectable changes in water quality, whereas rehabilitation of a lock, and subsequent increased navigation activities, can produce long-term changes to aquatic and terrestrial ecosystems. The applicability of environmental laws to a given REMR activity is determined by the regulations implementing the law, as well as the characteristics of the REMR activity and its environmental impacts.

Purpose

4. The purpose of this report is to outline several environmental laws and regulations and to describe generally how those authorities might apply to REMR activities. The intent is to identify the laws that have legal or regulatory authority over REMR activities and to discuss examples of environmental impacts or circumstances, related to REMR activities, to which the statutes might be applicable. This report is for informational use only; it does not constitute official Department of the Army guidance on the application of the enumerated statutes. Such guidance may be obtained from the appropriate Offices of Counsel and Regulatory Functions branches.

5. Environmental laws that are subsumed under more encompassing laws or laws that are primarily applicable to planning and other non-O&M functions are briefly discussed. Personnel responsible for REMR activities should be aware of the intent and authority of these laws, in the event a REMR activity could be affected.

Scope and Method

6. Statutes and Executive Orders, or their implementing regulations, listed below were examined for applicability to REMR activities. The laws were identified through review of literature on environmental legislation, specific legislation, Engineer Regulations (ER), and other CE documents, e.g., environmental documents, master plans, and operational management plans. The statutes were classified as compliance statutes, statutes applicable in certain cases, and secondary environmental laws. This review and classification was accomplished from the standpoint of an agency identifying laws applicable to proposed agency actions, rather than a strict legal interpretation.

- American Folklife Preservation Act (20 USC 2101-2107; PL 94-201 as amended).*
- Anadromous Fish Conservation Act (16 USC 757a-757g; PL 89-304 as amended).
- Antiquities Act (16 USC 431-433; PL 59-209).
- Archaeological Resources Protection Act (16 USC 470aa-47011; PL 96-95).
- Bald Eagle Act (16 USC 668-668d; PL 89-70 as amended).
- Clean Air Act (42 USC 7401-7626; PL 95-95 as amended).
- Clean Water Act (33 USC 1251-1376; PL 92-500 as amended).
- Coastal Barrier Resources Act (16 USC 3501-3510; PL 97-348).
- Coastal Zone Management Act (16 USC 1451-1464; PL 92-583 as amended).
- Development of Reservoir Areas for Future Resources of Timber (16 USC 580; PL 86-717).
- Endangered Species Act (16 USC 1531-1542; PL 93-205 as amended).
- Environmental Effects Abroad of Major Federal Actions (Executive Order No. 12114).
- Estuary Protection Act (16 USC 1221-1226; PL 90-454).
- Farmland Protection Act (7 USC 4201 et seq.; PL 97-98).
- Federal Insecticide, Fungicide, and Rodenticide Act (7 USC 135 et seq.; PL 92-516 as amended).
- Federal Land Policy and Management Act (43 USC 1701-1784; PL 94-579 as amended).
- Federal Nonnuclear Energy Research and Development Act (42 USC 5901-5920; PL 93-577).
- Federal Water Project Recreation Act (16 USC 4601-12 - 4601-21; PL 89-72 as amended).
- Fish and Wildlife Coordination Act (16 USC 661-666c; PL 85-624 as amended).
- Floodplain Management (Executive Order No. 11988).
- Forest and Rangeland Renewable Resources Planning Act; National Forest Management Act (16 USC 1600-1687; PL 94-588).
- Historic Sites Act (16 USC 461-467; PL 74-292).
- Land and Water Conservation Fund Act (16 USC 4601-4 - 4601-11; PL 88-578 as amended).
- Marine Mammal Protection Act (16 USC 1361-1407; PL 92-522 as amended).
- Marine Protection, Research, and Sanctuaries Act (33 USC 1401-1435; PL 92-532 as amended).

* USC = United States Code; PL = Public Law.

- Migratory Bird Conservation Act (16 USC 715-715r; PL 87-383 as amended).
- Migratory Bird Treaty Act (16 USC 703-711; PL 86-732 as amended).
- National Environmental Policy Act (42 USC 4321-4347; PL 91-190 as amended).
- National Historic Preservation Act (16 USC 470-470t; PL 89-665 as amended).
- Native American Religious Freedom Act (42 USC 1996; PL 95-341).
- Protection of Wetlands (Executive Order No. 11990).
- Reservoir Salvage Act (16 USC 469-469c; PL 86-523 as amended by the Archaeological and Historic Preservation Act PL 93-291).
- Resource Conservation and Recovery Act (42 USC 6901-6987; PL 94-580).
- Rivers and Harbors Act of March 3, 1899 (33 USC 401-413).
- Soil and Water Resources Conservation Act (16 USC 2001-2009; PL 95-192).
- Submerged Lands Act (43 USC 1301-1315).
- Surface Mining Control and Reclamation Act (30 USC 1201-1328; PL 95-87).
- Toxic Substances Control Act (15 USC 2601 et seq.).
- Water Resources Planning Act (42 USC 1962-1962d-3; PL 89-80).
- Watershed Protection and Flood Prevention Act (16 USC 1001-1009; PL 85-624 as amended).
- Wild and Scenic Rivers Act (16 USC 1271-1287; PL 90-542 as amended).

Compliance statutes

7. These statutes represent the Nation's comprehensive policies for use and protection of environmental resources. As such, REMR activities may be affected by these statutes. Compliance statutes are discussed in Part II.

Statutes applicable in certain cases

8. These laws are applicable where REMR activities affect the specific resources protected or incorporate the actions addressed or regulated by these statutes. Statutes applicable in certain cases are discussed in Part III.

Secondary environmental laws

9. These environmental or natural resource laws are not applicable to most REMR activities.

10. The diversity of REMR activities could conceivably involve resources or actions specifically covered by these laws. The secondary environmental laws are briefly discussed in Part IV.

