Environmental Management and Compliance Requirements Handbook

515–1–H

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Environmental Management and Compliance Requirements Handbook 515-1-H

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FOREWORD

Every American, as well as every organization in America, is obligated to protect the environment. The U.S. Geological Survey (USGS) is continually striving to ensure preservation of this core value.

The incorporation of aggressive environmental protection measures into the workplace is a sound business practice. We cannot afford the waste, expense, or harm to our people and the scarce natural resources. Preserving and conserving today results in spending less on cleanup activities and compliance costs tomorrow and preserves scarce resources for future generations. It is critical to integrate environmental policies and directives into our daily operations and implement them throughout the organization.

Environmental protection is a responsibility of every employee and a key task for every manager. Managers have specific legal responsibilities under the provisions of environmental laws and regulations, detailed in the Department of the Interior (DOI) and USGS policies. The USGS developed a comprehensive environmental management program that focuses on maximizing our efforts in preventing pollution; protecting air, water, and soil quality; and caring for the historic sites and natural resources at USGS locations in accordance with all applicable rules and regulations.

This handbook replaces Environmental Management and Compliance Requirements Handbook 445-1-H dated June 2002, expands Survey Manual (SM) Chapter 515.1, Environmental Policy and Responsibilities, and is a cornerstone of our environmental compliance program. This handbook has been developed to provide staff with a single user-friendly document that incorporates both the DOI and USGS policy requirements. New USGS chapters issued in the future will be incorporated in sequential order. Updates and revisions to chapter content will be highlighted in Appendix A, Fiscal Year Changes Summary, with the last revision date annotated in the Table of Contents. The Environmental Management Branch (EMB) will post future manual changes or additions as they occur on the USGS Office of Policy and Analysis and EMB SharePoint sites.

The EMB will coordinate future updates, additions, or changes to proposed guidance through respective field office and science center chiefs, administrative officers, and managers for review and comment prior to making changes to the handbook. The USGS Sustainability Council will provide a review prior to bureauwide review. The Senior Sustainability Officer (SSO) will provide final approval.

Together, the USGS 515-1-H – Environmental Compliance and Protection Handbook and USGS Survey Manual Chapter 515.1 – Environmental Compliance constitute the USGS environmental policy. Additionally, the USGS adopts policy by reference (such as U.S. Environmental Protection Agency (EPA), Department of Transportation (DOT), and Occupational Safety and Health Agency (OSHA) regulations; DOI Series 31 Departmental Manuals on Environmental Quality Programs (Parts DM 515 – DM 523); and USGS Survey Manual 515.4 – Environmental Management System).

New Departmental policies issued in the future will be incorporated as part of this handbook.

The EMB will serve as the administrator of this manual. Questions or recommended changes to this handbook may be directed to the USGS Environmental Compliance Program Manager.

Jose R. Aragon
Associate Director for Administration

8/23/16
Date

Change Summary

Reference and requirements to Executive Order (EO) 13690 – Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input (January 30, 2015), and H. 520 DM 1, Floodplain Management and Wetlands Protection Procedures were added.

A direct link to the Yellow Book: Guide to Environmental Enforcement and Compliance at Federal Facilities (EPA 315-B-98-011, February 1999) was removed because EPA no longer has a direct link to the Yellow Book. The Yellow Book, renamed to EPA's Guide to Enforcement and Compliance at Federal Facilities, is located on the EPA Federal Facilities Enforcement Office (FFEO) site.

Updated the following links: GHS, https://www.osha.gov/dsg/hazcom/global.html, https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/facility-response-plan-frp-overview, and https://www.epa.gov/hwgenerators/uniform-hazardous-waste-manifest-instructions-sample-form-and-continuation-sheet-and.

Changed the Material Safety Data Sheet (MSDS) terminology to Safety Data Sheet (SDS) as prescribed by Globally Harmonized System standards.

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CHAPTER 1. AUTHORITY, PURPOSE, AND GENERAL POLICIES

1. **Scope.** This handbook expands on the USGS policy for compliance with both statutory and regulatory requirements and the management of USGS environmental programs, as established in SM 515.1.

A. *Applicability.*

(1) This handbook applies to all USGS locations, including owned, leased, and otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Each manager of a USGS location should obtain copies of its respective State, Tribal, and local regulations to determine if the location, including field work associated with the location, is subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

B. *Background.*

(1) Executive Orders and Congressional legislation have directed all Federal agencies to provide leadership in the protection of our Nation's environment. The sources that generate the requirements, regulations, standards, mandates, policies, and guidance form the basis of this handbook. Specific technical discussions of the sources are presented in each chapter as they apply to various aspects of environmental protection.

(2) Federal environmental legislation extends as far back as 1899 with the Rivers and Harbors Act. For many years, sovereign immunity exempted Federal agencies from compliance with environmental legislative requirements. Court decisions, however, have determined that Federal agencies must comply with legislative requirements. Further, Congress is continuing its trend of including waivers of sovereign immunity when reauthorizing or amending environmental statutes.

(3) The USGS implementation of executive and legislative mandates, as set forth in this handbook, is directed toward compliance with environmental protection regulations. Accordingly, the environmental policies contained in this handbook consolidate into one document the USGS policy, legislative mandates, and requirements for implementing the Federal regulations for air and water quality, land use, solid and hazardous waste, forest management, fish and wildlife management, and management of other environmental, natural, cultural, historical, and archaeological resources.

2. **Authorities and References.**

A. *Federal Statutes.*

(1) Alternative Motor Fuel Act of 1988, as amended (Public Law 100–494).

(2) American Indian Religious Freedom Act of 1978 (Public Law 95–341, 42 United States Code (U.S.C.) 1996 et seq.).

(3) Antiquities Act of 1906 (16 U.S.C. 431 et seq.).

(4) Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469 et seq.).

(5) Archaeological Resources Protection Act of 1979 (16 U.S.C. 470(aa) et seq.).

(6) Clean Air Act of 1970, as amended (42 U.S.C. 7401 et seq.).

(7) Clean Water Act of 1977, as amended (Public Law 95–217, 33 U.S.C. 1251 et seq.).

(8) Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et seq.).

(9) Community Environmental Response Facilitation Act of 1992 (Public Law 102–426).

(10) Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. 9601 et seq.).

(11) Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C. 11001 et seq.).

(12) Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.).

(13) Federal Facilities Compliance Act of 1992 (Public Law 102–386).

(14) Federal Insecticide, Fungicide, and Rodenticide Act of 1947, as amended (Public Law 92–516, 7 U.S.C. 136, et seq.).

(15) Federal Noxious Weed Act of 1974 (7 U.S.C. 2801 et seq.).

(16) Federal Property and Administrative Services Act of 1949 (10 U.S.C. 484 et seq.).

(17) Federal Tort Claims Act of 1946, as amended (28 U.S.C. 2671 et seq.).

(18) Fish and Wildlife Conservation Act of 1980 (16 U.S.C. 2901 et seq.).

(19) Hazardous and Solid Waste Amendments of 1984 (Public Law 98–616).

(20) Hazardous Materials Transportation Act of 1975 (49 U.S.C. 5101 et seq.).

(21) Hazardous Materials Transportation Uniform Safety Act of 1990 (Public Law 101-615).

(22) Historic Sites, Buildings, and Antiquities Act of 1935 (Public Law 74-292, 16 U.S.C. 461 et seq.).

(23) Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 et seq.).

(24) Marine Protection, Research, and Sanctuaries Act of 1972, as amended (33 U.S.C. 1401 et seq.; 16 U.S.C. 1431 et seq.).

(25) National Energy Conservation Policy Act of 1978 (Public Law 95–619).

(26) National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

(27) National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.).

(28) Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001 et seq.).

(29) Noise Control Act of 1972 (42 U.S.C. 4901 et seq.).

(30) Noxious Plant Control Act of 1968 (43 U.S.C. 1241 et seq.).

(31) Occupational Safety and Health Act of 1970 (29 U.S.C. 651 et seq.).

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

(33) Pollution Prevention Act of 1990 (42 U.S.C. 13101 et seq.).

(34) Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901 et seq.).

(35) Rivers and Harbors Act of 1899 (33 U.S.C. 407 et seq.).

(36) Soil Conservation Act of 1938 (16 U.S.C. 590a et seq.).

(37) Superfund Amendments and Reauthorization Act of 1986 (Public Law 99–499).

(38) Toxic Substances Control Act of 1976 (15 U.S.C. 2601 et seq.).

(39) Used Oil Recycling Act of 1980, as amended (Public Law 96–463).

B. *Federal Regulations.*

(1) 29 Code of Federal Regulations (CFR) 1910, Occupational Safety and Health Standards.

(2) 33 CFR 1–end, Navigation and Navigable Waters.

(3) 36 CFR 60, National Register of Historic Places.

(4) 36 CFR 800, Protection of Historic and Cultural Properties.

(5) 40 CFR 1–end, Protection of the Environment.

(6) 43 CFR 11, Natural Resources Damage Assessment.

(7) 49 CFR 100–199, Transportation.

(8) 50 CFR 1–end, Wildlife and Fisheries.

C. *Executive Orders (EO).*

(1) EO 11990, May 24, 1977, Protection of Wetlands.

(2) EO 12088, October 13, 1978, Federal Compliance with Pollution Control Standards.

(3) EO 12759, April 17, 1991, Federal Energy Management.

(4) EO 12843, April 22, 1993, Procurement Requirements and Policies for Federal Agencies for Ozone Depleting Substances.

(5) EO 12844, April 22, 1993, Federal Purchases of Alternative Fuel Vehicles.

(6) EO 12845, April 21, 1993, Requiring Agencies to Purchase Energy Efficient Computer Equipment.

(7) EO 12856, August 3, 1993, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements.

(8) EO 12873, October 20, 1993, Federal Acquisition, Recycling, and Waste Prevention.

(9) EO 12902, March 8, 1994, Energy Efficiency and Water Conservation at Federal Facilities.

(10) EO 13031, December 13, 1996, Federal Alternative Fueled Vehicle Leadership.

(11) EO 13101, September 16, 1998, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition.

(12) EO 13123, June 3, 1999, Greening the Government through Energy Efficient Management.

(13) EO 13134, August 12, 1999, Developing and Promoting Biobased Products and Bioenergy.

(14) EO 13148, April 26, 2000, Greening the Government through Leadership in Environmental Management.

(15) EO 13149, April 26, 2000, Greening the Government through Federal Fleet and Transportation Efficiency.

(16) EO 13150, April 21, 2000, Federal Workforce Transportation.

(17) EO 13175, November 6, 2000, Consultation and Coordination with Indian Tribal Government.

(18) EO 13693, March 19, 2015, Planning for Federal Sustainability in the Next Decade.

(19) EO 13690, January 30, 2015, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input, amending EO 11988, May 24, 1977, Floodplain Management.