Use of This Report

11. This report identifies some general legal and regulatory requirements of environmental laws. For each law, basic information is provided on implementation provisions and REMR activities potentially covered by the law. General information on these laws and state-specific information is available on the Computer-aided Environmental Legislative Data System (CELDS), developed by the Construction Engineering Research Laboratory. This information can be used, prior to starting a REMR project, to identify required regulatory actions. Early involvement of environmental personnel is important in ensuring that environmental considerations are incorporated in project implementation. In some instances, technical advice from natural resource personnel is required, depending on characteristics of the project. General compliance information is summarized; detailed guidance for meeting compliance requirements of the laws is being prepared separately. As noted in paragraph 4 above, this report shall not be used as official Army guidance. The information provided below is intended solely to aid in identifying potentially applicable environmental compliance requirements.

PART II: COMPLIANCE STATUTES

12. Compliance statutes represent the comprehensive Federal policy for protection of natural and cultural resources. Environmental quality is protected, conserved, or enhanced through regulation of use of natural resources, or of actions that could endanger human health or well-being.

13. The compliance statutes include laws governing both private and public sector use of natural resources, and laws enacted specifically for Federal actions. Documentation of the environmental effects of a project or notification and/or coordination with the responsible agency is normally required by these laws. Actions by natural resource agencies, e.g. approval or denial of permits and the documentation of impacts, are the procedures mandated by law to ensure protection of environmental quality.

National Environmental Policy Act

Intent

14. The National Environmental Policy Act (NEPA) was enacted to provide a national policy for protection and enhancement of the environment. For Federal agencies, NEPA's intent is to ensure that the environmental effects of agency actions are considered in decisionmaking along with economic and technical factors (42 USC 4321-4347; PL 91-190 as amended). Accordingly, agencies are required (NEPA, Section 102) to:

- a. Prepare an environmental impact statement (EIS) for major Federal actions that significantly affect the quality of the environment.
- b. Combine natural and social sciences, and environmental design arts in planning and decisionmaking.
- c. Ensure unquantified environmental amenities are considered along with economic and technical considerations.
- d. Propose alternatives to conflicting or controversial uses of natural resources.

Applicability to REMR

15. The applicability of NEPA to REMR activities is dependent on the significance and magnitude of environmental impacts caused by the activities. Regulations governing the application of NEPA to Corps Civil Work projects

including REMR activities are found in Engineer Regulation (ER) 200-2-2. Potentially significant or long-lasting impacts may not be readily apparent to personnel unfamiliar with the affected ecologic resources, e.g., aquatic habitat. Review of REMR activities by environmental resources personnel can result in development of alternatives and incorporation of relevant ecological information in the implementation of REMR activities, so as to protect environmental quality (NEPA, Sec. 102(a) and (h)). REMR actions should be reviewed by personnel knowledgeable of the affected resources to determine whether ER 200-2-2 requires the preparation of NEPA documentation. Those personnel should also review the existing documentation of the environmental effects for O&M functions which include the proposed REMR activities (Office, Chief of Engineers (OCE), Department of the Army 1981). NEPA normally requires the preparation of an Environmental Assessment (EA) or an EIS discussing the environmental impacts caused by O&M of a project. However, OCE is currently evaluating various O&M projects for categorical exclusion from the requirement for EA and EIS preparation, due to minor impacts or routine nature of these actions. Routine REMR activities, such as routine repair, maintenance and rehabilitation, and certain erosion control activities, may be included as O&M Categorical Exclusions.*

16. Environmental documentation for REMR activities are not required if the maintenance functions which include the REMR activities are adequately covered in a project O&M EIS or listed as a categorical exclusion in ER 200-2-2. If not, a review of the EIS, or any existing environmental documentation, and an assessment of potential REMR environmental impacts should be conducted to determine (a) if there are significant impacts resulting from the REMR activities, (b) if environmental conditions have changed (since EIS preparation), or (c) if REMR activities and impacts are substantially different from those discussed in the O&M EIS (OCE 1981, Appendix C, Paragraph 5). A draft EIS supplement is required if the review indicates there may be significant impacts, not adequately covered in the prior EIS, resulting from REMR activities. For projects without an O&M EIS, as noted above, an EA is normally required covering the REMR actions, unless the activity is categorically excluded. Before implementation of an action which requires further

* Personal Communication, Mr. Dick Makinen, Office of Policy, Office, Chief of Engineers, Washington, DC.

documentation, the environmental impacts of the actions are considered and either (a) a Finding of No Significant Impact (FONSI), resulting from an EA or (b) a Record of Decision, resulting from EIS preparation, is signed (OCE 1981, Paragraph 24).

EA and EIS preparation

17. Preparation of an EA, EIS, or EIS supplement for REMR activities will likely be assigned to environmental personnel within CE Operations Divisions or to Planning personnel. Procedures for EA preparation for REMR activities are the same as for other O&M actions. An EA briefly documents the environmental effects to be caused by a proposed action. The EA analysis is used to determine if these effects are of such type, magnitude, duration, or significance as to require an EIS. The EA, normally less than 15 pages, contains a brief discussion of the need for the proposed action, its environmental impacts, and reasonable alternatives to the proposed action, and documents compliance with other environmental laws and coordination with other agencies. The environmental impacts identified in the EA are the basis for deciding if an EIS or a FONSI is prepared. A FONSI is prepared when it is concluded the proposed activities will not have a significant effect on the human environment. An EIS is prepared when significant environmental effects are expected.

18. EIS preparation for REMR activities follows procedures for Projects in an Operations and Maintenance Category (OCE 1981, Appendix C, Paragraph 5). Preparation of a draft EIS and EIS supplement, agency review and comment, and final EIS preparation are somewhat less complex than for planning studies. After preparation of the final EIS, a Record of Decision is prepared to document the final decision or recommendation on the project (OCE 1981, Paragraph 12). The Record of Decision summarizes the technical analyses contained in the EIS, focusing on the environmental impacts and measures taken to minimize the impacts.