3. **Requirements.**

A. *USGS Compliance.* The USGS will comply with environmental requirements in the following order:

(1) *Statutory Requirements.* Environmental laws passed by Congress and signed by the President require compliance by Federal facilities with all substantive and procedural requirements that apply to environmental management. State and local governments often enact similar or more stringent laws that apply to Federal facilities.

(2) *Regulatory Requirements.* Federal, State, Tribal, and local regulations implement and expand upon statutory requirements. Each chapter in this handbook also refers to other significant Federal regulations pertaining to environmental compliance, pollution prevention, and protection of natural or cultural resources.

(3) *Executive Order Requirements.* EO 12088, Federal Compliance with Pollution Control Standards, October 13, 1978, requires executive agencies to comply with applicable requirements of Federal laws. This EO requires each agency to submit to the Office of Management and Budget (OMB) an annual plan for environmental pollution control with cost estimates for the design, construction, management, operation, and maintenance of Federal facilities. In addition, other EOs require Federal agencies to assume a leadership role in environmental compliance and protection.

(4) *DOI Requirements.* Departmental requirements are published in Departmental Manual 515, Chapter 2, and Departmental Manual 518, Chapters 2 and 3. These requirements are consolidated and incorporated within this handbook.

(5) *USGS Requirements.* The Director establishes USGS environmental compliance and protection requirements. In addition to policies established in this handbook, the Director periodically provides additional policy and guidance through letters, memoranda, and messages.

B. *Handbook Format.* The handbook presents overall policy and program management in chapters that deal with specific environmental and technical issues. Each chapter is broadly divided into five parts: Section 1: Scope, Section 2: Authorities and References, Section 3: Requirements, Section 4: Responsibilities, and Section 5: Additional Resources.

(1) *Section 1.* The scope explains why the chapter exists. It may consist of the following components:

(a) *Applicability.* Applicability identifies to whom the chapter applies.

(b) *Background.* Background addresses why the USGS is carrying out these actions and discusses historic items in relation to the subject of the chapter.

(2) *Section 2.* Describes the authority and lists legislative references that apply to the chapter's subject matter.

(3) *Section 3.* Explains how legislative and other requirements apply and considers all policy-related items that pertain to the chapter's subject matter.

(4) *Section 4.* Considers all responsibilities associated with statutes, policies, and requirements.

(5) *Section 5.* Additional resources are listed pertaining to the chapter's subject matter.

(6) Terms and definitions, appendixes, and an index are provided at the end of the handbook to assist with clarification.

C. *Environmental Policy and Program Elements.*

(1) Include environmental protection and compliance as an integral part of every operation.

(2) Hold managers and supervisors accountable and provide them with recognition for implementing and managing the environmental management program within the scope of their authority and responsibility.

(3) Establish and maintain a staff of environmental protection professionals and collateral-duty environmental program coordinators, at appropriate levels within the Department, to advise

managers in the development and implementation of an environmental management and compliance program.

(4) Require that no employee be subjected to restraint, interference, coercion, discrimination, or reprisal for filing a report of an alleged adverse environmental action or condition in the workplace.

(5) Provide employees with the supervision, knowledge, and skills necessary to perform their assigned tasks in a manner that minimizes the impact on the environment.

(6) Promote an off-the-job environmental ethic through on-the-job environmental awareness activities.

(7) Incorporate and enforce appropriate environmental protection and compliance performance clause(s) in contracts with concessionaires and contractors.

(8) Develop an organizational policy that includes manager and employee accountability, and designates appropriate personnel and financial resources for program implementation.

(9) Ensure that employees are aware of, have reasonable access to, and are instructed on how to implement applicable policy documents, codes, regulations, and program standards.

(10) Conduct annual evaluations of program elements, inclusive of personnel and financial resources, for the purpose of establishing short- and long-term goals for program enhancement and implementation.

(11) Conduct evaluations for identifying current and potential noncompliant areas within the workplace.

(12) Determine actions to be taken to correct an area of noncompliance, or take appropriate steps to prevent a noncompliant situation from arising.

(13) Identify, develop, coordinate, schedule, and conduct required training for the appropriate audiences.

(14) Establish standard and regulatory compliance assistance awards and recognition programs.

(15) Ensure USGS contractors, concessionaires, and volunteers and other non-USGS employees working or performing duties comply with the environmental rules and regulations.

4. **Responsibilities.** See Chapter 2 of this handbook.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 2. RESPONSIBILITIES

1. **Scope.** This chapter establishes the responsibilities of USGS personnel to maintain compliance with both statutory and regulatory requirements and the management of USGS environmental programs.

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased, and otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires USGS employees, contractors and other personnel acting on behalf of the USGS, to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

2. **Authorities and References.** See Chapter 1, Section 2 of this handbook.

3. **Requirements.** The USGS will comply with all Federal, State, Tribal, and local statutory and regulatory requirements and with DOI and USGS environmental management and compliance policy requirements.

4. **Responsibilities.**

A. *Bureau Director.*

(1) Provides management direction and support necessary for the USGS to effectively fulfill its policy commitments by holding Associate and Regional Directors accountable for effectively fulfilling USGS environmental program responsibilities.

(2) Appoints a Senior Sustainability Officer (SSO) with sufficient authority to effectively represent the interest and support of the Director in the management and administration of USGS environmental programs.

(3) Provides adequate resources (staff and budget) to effectively implement and administer USGS environmental programs.

(4) Demonstrates personal commitment to protection of human health and the environment.

(5) Provides for personnel recognition for outstanding environmental management, compliance, and awareness performance.

(6) Submits reports to the Department on USGS environmental programs, as required or upon request, that may include information about funding levels for USGS environmental programs, compliance audit, and abatement activities, and so on.

B. *Chief Sustainability Officer (CSO).* The Associate Director for Administration serves as the CSO for the USGS and is responsible for ensuring the establishment of and direction for the USGS environmental management and compliance program.

(1) Provides regular updates to the Director on the environmental program.

(2) Includes environmental issues on the agenda for the Executive Leadership Team (ELT) meetings when appropriate.

(3) Exercises the authority of the Director for the management and administration of the program.

(4) Directs program activities through the Chief, Office of Management Services, to ensure that adequate resources are provided to the Environmental Management Branch to develop and administer the program.

(5) Promulgates policy, directives, and alternate or supplemental standards that apply to the implementation of an effective program.

(6) Appoints appropriate personnel for the immediate and primary investigation of serious environmental spills or releases, when deemed appropriate.

(7) Encourages the use of the USGS Sustainability Council (SM 308.73 USGS Sustainability Council) as the forum for the exchange of program information, as a focal point for coordinating environmental activities, and as a vehicle for formulating recommendations to the Director and the ELT regarding the program.

(8) Provides pertinent information concerning the USGS program to the Department of the Interior upon request, including interim and annual progress reports of the USGS environmental program implementation.

(9) Advises the Director and the ELT on the status of the program by submitting periodic status reports, as necessary.

C. *Chief, Office of Management Services (OMS).* Serves as a member of the USGS Sustainability Council (SM 308.73 USGS Sustainability Council) and directs USGS Environmental Management and Compliance Program activities through the Chief, Environmental Management Branch (EMB) of the OMS.

D. *Chief, Environmental Management Branch (EMB).* Responsible for environmental program oversight and development as described in this manual and serves as a member on the USGS Sustainability Council (SM 308.73 USGS Sustainability Council).

(1) Recommends that the USGS establish environmental management and compliance review boards, councils, or committees to provide for employee involvement and to enhance the program, where deemed necessary. These boards, councils, or committees may be combined with any committees or councils that have already been established.

(2) Ensures and coordinates the development of USGS environmental program policies, directives, alternate or supplemental standards, and guidelines.

(3) Advises managers and environmental program administrators, and provides USGS program guidance and coordination for all basic program elements.

(4) Participates in DOI environmental councils, committees, and working groups, as requested.

(5) Ensures that environmental program evaluations of the USGS are conducted at a frequency determined using a risk-based, targeted approach. See Chapter 3.3.C.(1) for more information regarding this risk-based, targeted approach.

(6) Evaluates EMB staff for managerial effort and effectiveness in establishing and implementing the USGS environmental program.

(7) Directs the development of policies for and the establishment and monitoring of USGS environmental contracts.

(8) Oversees the identification and development of USGS environmental training and professional development programs.

(9) Serves as the USGS principal representative to the EPA and other agencies on technical matters pertaining to the USGS environmental programs.

(10) Provides oversight for appropriate initiatives, directives, standards, and criteria to meet contractor, concessionaire, volunteer, and public environmental requirements.

(11) Assists USGS Environmental Protection Specialists (EPSs) in establishing environmental services contracts, as necessary.

(12) Participates in DOI environmental councils, committees, and working groups, as requested.

(13) Provide EPSs with environmental program statistical reports and prevention recommendations.

(14) Develops standard operating procedures (SOPs), forms, and templates in order to facilitate the management of environmental programs.

E. *Environmental Protection Specialist (EPS).* As the USGS technical environmental advisor, provides assistance and guidance to the Regional Director and/or their appointed staff, Science Center managers and Collateral Duty Environmental Program Coordinators (CDEPCs) in carrying out activities such as the following:

(1) Conducts formal environmental compliance audits of science centers and other locations at a frequency determined using a risk-based, targeted approach. See Chapter 3.3.C.(1) for more information regarding this risk-based, targeted approach. Verifies that deficiencies are noted, recommended corrective actions are recorded in the Environmental Compliance Audit database, and the manager tracks the deficiencies until they are resolved. Environmental audit reports must be forwarded to the Associate and Regional Directors, appointed staff, and the Center Directors.

(2) Investigates, reports, and analyzes environmental incidents.

(3) Reviews environmental incident information to determine its accuracy and completeness and recommends appropriate action to correct deficiencies.

(4) Assists the Chief, EMB, in the development and implementation of appropriate initiatives, directives, standards, criteria to meet contractor concessionaire, and environmental requirements.

(5) Provides program implementation and compliance with regard to all environmental media, including, but not limited to, chemical, physical, biological, and mechanical hazards.

(6) Interpreting Federal, State, Tribal, and local regulations, Executive Orders, and Departmental and USGS environmental policy and directives.

(7) Advises and supports science centers (e.g. CDEPCs and field managers) in implementing and complying with program responsibilities.

(8) Participates as an ad hoc member on the USGS Sustainability Council and working groups arising from subject activities as necessary.

(9) Recommends program policies, directives, alternate or supplemental standards, and guidelines to the Chief, EMB, for adoption at the USGS.

(10) Assists in the identification, development, and conduct of general and specialized environmental training to meet field-level science needs, including but not limited to CDEPC-specific training.

(11) Develops and maintains standard operating procedures for implementing and complying with each element of the environmental management system (EMS) and environmental compliance program.

(12) Coordinates the development and maintenance of environmental promotional materials and awards or recognition programs in field organizations. Materials promoting the environmental management and compliance program are aimed at providing information to specific target audiences. The EPS should make available or recommend environmental training materials, journals, reference documents, posters, signs, and so on.

F. *Associate Director (AD) or Regional Director (RD).*

(1) Ensures support is provided to coordinate and oversee the science centers and to assist field CDEPCs, Science Center Directors, supervisors, and employees in program implementation.

(2) Requires compliance with statutory, regulatory, and program criteria and provides the necessary direction and support to managers so that they may effectively fulfill their policy commitments.

(3) Supplements the environmental management program with special initiatives, directives, standards, criteria, and training to meet the unique environmental compliance needs within the respective areas of responsibility.

(4) Demonstrates personal commitment to the environmental management program by establishing a means for managers and supervisors to account for effectively fulfilling environmental responsibilities within the respective organizational and program areas.

(5) Implements and administers the environmental management program within the respective area of responsibility by delegating sufficient authority to managers and collateral duty personnel.

(6) Provides adequate staff and budget resources to effectively administer the environmental management and compliance program within the respective area/region of responsibility.

(7) Requires self-conducted environmental program evaluations and inspections of operational locations on an annual basis.

(8) Requires formal environmental management and compliance evaluations and inspections of operational locations on the basis of any identified program deficiencies. OMS findings reports will be submitted to the Associate and Regional Directors and appointed staff and Center Directors.

(9) Requires that all inspection deficiencies are noted and that recommended corrective actions are documented and tracked until resolved.

(10) Provides recognition to employees for outstanding environmental performance.

(11) With involvement of AD and RD staff and Science Center environmental staff, supports the management and administrative authority for environmental program matters to the SSO, with sufficient authority to effectively represent the interest of and provide support to the respective science centers.

G. *Science Center Director (SCD).*

(1) Requires compliance with statutory, regulatory, and program criteria. Provides the necessary direction and support to managers so that they may effectively fulfill their policy commitments.

(2) Supplements the program with special initiatives, directives, standards, criteria, and training to meet the unique environmental needs of the area.

(3) Requires environmental management and compliance to be integrated into the planning of every job.

(4) Establishes a means for field managers and supervisors to account for effectively fulfilling environmental management responsibilities within their respective organizational and program areas.

(5) Provides adequate staff and budget resources to effectively administer and implement the environmental program.

(6) Requires all managers to ensure annual environmental compliance evaluations/inspections are conducted and abate deficiencies as established in an action plan.

(7) Provides support to EPS to conduct formal environmental compliance audits of science centers at a frequency determined using a risk-based, targeted approach. See Chapter 3.3.C.(1) for more information regarding this risk-based, targeted approach. Ensures that all audit deficiencies are noted and that recommended corrective actions are documented and tracked until resolved.

(8) Provides recognition to employees for outstanding environmental protection performance.

(9) Ensures that operations and scientific projects undergo regular review to ensure environmental compliance. Requires that deficiencies are noted and that recommended corrective actions are recorded in writing and tracked until resolved.

(10) Ensures that the general program elements described in this handbook are carried out within the sphere of his or her authority.

(11) Demonstrates personal commitment to and actively participates in the environmental management and compliance program.

(12) Ensures that spills or releases of hazardous materials that result in (or have the potential for) harm to human health or the environment or that meet or exceed regulatory reporting threshold are investigated and reported.

(13) Coordinates the review of notices of violation (NOV) or other enforcement actions issued to respective field centers by the State, Tribal, and local environmental regulatory agency or by the EPA to determine accuracy, completeness, and appropriate action taken to correct deficiencies.

H. *Collateral Duty Environmental Program Coordinator (CDEPC).*

(1) Provides assistance to managers and supervisors in administering environmental programs.

(2) Participates, upon request, as a member of a USGS Environmental Committee or Environmental Working Group related to subject activities that arise from time to time in order to provide field expertise in region-wide programs, problems, or issues.

(3) Coordinates and documents annual self-conducted environmental compliance inspections, unless external environmental audits are conducted by EPSs during the same fiscal year.

(4) Coordinates and tracks the organization's corrective actions through final abatement action.

(5) Recommends program policies, directives, alternate or supplemental standards, and guidelines for adoption at the USGS. Working with the AD and RD staff and EPSs, interprets regulations and guidance for the area.

(6) Ensures that allegations of reprisal, reports of unsafe and unhealthful conditions, and environmental spills, accidents, or incidents related to the organization are investigated and reported, as required.

(7) Provides assistance to field-level managers and supervisors in implementing and complying with the program elements listed in Chapter 1, Section 3C.

(8) Coordinates field-level contracts, as needed, for areas such as hazardous-waste disposal and other environmental services.

(9) Coordinates the identification, development, and consolidation of training plans and conducts environmental training.

(10) Maintains a library or has access to environmental reference publications and regulations to include, at a minimum, this handbook, Departmental policy, appropriate State environmental rules and regulations, and EPA rules and regulations.

(11) Publicizes policies and procedures on the science center's internal USGS Web page and its SharePoint site to ensure an effective environmental program.

(12) Provides environmental program coordination with Federal and State regulators, as needed.

(13) Ensures that appropriate spill response equipment and supplies are available.

(14) Reviews the science center's recorded environmental incident information to determine its accuracy and completeness and ensures that appropriate action is taken to correct deficiencies.

(15) Coordinates USGS data calls and compiles reports for submittal to the USGS.

(16) Coordinates the development and maintenance of USGS programs that promote the environment.

I. *All USGS Employees.*

(1) Comply with the environmental rules and regulations.

(2) Maintain a general awareness of all applicable USGS environmental policies and goals.

(3) Incorporate environmentally safe practices and procedures into daily operations.

(4) Incorporate environmental compliance into every aspect of operational practices.

(5) Promote pollution prevention as the primary means of achieving and maintaining compliance with environmental requirements.

(6) Report unsafe and (or) unhealthful conditions that may negatively affect the environment.

(7) Actively participate in environmental education and training activities.

J. *Employee Representatives.*

Participate in activities, such as the following:

(1) A formal inspection of offices or sites.

(2) The identification of noncompliant or environmentally unfriendly conditions.

(3) The review of proposed environmental work rules and regulations.

K. *USGS Sustainability Council (SM 308.73 Sustainability Council).*

(1) Serves as an advisory body on environmental management and compliance matters to the CSO and ELT.

(2) Provides a focal point for coordinating USGS environmental program activities.

L. *USGS Environmental Committees.* Advise the Associate Director for Administration and Executive Leadership Team (ELT) on environmental management and compliance matters.

M. *Environmental Working Groups.* USGS committees may establish Environmental Working Groups as necessary to address the environmental aspects of specific programmatic or operational issues. Members assist in developing drafts of program guidelines and other documentation and in conducting research on environmental issues.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 3. ENVIRONMENTAL PROGRAM MANAGEMENT

1. **Scope.** This chapter establishes the USGS policy and responsibilities for compliance with the statutory and procedural requirements that pertain to environmental program management. Effective program management enables the USGS to achieve and maintain environmental compliance and protection nationwide. In addition, this chapter provides overall direction and consistency for environmental compliance and protection programs, along with technical, legal, and data-management support.

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased, and otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

B. *Background.*

(1) USGS environmental programs protect the health of USGS staff and others and protect the environmental quality of their working environment and adjacent communities in order to support future activities. Environmental programs strengthen USGS relationships with regulatory agencies and the public and reduce the long-term costs of maintaining and operating facilities by avoiding penalties, cleanup costs, and the risk of future liability.

(2) The USGS faces a difficult challenge in its effort to achieve compliance with Federal, State, Tribal, and local laws, rules, and regulations that affect its locations and activities. Contributing to the challenge is the fact that environmental compliance is an area of continuous change. New requirements can emerge from many sources, and the regulatory priorities of Federal, State, Tribal, and local agencies can vary. The USGS must implement a methodical approach to achieving compliance, which involves the following:

(a) Identifying environmental requirements that apply to USGS activities.

(b) Implementing programs to achieve compliance.

(c) Conducting assessments to identify areas in which improvements are needed, prioritizing implementation and abatement actions to correct deficiencies, and monitoring overall compliance performance.

2. **Authorities and References.**

A. Clean Air Act (CAA) of 1970, as amended (42 U.S.C. 7401 et seq.).

B. Clean Water Act (CWA) of 1977, as amended (Public Law 95–217, 33 U.S.C. 1251, et seq.).

C. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended (42 U.S.C. 9601 et seq.).

D. Endangered Species Act of 1973 (16 U. S. C. 1531 et seq.).

E. Executive Order (EO), 13148, Greening the Government through Leadership in Environmental Management, April 2000.

F. Executive Order (EO) 13693, Planning for Federal Sustainability in the Next Decade (March 19, 2015).

G. Federal Water Pollution Control Act of 1972, as amended (33 U.S.C. 1251 et seq.).

H. National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.).

I. Pollution Prevention Act (PPA) of 1990 (42 U.S.C. 13101 et seq.).

J. Resource Conservation and Recovery Act (RCRA) of 1976, as amended (42 U.S.C. 6901 et seq.).

J. Toxic Substances Control Act (TSCA) of 1976 (15 U.S.C. 2601 et seq.).

3. **Requirements.**

A. *General.* The USGS will do the following:

(1) Actively protect and enhance the quality of the environment by maintaining compliance with all applicable regulatory requirements through a process of continual improvement.

(2) Assess the potential environmental impact of all proposed work in the earliest stages of formulating plans, actions, and programs. National Environmental Protection Act (NEPA) provides a mechanism for considering environmental compliance and protection issues as embodied in appropriate statutory, regulatory, and USGS policy guidelines.

(3) Promote environmental training and education, pollution prevention, and the integrated management of natural resources as the long-term strategy for achieving and maintaining environmental compliance.

(4) Ensure the protection, conservation, and management of watersheds, wetlands, natural landscapes, soils, forests, fish and wildlife, and other natural resources.

(5) Ensure consistent responses to Federal, State, Tribal, and local agencies to avoid setting adverse precedents (particularly those with funding implications). Ensure that managers work with the EPSs and EMB to meet permit conditions; meet terms of compliance agreements, settlements, and negotiations; and develop responses to Notices of Violation (NOV) from environmental agencies.

B. *Environmental Management System (EMS).*

(1) *Purpose of the EMS.* An EMS establishes what an organization needs to do to meet its environmental, economic, and sustainable development goals. Such a system will be used to determine the goals, policies, and strategies for implementation and will create the necessary linkages between environmental concerns and the economic considerations.

(2) *Background.*

(a) In August 1993, EO 12856, "Federal Compliance with Right-to-Know Law and Pollution Prevention," required the EPA to establish a "Federal Government Environmental Challenge Program." One component of the program was to "challenge Federal agencies…to agree to a code of environmental principles to be developed by EPA, in cooperation with other agencies, that emphasizes pollution prevention, sustainable development, and state-of-the-art environmental management programs..."