Clean Water Act (1977 Amendments to the Federal Water Pollution Control Act)

19. The Clean Water Act (CWA) serves as the major authority for water quality standards and regulation of activities in waters of the United States, including wetlands (33 USC 1251-1376; PL 92-500 as amended). Protection of water quality is accomplished through, among other things, implementation of

water quality standards and regulation of activities in the waters of the United States. The EPA, Corps permitting offices, and state agencies are responsible for implementing provisions of the Act.*

20. The discharge of wastewater, pollutants, or effluents into a stream, river, or reservoir from REMR activities must not violate established water quality standards. Chemical substances, sediment, and debris can be introduced to water bodies from underwater procedures, and from waste and cooling water from repair and maintenance activities. Such discharges may cause changes in water quality which are detrimental to aquatic species and human uses. Section 402 of the CWA established the National Pollutant Discharge Elimination System (NPDES), which can be administered by the states, to regulate discharge of pollutants (OCE 1983, Chapters 3-5). Regulated water quality parameters routinely include pH, temperature, dissolved oxygen, coliform bacteria, and turbidity. Pesticides and other substances are variously regulated by states and local agencies.

21. Section 404 of the Act establishes the Federal permit program, administered by the Corps, to regulate the discharge of dredge or fill material into waters of the United States (OCE 1983, Chapters 3-5, 33 CFR 320-330). Under its regulatory authority, the Corps established a nationwide permit, exempting anticipated, normal repair and rehabilitation activities, so that individual permits would not be required (33 CFR 330.5(3)). The nationwide permit covers REMR activities that are intended to restore or maintain the structure at the original capacity or function, not deviating from the plans for the original structure (33 CFR 330.5(3)). Deviations from original construction designs or expansions of capacity are not covered under the nationwide permit.

22. The environmental impacts of those REMR activities not exempted by the nationwide permit should be reviewed to ensure compliance with Section 404. Such disposal activities may also require an EA in accordance with NEPA. REMR activities requiring discharge of dredged material in waters of the United States must comply with the Section 404(b)(1) guidelines issued by EPA and with Regulatory program requirements (33 CFR 320-330). In some limited cases such discharges may be exempted from regulation under Section 404,

* For purposes of this report, "the Act" or "this Act" refers to the law under discussion.

and Regulatory personnel can assist in that determination. If the REMR activities utilize a previously permitted disposal site or are covered in a final EIS or EA that included a Section 404(b)(1) analysis that discusses the effects of the discharge, then the project is in compliance. Use of a previously permitted site is exempt from compliance requirements if the permit covers the material to be disposed and if other factors are unchanged. If the characteristics of the disposal material or of the disposal site, e.g. runoff, deviate from original conditions, a Section 404(b)(1) analysis should be undertaken. If REMR activities produce a nondredge discharge which normally requires a water quality permit, certification of compliance with water quality standards should be obtained from the state water quality control agency (Section 401). Water quality determinations are based on stream segments and the existing water quality of the segment. Applications for permits or certification must normally provide expected discharge volumes and planned discharge treatment so that the water quality resulting from a discharge can be evaluated. Some state agencies may require different or additional information before processing a certification request. In addition, some water quality certification may contain conditions with which the applicant must comply during his operation.

Clean Air Act

23. Clean air is a requirement for human health and a desirable component of environmental quality. Protection of local air quality became a national priority with the Clean Air Act of 1970 and 1977 amendments (Henderson and Teaford 1985). The 1977 amendments provided for protection of air quality through establishment of ambient air quality standards, industry emission standards, and a permit and enforcement system to enforce the standards (42 USC 7401-7626; PL 95-95 as amended). Section 309 of the Clean Air Act requires EPA or state review of all Federal construction and other major activities that result in air pollution. Corps construction and operation and maintenance activities must comply with air pollution control requirements of Federal, state, and local laws and planning, design, and selection of specifications should consider pollution control. If warranted, more stringent pollution control requirements can be implemented for Corps actions (OCE 1968; Headquarters, Department of the Army 1982). Air quality impacts are

documented in EIS or EA reports prepared for O&M and REMR activities. Projects not covered by an EA or EIS are reviewed and any written comments are made public.

24. The states have been given primary responsibility for regulating air quality by EPA. EPA divided the country into Air Quality Control Regions (AQCR's) and classified air quality for the AQCR's (40 Code of Federal Regulations (CFR) 51). EPA established ambient air quality standards, and air quality standards for new source polluters and for hazardous pollutants (40 CFR 50). Under provisions of the Act, the states prepared State Implementation Plans (SIP's) to accomplish the standards and requirements established by EPA. In some cases, the states established more stringent standards than established by EPA.

25. Regulation of air quality by the states is primarily through permitting of new sources of pollution and through air quality monitoring (40 CFR 52.21). Any construction or new activity in an area must not result in violation of the ambient air quality standards or other provisions of the SIP. This is accomplished through a review and permit process known as the Prevention of Significant Deterioration (PSD) review. Based on this review, the state air pollution agency issues a new source permit for the pollutant. Based on the AQCR classification, EPA established allowable increases for pollutants over existing baseline levels and de minimis levels, i.e. emission increase levels which are not considered significant. New sources of pollutants within the allowable increases or under the de minimis levels may be exempt from permit requirements (different states handle this differently). Permits are issued for new sources of air pollution which have the potential to emit 250 tons (226 metric tons) per year of any air pollutant. Issuance or denial of the permit is based on the PSD review of information provided to the agency by the applicant. Applicants submit information to the air quality agency to demonstrate that the new source will not contribute to air pollution in violation of (a) any national ambient air quality standards in the AQCR or (b) any applicable maximum allowable increase over baseline concentrations. Permit applicants must demonstrate that the best available control technology will be used at the project site and that the proposed new source will not cause pollutant concentrations in excess of ambient air quality standards, new source performance standards, and hazardous emission standards. The permits

set out any restrictions or requirements, e.g. onsite air quality monitoring or reporting, required by the agency.

Resource Conservation and Recovery Act

26. The intent of the Resource Conservation and Recovery Act (RCRA) is protection of the human and natural environment from contamination and degradation by hazardous substances (42 USC 6901-6987; PL 94-580). The overall objective of RCRA is to control the generation, transportation, storage, and disposal of wastes which could be detrimental to human health and environmental quality. The EPA has implemented RCRA by determining the safety of a large number of substances and developing criteria for identifying possibly hazardous substances, and by regulating the transportation and disposal of hazardous substances. REMR activities that utilize regulated hazardous substances or that produce potentially hazardous wastes must comply with RCRA (40 CFR 261). The determination that a waste is hazardous is based on the listing of the substance as regulated (40 CFR 261) or on the characteristics of the substance (Subpart C, 40 CFR 261.20-.24), i.e. ignitability, reactivity, corrosivity, or toxicity. For contracted activities, contract provisions can require contractors to be responsible for hazardous waste disposal. If a regulated or hazardous substance will be generated, the EPA or state agency is notified on EPA Form 8700-12. Disposal of hazardous substances is required at a licensed disposal site. Transportation to the disposal site is documented on an EPA transportation manifest, the official document required for hazardous waste transport. Regulation of hazardous substances is a continuously changing process and assistance from EPA or the responsible state agency is highly recommended.

27. Hazardous substances utilized in REMR activities may not be regulated if the substance is covered under one of the exemption or exclusion categories established by EPA (40 CFR 261.11). These categories cover hazardous substances produced in such quantities or in such a manner, e.g. household garbage, that the regulated waste does not pose a threat. For instance, generators of less than 100 kg/month of hazardous substances are exempted from the requirements of hazardous waste generators. Generators of small quantities are still responsible for proper disposal of the wastes.

Fish and Wildlife Coordination Act

28. The intent of the Fish and Wildlife Coordination Act (FWCA) is to ensure that equal consideration is given wildlife conservation with other aspects of a water resource development project (16 USC 661-666c; PL 85-624 as amended). The Act promotes the consideration of wildlife resources (Comiskey 1982). The FWCA and related legislation require that the Corps consult with the Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), and state wildlife agencies in project planning studies. REMR activities normally will not require this FWCA consultation. If REMR activities include a proposal or authorizations for water to be impounded, diverted, or the channel deepened or the stream or water body controlled or modified, the FWCA consultation would be required to consider the impacts to fish and wildlife habitat. The FWCA does not provide authority for the Corps to manage fish and wildlife directly, but enables the Corps to make the lands available to FWS or state wildlife agencies for fish and wildlife management (FWCA, Sections 3(a) and (b)).

29. If REMR activities result in significant changes in vegetation, channel flow, or other habitat components, FWCA compliance is normally undertaken as part of the decision document or project documentation which includes the EA or EIS. Consultation with the FWS and state wildlife agencies is required during preliminary stages of a new project or project modifications. The wildlife agencies evaluate existing wildlife resources, review Corps plans, and assess the fish and wildlife benefits and losses associated with the proposed action. These agencies typically identify important habitat and species that may be affected, and recommend measures to reduce impacts. The applicable District should respond to each of the recommendations of the coordination report in the project authorization document.

Endangered Species Act

30. The Endangered Species Act seeks to conserve endangered and threatened plant and animal species (16 USC 1531-1542; PL 93-205 as amended). Section 7 of the Act requires Federal agencies to consider endangered species in planning and operation functions (OCE 1983, Paragraph 18-5). Agencies comply

with Section 7 by coordination and consultation with the FWS or NMFS (OCE 1982a, Appendix B). Agencies are required to take actions to ensure that projects do not harm or threaten the existence of a listed species or destroy the species' critical habitat.

31. Actions required before implementation of REMR activities are dependent on whether or not consultation has occurred which considered the proposed actions. If an EIS or previous consultation has determined that operation and maintenance of the project will not affect any listed species or habitat, and if proposed REMR activities are covered in the EIS or similar activities discussed, consultation is not required, provided that conditions have not changed since EIS preparation. Changed conditions would include protected species being attracted to the project or new species listed that may inhabit the project. Similarly, if proposed REMR activities are covered in the EIS or similar activities discussed, then formal consultation is not required. If the REMR activities or similar activities are not discussed in an EIS covering impacts to endangered species, a decision must be made whether to seek the formal consultation process. This decision is based on preliminary environmental assessments, specialized habitat or population studies, and informal consultation with FWS or NMFS. If the applicable District determines that the proposed action may affect a listed species or habitat, formal consultation should be initiated. Formal consultation is required for all REMR activities for which previous consultation has not occurred (OCE 1982a, Paragraphs 2-5b, 2-6).

32. Consultation begins when the agency submits a request to the FWS or NMFS for information on the presence in the project area of species listed or proposed to be listed as endangered or threatened. A map of the proposed project area and a description of the proposed action should be included with the request. Within 30 days the FWS or NMFS responds with a list of species located in the project area. If any listed species are in the project area, the Corps must prepare a biological assessment within 180 days. This assessment identifies any listed or proposed to be listed species that may be affected by REMR activities and determines to what extent REMR activities will impact the critical habitat of the species. Based on the Corps' assessment, the FWS or NMFS provides an opinion as to how the REMR activities will affect the species or its critical habitat. Alternatives to the actions are

proposed, including modifications to design and scheduling, and project abandonment. Consultations are completed within a 90-day period after submission of the biological assessment to the FWS or NMFS, unless an extension is agreed to by both agencies (OCE 1983, Chapter 18, Paragraph 18-5).

National Historic Preservation Act and Reservoir Salvage
Act/Archaeological and Historic Preservation Act

33. Protection of the Nation's cultural, historic, and archeological resources is the policy of the National Historic Preservation Act (NHPA) and the Reservoir Salvage Act. The Reservoir Salvage Act, since amendments of 1974, is usually referred to as the Archaeological and Historic Preservation Act (AHPA) (PL 93-291). The NHPA (16 USC 470-470t; PL 89-665 as amended) strives to preserve, restore, and maintain cultural resources. The NHPA requires Federal agencies to take into account the effect of all Federal or Federally licensed or supported actions, e.g. rehabilitation, construction, permitting, on historic resources. Agencies must determine the effects of their actions on historic districts, sites, and any object included in or eligible for inclusion on the National Register of Historic Places (OCE 1982b, Chapter 3, Paragraph 3-4). The objective of the Reservoir Salvage Act is to preserve historical and archeological data which might be lost or destroyed as a result of Federal construction projects or other Federally licensed activities which cause flooding or alteration of the terrain (16 USC 469-469c; PL 86-523 as amended). For cultural resources affected by construction, the AHPA provides that up to 1 percent of the total amount appropriated for Corps projects can be used for recovery, protection, and preservation of the cultural resources or site, without seeking an exemption. Regulations under both Acts require agencies to take necessary actions to prevent detrimental impacts to historical and cultural resources.