(b) EO 13148, "Greening the Government through Leadership in Environmental Management," was signed in April 2000 and requires Federal agencies to develop and implement EMSs. The EMS will "ensure that strategies are established to support environmental leadership programs, policies, and procedures and that agency senior-level managers explicitly and actively endorse these strategies." EO 13693, Planning for Federal Sustainability in the Next Decade (March 19, 2015) recommends continued implementation of EMS where those systems have proven effective and deployment of new EMSs where appropriate.

(3) *EMS Implementation.*

(a) *Manager Commitment.* Make a written commitment to improved environmental performance by establishing policies that emphasize the need to comply with environmental requirements and pollution prevention.

(b) *Compliance Assurance and Pollution Prevention.* Implement proactive programs that aggressively identify and address potential compliance problem areas and use pollution prevention approaches to correct deficiencies and improve environmental performance.

(c) *Enabling Systems.* Develop and implement the necessary measures to enable personnel to perform their functions consistent with regulatory requirements, USGS policies, and the overall organizational mission.

(d) *Performance and Accountability.* Develop measures to address employees' environmental performance and full accountability of environmental functions.

(e) *Measurement and Improvement.* Implement, use, and fully support the EMS and use the Environmental Compliance Auditing Program to assess the EMS's progress toward meeting its environmental goals. Use the results of the audit to improve environmental performance.

(4) *Management Reviews.* Conduct an environmental management review on an annual basis.

C. *EMS and Environmental Compliance Audit Program.*

(1) The Office of Management Services will facilitate an external audit of the EMS once every 3 years. Environmental Protection Specialists will conduct and document compliance evaluations of field locations that fall under the EMS or baseline audit location umbrella at a frequency determined using a risk-based, targeted approach. The risk-based, targeted approach is based on the activities and locations as it relates to the environment. A targeted approach is used to determine the frequency of environmental compliance audits for USGS locations. The risk-based approach takes into account several factors, outlined in the Risk Classification Worksheet Instructions located in Appendix A.

All other field-level environmental compliance audits will be conducted on the basis of past program deficiencies. All deficiencies will be noted and corresponding corrective action plans will be developed and implemented.

(2) Current Federal, State, Tribal, and local regulations, along with DOI environmental compliance auditing policy, form the basis for external and internal environmental compliance audits/inspections. This handbook serves as a resource for conducting the annual self-inspections.

D. *Pollution Prevention.* The preferred method of environmental protection is to eliminate or control the pollutant source. Dedicated efforts are necessary to eliminate or minimize the use of hazardous material and the generation of hazardous waste. The responsible parties will identify the means and methods for eliminating or minimizing pollutants and, where possible, incorporate them at the earliest stages of planning, design, and procurement of facilities, equipment, and material.

(1) When assessing solutions to deficiencies related to compliance requirements, managers will make use of the environmental management hierarchy set forth in the Pollution Prevention Act (PPA) of 1990. The following is the order of preference for eliminating or minimizing pollution:

(a) Source reduction.

(b) Material recycling.

(c) Treatment.

(d) Disposal.

(2) Each USGS organization will make every effort to meet or exceed the goals published in the Strategic Plan for Greening the Interior through Waste Prevention, Recycling, and Federal Acquisition.

E. *Personal Liability for Violation of Environmental Laws.* In most cases, Federal employees are named as defendants in their official capacities because the actions in question are usually undertaken by virtue of their official authority. These cases generally proceed without risk of personal liability for the employee. In some cases, however, a Federal employee may be sued in his or her individual capacity for injuries or damages to persons or property. Individuals who violate environmental laws or who injure or damage the persons or property of others as a result of carelessness may be personally liable for the consequences. Environmental cases involving the USGS may be brought against the USGS, some smaller component of the USGS, or individual employee(s). The individual employees may be named because the USGS can act only through its employees.

(1) *Personal Liability for Injuries or Damages to Persons or Property.* When the actions of a Federal employee cause injuries or damages to the person or property of another, the injured party may bring an action to recover the cost of the injury or damage.

(a) In such cases, the Department of Justice may substitute the United States for the individual if it determines that the individual was acting within the scope of official duties. An individual exercising official authority to carry out USGS business per applicable USGS regulations normally is determined to be acting within the scope of official duties.

(b) Any employee who is served with a complaint, subpoena, or other legal paper relating to activities undertaken within the scope of official duties will immediately report this information to his or her supervisor and the EMB for guidance on how to proceed.

(2) *Civil Liability for Fines.* Many of the environmental statutes impose civil penalties for violation of its requirements. Some of the statutes, such as the Clean Air Act (CAA), the Clean Water Act (CWA), and the Safe Drinking Water Act (SDWA), provide varying degrees of immunity from civil penalties to individual Federal employees. Liability under other statutes is not as clearly delineated. However, it appears that Federal officials who have made good faith efforts to know and comply with environmental requirements and who act within the scope of their employment do not face the likelihood of civil penalties imposed under Federal law.

(3) *Criminal Liability.* Most of the environmental statutes impose criminal liability for willful or knowing violations. Some statutes impose criminal liability for negligent violations. Individual Federal employees may be charged with criminal liability if their actions or inactions

meet the requirements for imposing liability. Federal or State prosecutors may bring criminal charges. Liability often does not depend on knowledge of, or personal participation in, the acts made criminal. With respect to violations that occur, the term "knowing" is defined as knowledge that the requirement or regulation exists, more so than to actual knowledge of specific violations. The Supreme Court has said "where dangerous or noxious waste materials are involved, the probability of regulation is so great that anyone who is aware that he is in possession of them must be presumed to be aware of the regulations." (United States v. International Minerals and Chemical Corporation, 402 U.S. 558 (1971)).

F. *Reporting Notices of Violation (NOV).* All USGS personnel will immediately report the discovery of a failure (or of a potential failure) of compliance with the requirement of the law to the next highest USGS authority by submitting a notice of violation (NOV). USGS policy is to complete either prompt corrective action or coordination of a plan for such corrective action with regulatory authorities regarding areas not in compliance with applicable requirements. Such prompt attention is the best approach to avoiding possible criminal charges or individual penalties.

G. *Site Inspections.* Upon the presentation of proper credentials, authorized EPA, State, Tribal, or local regulators or representatives will be allowed to enter a USGS location at reasonable times to examine or copy records, inspect all or part of the location, or sample any effluents or emissions that the officials have the authority to regulate. Such inspections will comply with the information- and location-security requirements. Should USGS employees deny the regulators access or if the regulator suspects “wrongdoing,” an inspection warrant can be acquired by the regulators and the inspection would be conducted, with the USGS employees removed from the facility.

H. *Information Security.* Periodically, representatives of Federal, State, Tribal, and local agencies who are exercising their regulatory authority under environmental laws visit USGS locations. Particular attention is needed to ensure that the USGS comply with directives governing the control and protection of sensitive information. Before permitting access, it is important for the information holder to ensure that the recipient understands and complies with applicable security regulations governing the dissemination and protection of the information.

I. *Government-Owned or Contractor-Operated (GO/CO) Facilities.* Managers of USGS GO/CO facilities will oversee location use or manage contracts to ensure the following:

(1) The operating contractor complies with the environmental regulations.

(2) The operating contractor participates in the USGS Environmental Compliance Auditing Program.

(3) The operating contractor assesses and implements pollution prevention solutions using the environmental management hierarchy.

(4) The operating contractor will advise the USGS of any permit and its conditions, provide periodic compliance status reports as required by the managing USGS office, and participate in the USGS Environmental Compliance Auditing Program

J. *Activities.* The USGS is responsible for ensuring that USGS activities comply with all applicable environmental regulations, regardless of space acquisition method (for example but not limited to USGS owned, USGS leased, GSA provided, or space agreements).

K. *Community Programs.* The USGS supports employees participation in community programs to address pollution and waste management issues. Such participation may include acting as advisors or helping to plan pollution control where the USGS contribute to the pollution or waste management problem in question. Before committing to participation, USGS managers should consult and seek the advice of management and the EMB.

L. *Coordination of Environmental Management between USGS and Tenants.* USGS managers will develop Memorandums of Agreement, incorporate language into Space Agreements, or introduce similar mechanisms to detail the responsibilities of USGS and tenants at locations. The USGS managers will maintain close coordination with tenants to ensure that the USGS and tenants meet the requirements of the support agreements, maintain compliance with all applicable environmental requirements, and participate in the host Environmental Compliance Auditing Program.

M. *Release of Information.*

(1) The senior management official at the USGS location has the authority to release location-specific information to U.S. Government agencies.

(2) Release of information regarding the USGS to the news media or the general public will be coordinated with the USGS Public Affairs Officer.

(3) Public requests for information will be coordinated with the Public Affairs and (or) Freedom of Information Act (FOIA) officer to ensure that these requests are handled expeditiously and in accordance with established procedures.

N. *Records Retention and Disposition.* Retention of records and disposition follow the USGS General Records Disposition Schedule, SM 432-1-S1 (http://www.usgs.gov/usgs-manual/schedule/432-1-s1/ch900a.html#plan – This link works best in Chrome).

(1) Destroy hazardous substance records required by the CERCLA when they are 100 years old.

(2) Retain all documentation in support of management plans mandated in this handbook until superseded.

(3) Destroy all reports, documentation, correspondence, and forms not covered by the paragraphs above after they are 100 years old.

(a) Such records include the following:

(i) Categorical exclusion (CE) records, if not being used in support of an active permit;

(ii) Environmental assessments (EAs), if not being used in support of an active permit;

(iii) Environmental impact statements (EISs), if not being used in support of an active permit;

(iv) Documentation of compliance or noncompliance;

(v) Site inspection records;

(vi) Communications with Federal, State, Tribal, and local environmental authorities; and

(vii) All other documentation required by law, regulation, and Executive Order, including reports to the EPA.

(b) Such records will cover the effects of USGS activities on the following:

(i) Air quality.

(ii) Water resources.

(iii) Wildlife.

(iv) Protected, threatened, and endangered species.

(v) Land resources.

(vi) Coastal contiguous zone waters.

(vii) Private property.

(viii) Land or property of historic or archaeological value.

O. *Director's Environmental Management Statement.* The Director will publish an environmental management statement outlining the USGS policy on compliance and other environmental policy issues. On the basis of the Director's statement, managers at each level of management will publish a statement delineating a policy to achieve and maintain compliance with the applicable environmental requirements at Science Centers and field offices under his or her management. This document will be prepared in a manner similar to other policy statements.

P. *Standard Operating Procedures (SOPs).*

(1) Managers will publish an environmental compliance and protection SOP. The instructions contained in the SOP need not contain all USGS organizational functions, but they must be sufficiently clear, completely applicable to the organizational level, and sufficiently detailed to ensure that all activities perform in an environmentally protective manner.