34. To comply with the Acts, the Corps must identify any resources that may be affected by the proposed project, evaluate the effects on the property, allow the Advisory Council on Historic Preservation an opportunity to comment (NHPA Section 106) if National Register properties, or eligible properties, are affected and to inform the National Park Service of the project and actions taken to minimize the impacts (36 CFR 800). These compliance requirements are considered for all actions. If an EA or EIS is prepared, the compliance actions are coordinated with EA or EIS preparation.

35. If a final EIS covers the REMR activity, then no further compliance action may be required. In cases with an existing EIS, sources, e.g. the State Historic Preservation Officer (SHPO), should be consulted to determine if any sites or other cultural resources have been identified since EIS preparation that could be affected by the activity. If an EIS has been filed but contains no information identifying National Register properties or potential impacts on cultural resources, the Corps must provide this information before any construction can take place (OCE 1982b, Chapter 3, Paragraph 3-5). The identification process is initiated by consulting published lists of National Register and eligible properties and other public documents. The District archeologist, the SHPO, the Advisory Council on Historic Preservation, the District consulting archeologist of the National Park Service, and other organizations with historical and cultural expertise can help determine what cultural resources are within the area and the potential impact from REMR activities. Depending on the availability of information, it is incumbent on the Corps to conduct appropriate field investigations (36 CFR 800; OCE 1982, Chapter 3, Paragraph 3-4b). Identified resources which have not been evaluated for inclusion on the National Register must be evaluated. The effect of the project on those properties listed or eligible for listing on the Register is then considered. Cultural resource study material is sent to the SHPO for determination of effect on National Register or eligible property (OCE 1982, Chapter 3, Paragraph 3-4b). If the SHPO determines that National Register properties may be affected, the Advisory Council on Historic Preservation is given opportunity to comment on the project (36 CFR 800).

PART III: STATUTES APPLICABLE IN CERTAIN CASES

36. Statutes applicable in certain cases were enacted to conserve specific environmental resources and to protect human, animal, and plant life from detrimental effects of certain substances, e.g. pesticides. The applicability of these laws to REMR activities is determined by the project setting and materials and procedures used. Protection under these laws is by way of licensing of certain actions, coordination of proposed actions to ensure consistency with established plans, protection of protected species, and regulation of use and disposal of certain substances.

Marine Protection, Research, and Sanctuaries Act

37. The Marine Protection, Research, and Sanctuaries Act regulates the disposal of all types of materials in marine and estuarine waters (33 USC 1401-1435; PL 92-532 as amended). REMR activities that involve disposal of materials in marine environments would be affected by the Act. Actions required before implementation of REMR activities are dependent on the nature of the disposed material, and whether disposal is in an area designated as a marine sanctuary. Criteria in Section 102 of the Act are used to evaluate the impact of a pollutant discharge on a disposal site. Disposal activities must comply with requirements of Section 102. Coordination with Permit personnel in the Operations Division can provide guidance on compliance requirements (EPA/CE 1977). If REMR activities entail the disposal of nondredged material, EPA is responsible for compliance. Disposal that occurs within a marine sanctuary is under the direction of the National Oceanic and Atmospheric Administration (NOAA), Department of Commerce. The discharge of dredged or nondredged material in an area designated as a marine sanctuary by NOAA must comply with the sanctuary regulations established by NOAA (OCE 1983, Paragraph 25-98). Required for compliance decisions are descriptions of the disposal material, disposal method, disposal site, and an assessment of the anticipated environmental impact (33 USC 1414, Section 104). If REMR activities do not meet EPA or NOAA criteria or result in undesirable changes to the project area, alternative plans must be considered.

Coastal Zone Management Act and
Estuary Protection Act

38. The Coastal Zone Management Act (CZMA) was enacted to promote coordination in the management, beneficial use, protection, and development of the coastal zone (16 USC 1451-1464; PL 92-583 as amended). Development, management, and protection are undertaken through long-term plans implemented by the states and local coastal zone management programs. The Estuary Protection Act is specifically for protection, conservation, and restoration of resources in estuaries (16 USC 1221-1226; PL 90-454). Information from state coastal management programs and local planning agencies can assist in determining what environmental resources exist in the project area and potential impacts of REMR activities on the coastal zone and estuaries.

39. To ensure that implementation of REMR activities in coastal areas complies with the CZMA, the Corps certifies to the state coastal zone management agency that the proposed activity is consistent with the state's coastal zone program, to the maximum extent practicable. If REMR activities significantly impact coastal zone activities or result in undesirable changes, then an informal discussion can be undertaken with the state coastal zone agency to identify alternative plans to minimize impacts. Previously prepared O&M plans and EIS's should have considered CZMA plans.

40. Compliance with the Estuary Protection Act requires that studies funded by Congress, e.g. Corps planning or construction projects, consider the effect of the project on estuaries and their resources. The Secretary of the Interior, through the FWS, reviews plans and makes recommendations. This review is incorporated into authorization reports to Congress.

Marine Mammal Protection Act

41. The Marine Mammal Protection Act was enacted to protect diminishing populations of certain species of marine mammals (16 USC 1361-1407; PL 92-522 as amended). The Act establishes the Marine Mammal Commission to oversee protection activities. The FWS and NMFS administer the Act (16 USC 1379), but primary administrative responsibilities are delegated to states with marine mammal conservation and protection programs.

42. REMR activities in coastal areas could result in taking of protected marine mammal species. The possibility of this occurring would become evident in investigations for Endangered Species and NEPA. Information from the FWS and NMFS can help in determining the likelihood of finding marine mammal resources in the project area, and the impact of REMR activities on the resources.

43. If proposed REMR activities pose a threat to a marine mammal species, consultation with the FWS or the NMFS is required to develop an alternative plan to minimize impacts. If REMR activities have a negligible impact on the species and its habitat, incidental taking of small numbers of the more abundant species is allowed, on a case-by-case basis. Requests for incidental taking of marine mammals describe the activity, and the anticipated impact of the activity, on the species and habitat affected (16 USC 1374, (a) and (b)). If the request is approved, a Letter of Authorization is issued by NMFS or FWS.

Federal Insecticide, Fungicide, and Rodenticide Act

44. The Federal Insecticide, Fungicide, and Rodenticide Act was enacted to ensure protection of human health and environmental quality through the safe use and disposal of these substances (7 USC 135 et seq.; PL 92-516 as amended). Under the Act, the EPA has classified pesticides for general or restricted use. The distribution, use, and disposal of pesticides is regulated by the states. Pesticide use in REMR activities is likely limited, more so than in more typical O&M functions, e.g. vegetation maintenance. Use of pesticides in REMR activities would have to be in compliance with applicable state regulations for pesticide use. State regulations vary in such things as permit requirements and criteria for exemptions, e.g. small quantities or agency use. The environmental documentation, EA or EIS, prepared for ongoing O&M functions may include the effects of pesticide use.

Wild and Scenic Rivers Act

45. The Wild and Scenic Rivers Act was enacted to protect the environmental values of free-flowing streams (16 USC 1271-1287; PL 90-542 as amended). REMR activities affecting the free-flowing characteristics of a

stream, e.g. impoundment, diversion or bank stabilization, could be affected by the Act if (a) the stream is part of the Wild and Scenic River System, (b) the stream has been designated for addition to the System, or (c) the action is not on a stream designated for the System, but would cause impacts to a designated river on the System. Implementation of affected REMR activities requires coordination with the Federal agency responsible for the streams.

46. The Act established criteria for designation as a wild river, scenic river, or recreational river. The Department of the Interior and the Forest Service, together with the states, designated streams or parts of streams which met the criteria, and Congress approved a number of the streams to establish the System. Streams may be recommended by the Department of the Interior or the States to Congress for addition to the System. Jurisdiction of the System is under the Department of the Interior and the Forest Service, Department of Agriculture (16 USC 1275). These agencies are responsible for consultation with Federal agencies that are issuing licenses or permits for activities in designated streams or are planning water resource developments, e.g. dams, water conduits, or reservoirs. REMR activities are affected if the activity alters the stream's free-flowing character or environmental values or if there is a discharge into the stream. If REMR activities affect a river that is part of the System, notification is required of the responsible agency of intent to modify the stream or to request issuance of a permit. This notification is required at least 60 days prior to construction or issuance of license or permit (16 USC 1278). Relevant information, e.g., the nature of the proposed action and an assessment of its environmental effects, is included with the notification. The EIS or EA should consider environmental effects to designated rivers.

47. The responsible department Secretary either gives or denies consent to the proposed action or permit. This decision is determined by (a) adverse effects to the environmental values for which the river was designated and (b) loss or diminution of the environmental values (scenic, recreational, and fish and wildlife) of a designated river. If consent is denied, measures are recommended to eliminate adverse effects, and plans are revised.

Protection of Wetlands
Executive Order 11990

48. Wetlands and wetland values are to be protected from all Corps actions. New construction and other activities are to be avoided, to the extent possible (Sections 1 and 2). The construction actions include draining, dredging, channelizing, filling, diking, impounding, and related activities, and any structures or activities (Section 7).

49. REMR activities that include these construction actions in wetlands can occur if it is decided that (a) there is no practical alternative to the construction, and (b) all practical measures to minimize harm are included as part of the construction activity (Section 2).

50. In considering the effects of new construction as part of REMR activities, the following factors (Section 5) are to be included in the analysis:

- a. Public health, safety, and welfare, including water supply, quality, recharge, and discharge; pollution; flood and storm hazards; and sediment and erosion.
- b. Conservation and maintenance of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, food and fiber resources.
- c. Other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

51. Compliance with this Executive Order involves an analysis of the impacts to wetlands caused by the REMR activity. The analysis becomes part of the project documentation or is incorporated in an EA or EIS for the action.

Floodplain Management
Executive Order 11988

52. The wise development and management of floodplains is to be encouraged by all Federal actions so as to minimize the risk and impacts associated with floods and to preserve and restore the natural values of floodplains (Sections 1 and 2). Corps activities on floodplains are to minimize adverse environmental impacts, e.g. erosion, and should be limited to those actions for which there is no practicable alternative (ER 1165-2-26). The short-term and intermittent nature of most REMR activities would minimize the impact to floodplain values and flood risks, so that the adverse floodplain impacts would be minimized.

PART IV: SECONDARY ENVIRONMENTAL LAWS

53. The secondary environmental laws regulate specific biological resources, agency functions, and natural resource uses that are not normally part of O&M or REMR functions. Requirements of some of the statutes are superceded or subsumed under the compliance statutes. Many of these are applicable to Planning Division actions, e.g. coordination of planning with other Federal agencies. At some point, a REMR project could conceivably involve agencies or activities covered by these laws, so a familiarity with them is advised.

Toxic Substances Control Act

54. The Toxic Substances Control Act is intended to control the testing, manufacture, and marketing of new toxic substances (15 USC 2601 et seq.). Regulated substances include such things as asbestos, polychlorinated biphenyls, Tris, chlorinated naphthalenes, and various industrial compounds (40 CFR 704, 720, and 763). REMR use of regulated substances is exempted from EPA notification under the provisions for small quantities, for research and development, or for test marketing (40 CFR 720.36 and 720.38).