(2) Managers are encouraged to publish a single SOP instead of multiple SOPs. A single SOP ensures continuity of effort and prevents conflicts in policies between various environmental programs.

(3) SOPs will be prepared in a manner that complements or supplements, but does not repeat, the information in this handbook.

4. **Responsibilities.**

A. *Chief Sustainability Officer (CSO).*

(1) Exercises the authority of the Director for the management and administration of the USGS environmental program.

(2) Directs USGS environmental program activities through the Chief, Office of Management Services, and ensures that adequate resources are provided to the Environmental Management Branch (EMB) to develop and administer the program.

(3) Promulgates policies, directives, and alternate or supplemental standards in order to implement an effective environmental program.

B. *Chief, Office of Management Services (OMS).*

(1) Develops environmental planning policies and procedures to ensure that decision-makers are informed of the consequences, alternatives, costs, and mitigating factors that must be considered regarding decisions that have potentially significant environmental impacts. Ensures that decision-makers consider constraints imposed by applicable Federal, State, Tribal, and local environmental laws and regulations.

(2) Develops and periodically updates this handbook. This handbook is the primary USGS policy document that guides the USGS in complying with Federal, State, Tribal, and local environmental laws.

(3) In all environmental policies and procedures, includes specific provisions that encourage employees and applicable contractors to engage in environmental planning, including the development of environmental baseline information.

(4) Develops the long-range vision necessary for planning, programming, and budgeting for USGS environmental requirements.

(5) Prepares annual reports to DOI on the status of environmental compliance and protection.

(6) Manages a USGS environmental management system and Environmental Compliance Auditing Program and oversees the development of planned activities to promptly correct environmental management and compliance deficiencies.

(7) In areas where little information has been assembled, identifies and conducts special environmental compliance and protection studies in order to establish policies or initiate actions.

(8) Participates as the USGS representative on intra-agency and interagency committees and working groups. Coordinates and cooperates with the heads of DOI bureaus regarding environmental issues of common interest.

(9) Develops an environmental campaign plan to outline long-term objectives and special environmental compliance and protection goals for the USGS.

(10) Ensures that environmental protection and pollution prevention alternatives are considered in the decision-making process for USGS actions.

(11) Interprets Federal, State, Tribal, and local environmental regulatory requirements and uniformly applies USGS policy as set forth in this handbook.

(12) Supports outreach processes for environmental planning and analysis (or other environmentally related activities).

(13) Notifies USGS employees and appropriate contractors of available environmental training.

C. *Associate Director or Regional Director.*

(1) Provides environmental support and oversight for the organizational managers, supervisors, and employees in implementing the environmental compliance program, as appropriate.

(2) Receives annual environmental reports from EMB and OMS Environmental personnel, such as annual sustainability reports (recycling, fleet, energy, etc., and annual environmental audit reports.

(3) Provides annual executive summaries of activities, success stories, and issues to the USGS.

(4) Ensures consistent interpretation and application of environmental policies.

(5) Ensures appropriate resources are made available in order to implement the program.

D. *Environmental Protection Specialist (EPS).*

(1) Advises and supports organizational managers in carrying out environmental management responsibilities.

(2) Serves as the focal point for information and the coordination of issues related to USGS activities in his or her respective area.

(3) Monitors and coordinates the consistent application of environmental policies within the respective area and seeks any clarification from the EMB.

(4) Coordinates and (or) conducts environmental management system assessments to identify shortfalls or "gaps" in the current system. Recommends appropriate actions to correct deficiencies.

(5) As the technical environmental management and compliance advisor, provides assistance and guidance to field managers in implementing an effective environmental management and compliance program.

(6) Recommends program policies, directives, alternate or supplemental standards, and guidelines for adoption at the USGS.

(7) Serves as a principal representative to the EPA and other agencies on technical matters pertaining to field-level environmental programs.

(8) Coordinates the identification, development, and conduction of general and specialized environmental training to meet program needs.

(9) Develops and maintains environmental protection promotional programs aimed at providing information to large target audiences; these duties include making available and recommending training materials, journals, reference documents, posters, signs, and so on.

E. *Science Center Director.*

(1) Implements program requirements within the scope of his or her authority.

(2) Provides and (or) makes arrangement for appropriate environmental training for employees.

(3) Monitors the consistent application of environmental policies within the scope of authority and elevates issues of interest to the appropriate EPS.

(4) Implements environmental management system assessments to identify shortfalls or "gaps" in the respective current organizational environmental management system. Recommends appropriate actions to correct deficiencies.

(5) Coordinates the implementation of an environmental awareness campaign that includes an awards and recognition program.

F. *Collateral Duty Environmental Program Coordinator (CDEPC).*

(1) Coordinates the environmental management and compliance program of his or her organization.

(2) Advises management on matters related to implementing this policy.

(3) Coordinates environmental management system assessments to identify shortfalls or "gaps" in the respective current organizational environmental management system.

(4) Provides program coordination with the Federal, State, Tribal, and local regulators, as needed.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 4. AIR QUALITY MANAGEMENT

1. **Scope.** This chapter establishes USGS policy and responsibilities for compliance with air quality and emissions requirements from stationary, mobile, and area sources that are consistent with the Clean Air Act (CAA).

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased or otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

B. *Background.*

(1) The Clean Air Act (CAA) established National Ambient Air Quality Standards (NAAQS) to protect the health and general welfare of the public. Each State must achieve these standards and develop a State Implementation Plan (SIP) that outlines ways to achieve and maintain the NAAQS for the EPA. Emission sources are required to comply with the standards and other measures set forth in the individual SIP. To improve air quality nationwide, the CAA Amendments of 1990 mandated the stringent pollution control and prevention measures that are described in this handbook

(2) This chapter includes regulations, responsibilities, and compliance requirements associated with emission of air pollutants from stationary, mobile, and area sources. The significant types and sources of emissions include the following:

(a) Particulate matter (PM), carbon monoxide (CO), sulfur oxides (SO_x), nitrogen oxides (NO_x), volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and greenhouse gases (GHG)—including carbon dioxide (CO_2), nitrous oxide (N_2O), and methane (CH_4)—from combustion of fuel in boilers, hot water heaters, internal combustion engines, and generators.

(b) PM and toxic air emissions from operating incinerators that dispose of the following:

(i) Hazardous waste.

(ii) General waste.

(iii) Classified material.

(iv) Medical, pathological, and (or) infectious waste.

(c) PM, CO, metals, and toxic air pollutants from open burning and open detonation operations.

(d) VOCs in vapors from operating degreasers or from other processes (paint stripping and metal finishing) that use solvents.

(e) CO, SO_x, and NO_x from vehicles and equipment.

(f) Fugitive particulate emissions from training activities and construction or demolition operations.

2. **Authorities and References.**

A. Alternative Motor Fuels Act (AMFA) of 1988, as amended (Public Law 100-494).

B. Clean Air Act (CAA) of 1970, as amended (42 U.S.C. 7401 et seq.).

C. Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (42 U.S.C. 11001 et seq.).

D. Energy Policy Act (EPACT) of 1992 (Public Law 102–486).

E. EO 13150, Federal Workforce Transportation (April 21, 2000).

F. Executive Order 13693, Planning for Federal Sustainability in the Next Decade (March 19, 2015).

G. Addressing Climate Change Adaptation in Accordance with Executive Order 13693, Planning for Federal Sustainability in the Next Decade (March 19, 2015).

H. The Federal Employees Clean Air Incentives Act of 1993 (Public Law 103–172).

I. Toxic Substances Control Act (TSCA) of 1976 (15 U.S.C. 2601 et seq.).

3. **Requirements.**

A. *Regulatory Scheme.*

(1) With respect to the NAAQS, the EPA classifies all areas in the country as follows:

(a) *Unclassifiable Area.* Any area that cannot be classified as meeting or not meeting the NAAQS for a specific pollutant on the basis of available information.

(b) *Attainment Area.* Any area that meets the NAAQS for a specific pollutant.

(c) *Nonattainment Area.* Any area that does not meet, or that contributes to the ambient air quality in a nearby area that does not meet, the NAAQS for a specific pollutant.

(2) Certain regulatory requirements are considered fundamental and apply to all areas, regardless of their attainment status, whereas other requirements apply only to nonattainment areas. For help in determining attainment designations, contact the responsible EPS; the State, Tribal, or local air pollution control office, or the appropriate EPA regional office.

(3) States have the primary responsibility for implementing the CAA goals. Each State must develop an SIP that outlines the State's strategy for achieving and maintaining the NAAQS. The EPA oversees this process.

B. *Conformity Rule.*

(1) *Prohibition.* Section 176(c) of the CAA prohibits any Federal agency from engaging in, supporting, providing financial assistance for, licensing, permitting, or approving any activity that does not conform to an applicable SIP or Federal Implementation Plan (FIP). The EPA outlines criteria and procedures for determining conformity. A Federal agency must determine whether a Federal action conforms to the SIP or FIP before implementing it. The general conformity rule applies only to Federal actions in nonattainment areas or maintenance.

(2) *SIP Revision.* SIP conformity criteria and procedures may be more stringent than the EPA rules if the State adopts conformity requirements that apply equally to all nongovernmental sources.

C. *Enforcement and Citizen Suit Provisions.*

(1) *Enforcement.* The CAA requirements are generally enforced by the State, Tribal, or local air pollution control office; however, the EPA may also enforce the regulations. Any penalties or fees assessed by the EPA or other regulatory agencies will be reported to the EMB.

(2) *Punitive Penalties.* USGS organizations that are assessed punitive civil fines or penalties by Federal, State, Tribal, or local authorities for violations of air pollution control requirements will seek legal counsel before paying fines or penalties. Any penalties or fines will be reported to the EMB.

(3) *Administrative Fees.* USGS organizations will pay any administrative fees and assessments imposed by Federal, State, Tribal, or local authorities when such fees and assessments are imposed to defray the costs of programs that regulate air pollution and are imposed uniformly on all regulated entities.

(4) *Citizen Suits.* Civil actions may be brought against any individual or governmental body (including the U.S. Government) for present or repeated CAA violations.

D. *Provisions for Stationary Sources.* Stationary sources are classified as a point source or an area source. Stationary sources will comply not only with the general requirements outlined above but also with the following standards:

(1) *Title V Operating Permits.* EPA regulations establish minimum requirements for State programs. Title V of the CAA requires that each State develop, implement, and enforce an operating permit program. However, the EPA retains significant authority to oversee the implementation of a State permit program. The EPA must review and approve State permit programs, review proposed permits, veto improper permits, and develop and implement a Federal permit program if a State fails to adopt or implement an approved program. The permit program attempts to clarify, in a single document, all the requirements that apply to a source, including requirements from the SIP and the EPA's Acid Rain Program and Air Toxics Program. The permit program also requires that permit fees be used to finance State air pollution control programs. After the effective date of any permit program approved under Title V, the law prohibits violation of any requirement of such a permit and requires compliance with the Title V permit to operate a source that is subject to this program. The program applies to all major stationary sources of air pollution, including those operated on Federal facilities, which are subject to Federal regulation under the CAA. The term "major source" is defined in section D(2)(a), below. The threshold amounts vary according to the attainment classification of the area where the source is located.