Federal Land Policy and Management Act

55. The Federal Land Policy and Management Act is the organic act for the Bureau of Land Management (BLM); i.e., the Act establishes the mission and authority of the agency (43 USC 1701-1784; PL 94-579 as amended). A Memorandum of Agreement has been implemented by the Secretaries of the Army and the Interior which provides for cooperation between the two agencies for Corps projects on BLM lands. BLM reviews and provides recommendations for Corps construction projects or O&M activities on BLM lands (OCE 1982b). REMR activities, e.g. testing activities or implementation of projects on public lands, can be implemented under the existing cooperation authority or by development of supplemental land management agreements (OCE 1982b). These agreements specify procedures and responsibilities for administration of the project area and adjacent BLM lands.

Soil and Water Resources Conservation Act

56. This is the organic act for the Soil Conservation Service (SCS), and establishes the requirement for the National Soil and Water Conservation Program (16 USC 2001-2009; PL 95-192). Coordination of Corps and SCS activities is provided by interagency agreement (OCE 1982b).

Watershed Protection and Flood Prevention Act

57. This act implements the Watershed Protection Program of SCS, authorizing construction of dams and other structures in upstream watersheds (16 USC 1001-1009; PL 85-624).

Farmland Protection Act

58. The Farmland Protection Act is intended to minimize the extent to which Federal programs cause unnecessary and irreversible conversion of farmland to nonagricultural uses (7 USC 4201 et seq.; PL 97-98). The Soil Conservation Service provides advice and consultation on whether a site proposed for a REMR activity meets the criteria for protection under the Act.

Land and Water Conservation Fund Act

59. This act provides funds to assist states in acquiring and developing lands for recreation. Project master plans are to be cognizant of State Comprehensive Outdoor Recreation Plans and other provisions of the Act. O&M actions are not affected unless lands acquired under the Act are converted to some use other than recreation (16 USC 4601-4 - 4601-11; PL 88-578). Replacement of lands is required for recreation lands converted to other uses as a result of REMR activities.

Forest and Rangeland Renewable Resources Planning Act;
National Forest Management Act

60. These two Acts constitute the organic acts for the Forest Service, Department of Agriculture (16 USC 1600-1687; PL 94-588).

Surface Mining Control and Reclamation Act

61. This Act established the Office of Surface Mining Reclamation and Enforcement in the Department of Interior (30 USC 1201-1328; PL 95-87). Primary purposes of the Act were to regulate surface mining, reclaim abandoned mines, fund research related to surface mining, and promulgate environmental protection standards for surface coal mining.

Rivers and Harbors Act of March 3, 1899

62. This Act established the Corps regulatory program for construction of piers, bridges, and other structures, placement of obstructions to navigation, and refuse disposal in navigable waters (33 USC 401-413).

Water Resources Planning Act

63. This Act established river basin commissions, provided financial assistance to states for water resources planning, and established the Water Resources Council (WRC) (42 USC 1962-1962d-3; PL 89-80). The WRC developed planning policy procedures for the Federal water resource agencies in the form of the "Principles and Standards," replaced by the "Principles and Guidelines" in 1983. Although never abolished, the WRC has not been active since 1983.

Submerged Lands Act

64. This Act conveys legal title and authority of lands beneath navigable waters to the states (43 USC 1301-1315). Corps projects, i.e. navigation and flood control, are exempted from any restrictions of state control.

Coastal Barrier Resources Act

65. This Act established the Coastal Barrier Resources System and prohibits new Federal construction, purchase, or stabilization projects for the purpose of development (16 USC 3501-3510; PL 97-348). The intent of the law is to protect fish, wildlife, and migratory habitats; to prevent loss of

human life; and to prevent questionable Federal expenditures that result from development of coastal barrier islands and adjacent nearshore areas. Except for maintenance of existing projects, e.g. dredging, no new expenditures or financial assistance is allowed for areas in the System.

Federal Water Project Recreation Act

66. This Act provides for recreation and fish and wildlife to be included as project planning purposes in Federal water resources projects (16 USC 4601-12 - 4601-21; PL 89-72). Cost-sharing and non-Federal participation are required for improvements other than minimum facilities for public health and safety.

Development of Reservoir Areas for Future Resources of Timber

67. This Act requires that forest and vegetation around reservoirs be maintained and managed so as to provide dependable future resources (16 USC 580; PL 86-717). The Act encourages forest management through use of such practices as sustained yield programs, reforestation, and accepted conservation practices.

Environmental Effects Abroad of Major Federal Actions Executive Order No. 12114

68. This Executive Order establishes authority for implementation of NEPA-like environmental procedures for activities outside US boundaries. The intent is to provide a mechanism for incorporation of environmental considerations in decisions on overseas actions. REMR activities would have to comply with any procedures established under this Executive Order.

Anadromous Fish Conservation Act

69. This Act authorizes the FWS to cooperate with the states for conservation and enhancement of anadromous fish of the Great Lakes and Lake Champlain (16 USC 757a-757g; PL 89-304). Any requirements for REMR under this Act would be part of a FWCA report.

Bald Eagle Act

70. This Act protects the bald eagle and its habitat (16 USC 668-668d; PL 89-70). Restrictions or compliance requirements for REMR activities under the Bald Eagle Act are subsumed in the Section 7 consultation process for the Endangered Species Act.

Migratory Bird Conservation Act

71. The Migratory Bird Conservation Commission was established by this Act to identify land and water areas that are important for migratory birds (16 USC 715-715r; PL 87-383). The identified lands are recommended to the FWS for acquisition and management for conservation and protection of migratory birds. If lands acquired under this Act are affected by REMR activities, this impact will be included in the EA, EIS, and/or FWCA reports.

Migratory Bird Treaty Act

72. This Act makes it illegal to hunt or tamper with nests or eggs of migratory birds protected by treaties between the United States and Great Britain, Mexico, and Japan (16 USC 703-711; PL 86-732). The FWS administers provisions and regulations promulgated under this Act.

Historic Sites Act

73. This Act authorizes the National Park Service to engage in a number of historic preservation activities (16 USC 461-467; PL 74-292). Corps activities affecting historic and other cultural resources are regulated by NHPA and AHPA.

Antiquities Act

74. The Antiquities Act was the first cultural resource preservation legislation. It authorizes the President to establish landmarks or objects of historic or scientific interest on public lands as national monuments (16 USC

431-433; PL 59-209). The designated monuments are maintained or managed by the National Park Service, Forest Service, and Department of the Army. The agencies can allow scientific or educational investigations of the cultural and archaeological resources of the properties. The Archaeological Resources Protection Act of 1979 now generally covers these investigations.

American Folklife Preservation Act

75. This Act established the American Folklife Center in the Library of Congress to further the research, study, and collection of items related to American folklife (20 USC 2101-2107; PL 94-201).

Archaeological Resources Protection Act

76. This Act (the ARPA) protects archeological resources on Corps and other public lands by requiring a permit for excavations and removal of resources (16 USC 470aa-47011, PL 96-95). The National Park Service administers the permits for the Corps. The archaeological resources remain property of the United States, and provisions must be made for preservation of the resources and associated records and data.

Native American Religious Freedom Act

77. This Act protects the exercise of traditional religions of the American Indians, Eskimo, Aleut, and Native Hawaiians (42 USC 1996; PL 95-341). Primary objectives of this Act include the protection of access to sacred sites, the use and possession of sacred objects, and freedom of worship through ceremonial and traditional rites.

78. Protection of sites is accomplished through an interaction with the ARPA. If a REMR activity may affect a site, then this Act, through the ARPA, will be involved.

Federal Nonnuclear Energy Research and Development Act

79. This Act authorizes research in a number of energy development alternatives, e.g. solar and geothermal energy (42 USC 5901-5920; PL 93-577).

PART V: SUMMARY

80. The regulation of Federal agency actions by environmental laws has progressed from very little regulation, to documentation of environmental impacts, to protection of resources and regulation of specific actions. This progression is documented in this report, as relevant to REMR activities by the Corps, and to O&M functions in general. The early pollution and natural resource laws were melded into a national commitment to environmental protection and enhancement by NEPA. NEPA requirements for environmental documentation for O&M actions broadened the scope of environmental protection from impact assessment of new planning projects, the major focus of NEPA, to the full range of Corps planning, construction, and operations activities. The Clean Water Act and other regulatory legislation brought increased responsibility for environmental quality to the Operations Divisions in Corps Districts. The rehabilitation and maintenance procedures implemented under the REMR Program are required to meet the same environmental regulatory and legal requirements as other O&M actions, as summarized in Table 1.

81. Determining the applicability of environmental laws to REMR projects requires recognition of the dynamic nature and range of conditions for natural resources. REMR technology will be used on Corps structures in project settings exhibiting a diversity of topographic, hydrologic, and hydraulic conditions. The surrounding terrestrial and aquatic ecosystems vary in habitat value, stability, complexity, and sensitivity to environmental change. Additionally, a single REMR activity may cause negligible or undetectable changes or impacts. However, the secondary impacts resulting from initial changes (e.g. ground-water contamination), or the cumulative impacts of multiple or repeated REMR activities, could result in significant environmental impacts. These secondary and cumulative impacts must be considered. Review of REMR activities by environmental personnel can identify the natural resource values of a project setting and the potential, secondary, and cumulative impacts.

Table 1

Summary of Environmental Laws Applicable to REMR Activities

<u>Law</u>	<u>Resource or Activity Regulated</u>	<u>Agency Requirement</u>
National Environmental Policy Act	Federal projects or agency actions	Preparation and coordination of an environmental assessment or environmental impact statement
Section 404 of Clean Water Act	Discharges of dredged or fill materials into waters of the United States, except maintenance dredging	Compliance with EPA guidelines for Sec. 404(b)(1). Certification of water quality; Section 404 authorization; Appropriate state permits
	Disposal of maintenance dredging material	
Clean Air Act	Air pollution emissions	New source permit for polluters of ≥ 250 tons (226 metric tons) of an air pollutant
Resource Conservation and Recovery Act	Hazardous substance generation and disposal	EPA notification of generation, transportation, and disposal
National Historic Preservation Act; Reservoir Salvage Act	Historic and archeological resources	Coordination with SHPO; preservation of resources Consultation with ACHP
Fish and Wildlife Coordination Act	Management of Corps lands for fish and wildlife	Coordination with FWS
Endangered Species Act	Threatened and endangered species and habitats	Formal consultation process

(Continued)

APPENDIX A: NOTATION

AHPA	Arhaeological and Historic Preservation Act
AQCR	Air Quality Control Region
ARPA	Archaeological Resources Protection Act
BLM	Bureau of Land Management, Department of the Interior
CE	Corps of Engineers
CELDS	Computer-aided Environmental Legislative Data System
CFR	Code of Federal Regulations
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ER	Engineer Regulation
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
FWS	Fish and Wildlife Service
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service, Department of Commerce
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OCE	Office, Chief of Engineers
O&M	Operations and Maintenance
PL	Public Law
PSD	Prevention of Significant Deterioration
REMR	Repair, Evaluation, Maintenance, and Rehabilitation
RCRA	Resource Conservation and Recovery Act
SCS	Soil Conservation Service
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
USC	United States Code
WRC	Water Resources Council

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Table 1 (Concluded)

Law	Resource or Activity Regulated	Agency Requirement
Marine Protection, Research, and Sanctuaries Act	Disposal of dredged and non-dredged material in open water or marine sanctuaries	Compliance with disposal requirements of CE, EPA, or NOAA
Coastal Zone Management Act	Planning or construction activities in coastal zones	Consultation with state agencies prior to implementation
Estuary Protection Act	Planning or construction activities (with Congressional authorization) in estuaries	FWS review to be incorporated in Congressional authorization reports
Marine Mammal Protection Act	Marine mammals	Consultation with FWS and NMFS
Federal Insecticide, Fungicide, and Rodenticide Act	Pesticide use and disposal	Compliance with state and Federal regulations
Toxic Substances Control Act	Toxic substance use and disposal	EPA notification
Wild and Scenic Rivers Act	Permits for water resource projects on streams in the Wild and Scenic River System	Notification and coordination with Department of Interior and Forest Service