(a) *Permit Application.* Applications for operating permits will be timely and complete. An application is timely and complete if submitted according to the approved State program.

(b) *Certification.* A responsible official will certify permit applications regarding their truthfulness, accuracy, and completeness. The certification will include the compliance status and the method used to determine this status.

(2) *Hazardous Air Pollutants (HAP).* Section 112 of the CAA lists certain pollutants as being hazardous and subject to regulation; it also details the Federal requirements for controlling HAPs. The EPA will revise the list as necessary.

(a) *Major Source.* A major source of HAPs is any stationary source (or group of stationary sources) located within a contiguous area and under common control that emits, or may emit, 10 tons per year (tpy) or more of any HAP or 25 tpy or more of any combination of HAPs.

(b) *Area Source.* An area source of HAPs is any stationary source of HAPs that is not a major source. The term does not include motor vehicles or nonroad vehicles.

(c) *Source Categories.* Major and area sources are grouped into categories and subcategories for which regulations establishing emission standards have been issued.

(d) *Emission Standards.* The EPA establishes technology-based emission standards that achieve emission reductions for new and existing sources in the appropriate category to the maximum

extent possible, while giving consideration to cost, air quality, health and environmental effects, and energy requirements.

(i) Measures to achieve the desired emissions standards include the following:

(aa) Implementing process changes.

(bb) Making material substitutions.

(cc) Treating or controlling emissions, generally by making use of the maximum achievable control technology (MACT).

(ii) Most USGS emission sources are regulated under the NAAQS and include degreasers, asbestos, and dry cleaning processes. Some of the common emission sources at USGS locations, such as painting equipment, are not regulated under the National Emission Standards for Hazardous Air Pollutants (NESHAP) but may be regulated and (or) prohibited at a local level, as in the case with solvents.

(iii) The EPA must also develop and issue health-based standards within 8 years after technology-based standards have been issued. These health-based standards provide an ample safety margin to protect public health unless a more stringent standard is needed to protect the environment from an adverse effect.

(3) *Accident and Risk Management Plans.* The CAA requires owners and operators of stationary sources that manufacture, process, use, handle, or store EPA-regulated substances exceeding specified thresholds to identify hazards that may result from the releases of such substances, to design and maintain a safe location to prevent such releases, and to minimize the consequences of any accidental releases. Locations exceeding the threshold limits will have risk management plans. Managers will employ the environmental management hierarchy and pollution prevention concepts when developing and updating their risk management plans. The risk management plans will also include emergency preparedness plans and procedures developed according to standards in 29 CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals.

(4) *New Source Performance Standards (NSPS).* The provisions of this handbook apply to the owner or operator of any stationary source that contains an affected location, the construction, reconstruction, or modification of which began after the date of publication in 40 CFR 60 of any standard (or, if earlier, the date of publication of any proposed standard) that applies to such a location; common source types with applicable NSPS requirements include municipal waste combustors, fossil-fuel-fired steam generators, incinerators, and storage vessels for petroleum liquids or liquids containing VOCs.

(5) It is USGS policy to comply with all Federal, State, Tribal, and local emission control standards and all other provisions of the CAA, as amended and with specific air emission permit conditions for all stationary sources.

(6) USGS organizations will comply with USGS and regulatory fuel composition requirements that apply to solid, liquid, and gaseous fuels for stationary fuel-burning equipment.

E. *Provisions for Mobile Sources.*

(1) *Aircraft.* The CAA authorizes the EPA, in consultation with the Secretary of Transportation, to develop emission standards that apply to any air-polluting emission from any class or classes of aircraft engines. No State, Tribal, or local air pollution control office may adopt or attempt to enforce any standard respecting any air polluting emission from any aircraft or engine unless such standard is identical to one developed by the EPA and the Secretary of Transportation. Although limited regulation of emissions from aircraft engines is possible, such regulation applies only to uninstalled aircraft engines.

(2) *Non-road Engines.* The EPA conducted and published a study of non-road engine and vehicle emissions in November 1991. On the basis of this study, the EPA initiated actions to establish national standards for certain categories of non-road engines.

(3) *Vehicle Inspection and Maintenance (IM).* Certain nonattainment areas require vehicle emissions testing. Federal facilities in these areas will demonstrate compliance with the applicable nondiscriminatory State IM program requirements for all employee and government (federally owned or leased) motor vehicles operated at the location, even if the vehicle is not registered in that State.

(4) *Fuels.*

(a) *Leaded Gasoline.* All USGS locations that dispense fuel for vehicles with catalytic converters will be equipped to dispense unleaded gasoline to such vehicles. It is illegal to knowingly dispense leaded gasoline into vehicles with catalytic converters or into any vehicle labeled for unleaded gasoline. As of 1995, the production or sale of leaded gasoline or lead additives was prohibited.

(b) *Oxygenated Gasoline.* States that include all or part of a carbon monoxide (CO) nonattainment area having a design value of 9.5 parts per million (ppm) or higher must include a provision in their SIP for selling and dispensing oxygenated gasoline in metropolitan areas within the nonattainment area. The EPA requires that this provision be in effect during the winter, when high levels of CO are likely. The EPA may waive the requirement for oxygenated fuel if a State can demonstrate satisfactorily that imposing such a provision interferes with the attainment of any other NAAQS. Check with the State to see if oxygenated gasoline is still required in vehicles.

(c) *Reformulated Gasoline.* Beginning in 1995, the ozone nonattainment areas with a 1980 population greater than 250,000 must implement the use of reformulated gasoline. Other nonattainment areas may petition to opt into the reformulated gasoline program. Check with the State to see if reformulated gasoline is required in vehicles.

(d) *Volatility.* To reduce the substantial release of volatile organic compounds (VOCs) into the atmosphere, Federal guidelines limit the volatility of gasoline marketed during the summer, when high levels of ozone are likely.

(e) *Sulfur Content of Diesel Fuel.* Effective October 1, 1993, the sulfur content of diesel fuel used in motor vehicles must not exceed 0.05 percent by weight, and it must meet a minimum cetane index of 40.

(f) *Clean Alternative Fuel for Fleet Vehicles.* According to the CAA, the clean fuel requirements affect the following owners or operators of centrally fueled fleets of 10 vehicles or more: those located in "serious," "severe," or "extreme" ozone nonattainment areas, and those located in "serious" CO nonattainment areas. In model year 1998, 30 percent of new light-duty fleet vehicle acquisitions were required to be clean-fuel vehicles; in model year 1999, that percentage increased to 50 percent; after the year 2000, it increased to 70 percent. The CAA mandates that any Federal location that dispenses clean alternative fuels to Federal fleet vehicles must offer such fuel for public sale during reasonable business hours, subject to national security concerns and the commercial availability of such fuels in the vicinity of the location.

(5) *Nonattainment Areas.* The CAA mandates that managers of areas designated as nonattainment areas for any pollutant develop an implementation plan to achieve the attainment of the NAAQS for that pollutant within 5 years of being designated as a nonattainment area. New major sources (or major modifications to existing major sources) in nonattainment areas must obtain a Nonattainment New Source Review (NSR) Permit before beginning any new construction or modification. The application for a Nonattainment NSR Permit includes information on the following:

(a) Installation of lowest achievable emission rate (LAER) technology.

(b) Offsetting new emissions with credible emissions reductions.

(c) An alternatives analysis demonstrating that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.

(d) Public comments.

(6) USGS will comply with all Federal, State, Tribal, and local emission control standards relevant to mobile sources. Mobil-source air pollution includes any air pollution that is emitted by motor vehicles, engines, and equipment that can be moved from one location to another.

(7) USGS personnel will not permanently remove or render inoperative any device or element of design in a U.S. Government motor vehicle or engine which is installed to enable a vehicle to comply with air quality regulations.

(8) USGS locations dispensing gasoline will be equipped to dispense unleaded gasoline. The USGS will not procure any gasoline-powered vehicle that cannot operate on unleaded gasoline.

(9) USGS will comply with local vehicle-emission inspection and maintenance program requirements for fleet vehicles and furnish proof of compliance when required by the local regulatory authority. Vehicle emission-inspection and maintenance procedures for fleet vehicles will be developed as a part of normal preventive maintenance programs.

(10) The Energy Policy Act (EPACT) of 1992 requires that the USGS must incorporate light-duty alternative-fuel vehicles into its vehicle fleet.

F. *Provisions for Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Units.*

The presence of halogenated hydrocarbons, such as, chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), halons, carbon tetrachloride, and others in the stratosphere is linked to the depletion of the Earth's ozone layer, which protects life and vegetation from damaging ultraviolet light. These materials are collectively referred to as ozone-depleting substances (ODSs). Stratospheric ozone is constantly being created and destroyed through natural cycles. Various ODSs, however, accelerate the destruction processes, resulting in lower-than-normal ozone levels. Each ODS has an ozone depletion potential (ODP) associated with it, which is the ratio of the impact on ozone of a chemical compared with the impact of a similar mass of CFC–11. Thus, the ODP of CFC–11 is defined to be 1.0. Other CFCs and HCFCs have ODPs that range from 0.01 to 1.0. The halons have ODPs ranging up to 10. Carbon tetrachloride has an ODP of 1.2, and methyl chloroform's ODP is 0.11.

In response to the threat that ODSs present to the environment, several nations, including the United States, have ratified an international agreement, known as the Montreal Protocol, which limits ODS production. Under the Montreal Protocol, the United States is obligated to limit or phase out the production and consumption of ODSs.

The production and consumption of ODSs is governed by 40 CFR 82, Protection of Stratospheric Ozone. On the basis of their respective ODPs, they are classified into Class I and Class II ODSs and are listed in 40 CFR 82; the ODPs for each ODS are also listed in the regulation. The ODP for Class I substance is 0.2 or higher. Class II substances have ODP less than 0.2. Although production of Class I ODSs has ceased, production of Class II ODSs will phase out over the next several years. Suitable substitutes have been identified for virtually every former use of ODSs in new acquisitions. Substitutes must also be approved under the EPA's Significant New Alternatives Policy (SNAP) Program for the intended use or application.

In order to minimize the release of ODSs to the atmosphere, 40 CFR 82 contains certain requirements for operating and maintaining equipment containing ODSs. In order to comply with these requirements, managers will take the following measures:

(1) Minimize the use and emissions of ODSs.

(2) Meet labeling requirements for ODSs.

(3) Monitor leakage rates and repair leaks as specified in the regulation for an appliance carrying more than 50 pounds of refrigerant.

(4) Use technicians (USGS personnel or contractors) who are trained and certified in the requirements of the regulation and who use approved recovery and recycling equipment to repair or service air conditioners in motor vehicles.

(5) Use technicians (USGS personnel or contractors) who are trained and certified in the requirements of the regulation and who use approved recovery and recycling equipment to repair, service, maintain, or dispose of appliances and industrial-use refrigeration and air conditioning equipment.

(6) Meet recordkeeping requirements of the regulation.

(7) Develop and implement an ODS conversion plan to ensure that existing HVAC and refrigeration equipment containing more than 5 pounds of ODS or equipment with more than 5 tons of cooling capacity are replaced or converted to an EPA SNAP-approved alternative. Plans will contain the following:

(a) Inventory of equipment or applications that contains Class I and II ODSs.

(b) Description of alternatives that will be implemented.

(c) Schedule for conversion or replacement.

(d) Estimated costs for implementing the plan.

(e) Plans for monitoring leaks.

(f) Plans for supporting training requirements.

G. *Training.* The CAA requires the following:

(1) *Chemical Process Safety Management.* The CAA requires the issuance of a chemical process safety standard to protect employees from the workplace dangers associated with accidental releases of highly hazardous chemicals. Employers must train workers in operating procedures, emphasize hazards and safe practices, ensure that contractors and contracted employees have appropriate information and training, and train and educate employees and contractors in emergency response as comprehensively and effectively required by Superfund Amendment and Reauthorization Act. The standard and a list of highly hazardous chemicals can be found in 29 CFR 1910.119, Process Safety Management of Hazardous Chemicals.

(2) *Solid Waste Incineration.* The CAA requires a program for training and certifying the operators of high-capacity (greater than 250 tons per day) solid-waste incineration units and high-capacity fossil-fuel-fired plants. As of November 15, 1994, in order to legally operate any such unit, each person with control over processes affecting emissions from such units must satisfactorily complete a training program that meets the EPA requirements.

H. *Air Pollution Emergency Episodes.* Where required, the USGS will have a contingency plan for air pollution emergency episodes that identifies all actions that can reasonably be taken without compromising essential services and mission responsibilities.

4. Responsibilities.

A. *Chief, Office of Management Services.*

(1) Coordinates the overall implementation of the CAA requirements. Ensures that all USGS activities comply with current Federal, State, Tribal, and local air pollution control requirements, including those that apply to the emissions of federally owned or leased vehicles.

(2) Coordinates the review of the proposed and final CAA regulations.

(3) Assists Regional Directors in resolving disputes with Federal, State, Tribal, and local regulatory agencies, as required.

(4) Conducts special environmental compliance and protection studies with regard to air quality management to assist in establishing policy or initiating actions.

(5) Through staff assistance and the Environmental Compliance Auditing Program, ensures USGS cooperation and compliance with Federal, State, Tribal, and local regulatory agencies with regard to their air quality regulations.

B. *Associate Director or Regional Director.*

(1) Ensures that all activities comply with current Federal, State, Tribal, and local air pollution control requirements.

(2) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with CAA requirements.

C. *Environmental Protection Specialist.*

(1) Coordinates input and comments to all applicable SIPs within their regions, as needed.

(2) Functions as a USGS air pollution episode advisor. The air pollution episode advisor ensures that air pollution episode plans and actions are consistent in their degree and timing for all USGS activities in the affected episode area and that the plans and actions are as consistent as

possible with the plans and actions of other Federal, State, Tribal, and local air pollution control authorities.

(3) Ensures that all required Federal, State, Tribal, and local permits are applied for and obtained for locations within their regions.

(4) Ensures that CAA-required training is provided.

(5) Ensures that required plans meet regulatory requirements.

D. *Science Center Director.*

(1) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with air-quality-management requirements.

(2) Pays appropriate Federal, State, Tribal, and local fees.

(3) Signs the following, as required:

(a) Compliance statements or certifications.

(b) Emission inventory reports.

(c) Permit applications for the construction and operation of all air quality management projects.

(d) Permit applications related to demolition or construction projects.

(4) Negotiates conditions with regulatory agencies for operating permits and variances to temporarily operate noncompliant sources of air pollution.

(5) Ensures that the CAA's general conformity rule requirements are satisfied at their respective locations, as required.

(6) Ensures that air pollution episode plans are developed, as necessary.

(7) Ensures that motor vehicles and other mobile sources comply with applicable emission standards and other requirements.

(8) Ensures that transportation control measures are developed and implemented, as required by the appropriate SIP.

(9) Ensures the appropriate regulatory authority is furnished with proof of compliance to the applicable nondiscriminatory State, Tribal, and local motor vehicle inspection and maintenance requirements for all USGS-owned or leased vehicles at the location, where applicable.

(10) Ensures that requests for waivers of any of the mandatory provisions of this policy are submitted to the EMB through the EPS.

E. *Collateral Duty Environmental Program Coordinator.*

(1) Coordinates surveys of emission sources in order to identify potential reductions.

(2) Submits to the EPS all instances in which compliance with fuel standards is impractical.

(3) Coordinates the development of air pollution episode plans, as necessary.

(4) Coordinates the development and implementation of transportation control measures, as required by the appropriate SIP.

(5) Coordinates the submission of proof of compliance with applicable nondiscriminatory State, Tribal, and local motor vehicle IM requirements for all USGS-owned and leased vehicles at the location, where applicable.

(6) Submits requests for waivers of any of the mandatory provisions of this policy to the EMB through the EPS.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 5. CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES MANAGEMENT

1. **Scope.** This chapter establishes USGS policy and responsibilities for compliance with the statutory requirements that protect cultural, historical, and archaeological resources. This chapter addresses USGS location requirements for developing and implementing programs to protect cultural, historical, and archaeological resources. This chapter also outlines the specifications of the National Historic Preservation Act (NHPA) and the Archaeological Resources Protection Act (ARPA). Directors and supervisors will implement an effective cultural, historical, and archaeological resources preservation program that complies with the policies, guidance, and instructions contained herein.

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased, or otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

B. *Background.* It is Federal Government policy, as established by the laws listed in section 2, wherever and whenever possible, to preserve important cultural, historical, and archaeological aspects of our national heritage. It is also Federal policy to protect and preserve for Native Americans their inherent rights of freedom to believe, express, and exercise their traditional religions, and to return to affiliated Native American and Native Hawaiian groups human remains, funerary objects, and objects of cultural patrimony located on Federal lands (Executive Order 13175).

2. **Authorities and References.**

A. American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996).

B. Antiquities Act of 1906 (16 U.S.C. 431–433).

C. Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469 et seq.).

D. Archaeological Resources Protection Act of 1979 (ARPA) of 1979 (16 U.S.C. 470 (aa) et seq.).

E. Executive Order (EO) 11593, May 13, 1971, Protection and Enhancement of the Cultural Environment.

F. Executive Order (EO) 13175, November 9, 2000, Consultation and Coordination With Indian Tribal Governments.

G. Historic Sites, Buildings, and Antiquities Act of 1935 (Public Law 74–292, 16 U.S.C. 461 et seq.).

H. National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.).

I. National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. 470 et seq.).

J. Native American Grave Protection and Repatriation Act (NAGPRA) of 1990 (25 U.S.C. 3001 et seq.).

K. Public Buildings Cooperative Use Act of 1976 (Public Law 94–541).

3. **Requirements.**

A. *General.*

(1) The USGS identifies, protects, and promotes the rehabilitation, adaptive reuse, and conservation of cultural, historical, and archaeological resources and other environmental assets through the best possible management practices and in cooperation with Federal, State, Tribal, and local agencies. The USGS will integrate the cultural, historical, and archaeological resource protection requirements of applicable laws in their planning and management efforts and encourage practical, economically feasible rehabilitation and adaptive reuse of significant cultural, historical, and archaeological resources, complying with environmental conservation specifications and documenting environmental impacts, as required by Federal law and DOI policies.

(2) Science Center personnel and the Environmental Protection Specialist (EPS) will assess the impact of science programs and activities on the cultural environment, including public and private resources that may be affected by planned actions.

(3) The USGS establishes, maintains, and improves relations with Federal, State, Tribal, and local authorities in the process of complying with relevant historical preservation laws and regulations and in developing agreements and procedures with State, Tribal, and local authorities.

(4) Prior to new construction, leasing, or the acquisition of buildings for the purpose of carrying out USGS responsibilities, the USGS will, to the maximum extent feasible, use available historical buildings while preserving their historical character and function. Property

preservation is to be conducted in a cost-effective manner that supports the scientific mission while protecting the health and safety of the occupants and employees.

B. *Advisory Council Process.*

(1) *General.* If cultural, historical, or archaeological resources are likely to be present and may affect directly or indirectly by an undertaking, USGS managers will contact the EPS. The EPS will consult with the State Historical Preservation Officer (SHPO) and (or) the Tribal Historic Preservation Officer (THPO) to determine the property's eligibility for placement in the National Register of Historic Places (NRHP) and, regardless of whether it is eligible, consult with the SHPO or THPO regarding the effect(s) of the undertaking on the property. If it is determined that the undertaking is a type of activity that has no potential to affect cultural, historical, or archaeological properties, then the USGS has no further obligations under Section 106 of the National Historic Preservation Act.

(2) *Determination of Effect.* After the USGS has evaluated the eligibility of archaeological or historic sites and resources for listing in the NRHP, the EPS will assess the effects of the proposed project or undertaking on the eligible resources. In coordination with the SHPO and (or) THPO, the EPS will document the process for determining eligibility and effects. If the SHPO and (or) THPO concur with the finding of cultural or historical significance, the EPS will submit summary documentation to the Advisory Council on Historic Preservation (ACHP). If the undertaking is determined to have an adverse effect, managers may enter into a Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU) with the SHPO and (or) THPO and the ACHP to reduce or remove the adverse effect. If the USGS finds that no historical or archaeological properties are present or affected, the EPS will provide documentation to the SHPO and (or) THPO and, barring any objection in 30 days, the USGS may proceed with its undertaking.

(3) *Failure to Agree.* If the USGS, the SHPO and (or) THPO, and the ACHP fail to agree on ways to reduce or avoid the effect on NRHP-eligible or NRHP-listed properties, consultation may be formally terminated. After taking the ACHP's final comments into consideration, the Bureau Director will provide the ACHP with its decision on whether or not the proposed undertaking will proceed.

C. *Historical Resources.* The USGS manager will cooperate with the SHPO and (or) THPO in their periodic visits, contacts, and other appropriate actions or studies. The manager will cooperate with the National Park Service (NPS) in their studies and provide input that minimizes any constraints that a National Historic Landmark designation might impose on the USGS.

D. *Archaeological Resources.* Managers will obtain ARPA permits for archaeological work on USGS property. In the case that the USGS contracts with archaeologists or that a USGS contractor subcontracts with archaeologists to perform archaeological work for a USGS location, a brief compliance statement in the contract or subcontract will be considered as the equivalent of a permit.

E. *Recordkeeping.* Managers with cultural assets will prepare a management plan that includes professional inventory, evaluation, and categorization of the location's cultural resources; and provides strategies and priorities for ongoing maintenance and protection of those resources from the adverse effects of planned undertakings. Plans will provide the USGS with information about NRHP-eligible or NHRP-listed resources located on or adjacent to the USGS. Plans will begin with Phase 1 overviews and be updated to include information gathered in Phase 2 and later survey work. Management plans will include the following activities:

(1) Identify the areas of probability for NRHP resources based on overviews and surveys performed by state authorized cultural resources professionals.

(2) Evaluate and inventory all known USGS cultural, historical, and archaeological resources.

(3) Describe applicable compliance strategies to avoid potential conflicts between the USGS mission and preservation mandates.

(4) Prescribe specific compliance actions to be taken if USGS undertakings affect resources listed (or eligible for listing) by the NRHP.

(5) Develop plans in agreement with Federal, State, Tribal, and local preservation programs, cultural resource guidelines, and other USGS planning documents and processes.

4. **Responsibilities.**

A. *Chief, Office of Management Services.*

(1) Maintains USGS procedural and policymaking expertise for interagency coordination and other aspects of compliance with preservation legislation. Assists in resolving disputes with Federal, State, Tribal, and local regulatory agencies.

(2) Supports the USGS by interpreting Federal, State, Tribal, and local cultural, historical, and archaeological resource requirements and by uniformly applying USGS policy as set forth in the handbook.

(3) Through staff assistance visits and the Environmental Compliance Auditing Program, ensures USGS cooperation and compliance with Federal, State, Tribal, and local regulatory agencies with regard to cultural, historical, and archaeological resource regulations.

B. *Associate Director or Regional Director.*

(1) Ensures that all activities comply with current statutory requirements to protect cultural, historical, and archaeological resources.

(2) Maintains procedural and policymaking expertise for interagency coordination and other aspects of compliance with preservation legislation.

(3) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with cultural, historical, and archaeological resource protection requirements.

(4) Ensures that the environmental management hierarchy (reduce, reuse, recycle) is employed, pollution prevention alternatives are evaluated, and lifecycle-costs are assessed when evaluating and selecting projects that address compliance requirements.

(5) Ensures that all mandated procedures are followed if resources designated as NHRP-listed or NHRP-eligible are to be transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly.

(6) Ensures that funds budgeted for historical or archaeological preservation are applied to the NRHP-listed or NHRP-eligible resources.

(7) Whenever proposed undertakings may have an effect on NRHP resources, enters into an MOA or MOU on behalf of the USGS with the SHPO and (or) THPO regarding the mitigation of such effects.

(8) When warranted by the presence of cultural, historical, and (or) archaeological resources, designates and trains a staff member to serve as a Cultural Resources Specialist and seek assistance from EMB.

C. *Environmental Protection Specialist.*

(1) Ensures that managers prepare a document specifying standard operating procedures for environmental compliance and protection and that they implement these requirements, if applicable.

(2) Consults with the SHPO and (or) THPO and the ACHP whenever proposed undertakings may have an effect on resources designated as NHRP-listed or NHRP-eligible.

(3) Coordinates the professional identification, evaluation, inventory, nomination, and protection of resources under their control that are potentially eligible for listing in the NRHP.

(4) Coordinates mandated procedures to be followed if NRHP-listed or NHRP-eligible resources are to be transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly.

(5) Ensures that inadvertently discovered archaeological resources are protected at the site of discovery until cultural resource professionals evaluate the significance of the find and make recommendations regarding its protection or recovery.

(6) Notifies the THPO of the discovery of Native American remains and associated cultural items in accordance with the Native American Grave Protection and Repatriation Act (NAGPRA) and other regulations issued by the DOI.

D. *Science Center Director.*

(1) Identifies the funding requirements necessary to maintain compliance with applicable existing and emerging regulations and permits for protecting cultural, historical, and archaeological resources.

(2) Pays appropriate Federal, State, Tribal, and local fees.

(3) Provides for the professional identification, evaluation, inventory, nomination, and protection of resources under his or her control that are potentially eligible for listing in the NRHP.

(4) Consults with the SHPO and (or) THPO and the ACHP in conjunction with the EPS whenever proposed undertakings may have an effect on NRHP-listed or NRHP-eligible resources and enters into memoranda of agreement regarding the mitigation of such effects.

(5) Prepares, maintains, and implements, when needed, Integrated Cultural Resource Management Plans for all USGS owned locations that contain cultural resources within organizational responsibility. The plan addresses national cultural resource standards for completing surveys, evaluating and protecting cultural resources, and planning for their management.

(6) Ensures that all mandated procedures are followed if NRHP-listed or NHRP-eligible resources are to be transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly.

(7) Ensures that funds budgeted for historic preservation are applied to NRHP-listed or NHRP-eligible resources.

(8) Arranges for the professional curation of salvaged archaeological resources and records that result from compliance actions.

(9) Allows Native Americans or Native Hawaiians access to sites and resources that are of religious importance or that are important to the continuance of their cultures, consistent with the American Indian Religious Freedom Act.

E. *Collateral Duty Environmental Program Coordinator.*

(1) Coordinates the protection of inadvertently discovered archaeological resources until cultural resource professionals evaluate the significance of the find and make recommendations regarding its protection or recovery.

(2) Coordinates the storage and curation of archaeological resources and records.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 6. HAZARDOUS MATERIALS MANAGEMENT

1. **Scope.** Hazardous materials are products that pose a risk to health, safety, and property during their storage, use, and transportation. Hazardous materials are defined and regulated in the United States primarily by laws and regulations administered by the EPA, Occupational Safety and Health Administration (OSHA), United States Department of Transportation (DOT), Department of Homeland Security (DHS), Drug Enforcement Agency (DEA), and Nuclear Regulatory Commission (NRC). In addition, the use, storage, and disposal of hazardous materials are also within the jurisdiction of the state regulations and are regulated by community right-to-know laws, building and fire codes, and emergency preparedness requirements. This chapter focuses on the requirements related to the EPA regulations and associated state regulations.

The proper management of hazardous materials by USGS staff is crucial in minimizing the risk of injuries, releases, and (or) the unnecessary generation of hazardous wastes. It is the responsibility of all employees to ensure that hazardous materials are properly handled, stored, and used.

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased, or otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

B. *Management of Hazardous Materials.* This chapter addresses the proper handling of hazardous materials and the contingency and response requirements related to the spillage of hazardous materials. Each State may require the development of a Hazardous Material Business Plan (HMBP) and Hazardous Material Management Plan (HMMP). Management of hazardous wastes, petroleum products, and pesticides are addressed separately in other chapters of this handbook.

2. **Authorities and References.**

A. Clean Air Act (CAA) of 1970, as amended (42 U.S.C. 7401 et seq.).

B. Clean Water Act (CWA) of 1977, as amended (Public Law 95–217, 33 U.S.C. 1251 et seq.).

C. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended (42 U.S.C. 9601 et seq.).

D. Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (42 U.S.C. 11001 et seq.).

E. Executive Order 13693, Planning for Federal Sustainability in the Next Decade (March 19, 2015).

F. Hazardous Materials Transportation Act (HMTA) of 1975 (49 U.S.C. 5101 et seq.).

G. Occupational Safety and Health Act of 1970 (29 U.S.C. 651 et seq.).

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

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

3. **Requirements.**

A. *General.* Hazardous materials are substances that have been determined to present an unreasonable risk to safety, health, and property during their handling and transportation. The Department of Transportation (DOT) regulations for shipping hazardous materials are found in Title 49 of the Code of Federal Regulations. Chemicals not listed by name in the DOT Hazardous Materials Table (49 CFR 172.101) may still be regulated if they meet the definition of any "hazard class" as established by DOT. For the purposes of this handbook, the term "hazardous material" refers to a virgin, unused product.

B. *Identification of Hazardous Materials.* Hazardous materials can be identified by using a number of different sources. Some of these sources are provided below:

(1) *The Container Label.* The manufacturer's label found on each container of hazardous material located in the workplace provides valuable information about the material in the container. Most labels contain information on the chemical makeup of the material, some safety precautions and first aid procedures, and the major hazards associated with the use of this material. Some labels even contain emergency response actions should an accidental release of the material occur.

(2) *Safety Data Sheet (SDS).* Manufacturers must publish a SDS for each chemical they manufacture and provide copies of these sheets to buyers. The SDS contains information concerning chemical ingredients, physical data, fire and explosion hazard data, health hazard data, spill response procedures, the product’s trade name, and the manufacturer's address and emergency telephone number. For more information regarding the SDS and the Globally Harmonized System for Hazard Communication, visit https://www.osha.gov/dsg/hazcom/global.html.

(3) *DOT Hazardous Materials Table (HMT).* If the name of the chemical is known, the DOT HMT can be used to determine the major hazard class (that is, corrosive, poison, flammable liquid, and so on), the United Nations (UN) or North American (NA) identification number, the label code, and other useful information.

C. *Emergency Planning and Response.* This section establishes USGS policy and responsibilities for compliance with statutory requirements for emergency planning and response.

(1) *Background.*

(a) Provisions within the major statutes recognize the need for emergency planning for uncontrolled releases of pollutants to the Nation's land, water, and air. Accordingly, these statutes require locations with the potential for such releases to develop procedures to prevent releases, to provide written emergency procedures, and to implement the response provisions in the event of a release. Further, the Emergency Planning and Community Right-to-Know Act (EPCRA) requires that comprehensive information be provided to the public about possible or potential hazards associated with toxic, hazardous, and extremely hazardous chemical releases. A Facility Response Plan guide is available at https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/facility-response-plan-frp-overview.

(b) Many of these statutes contain overlapping requirements. On June 5, 1996, the multiagency National Response Team (NRT) published its Integrated Contingency Plan (ICP) Guidance, which enables managers to meet multiple plan requirements by integrating them into a single plan. USGS facilities are encouraged, as appropriate, to use this guidance.

(c) Many State regulatory programs contain provisions for oil and hazardous substance (OHS) spill contingency planning and for notifying the State, Tribal, and local authorities when OHS spills occur. Most State regulations complement the Federal OHS spill contingency planning and response efforts. However, some State, Tribal, or local regulations are more stringent than the Federal requirements. Managers should obtain copies of the respective State, Tribal, or local regulations to determine if their activities subject to requirements that go beyond the Federal laws and regulations outlined herein. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

(2) *General Requirements.*

(a) Spill Prevention Control and Countermeasure (SPCC) Plans mandated by the CWA.

(b) Facility Response Plans (FRP) mandated by the OPA.

(c) Oil and Hazardous Substance Spill Contingency Plan mandated by the CWA and by the CERCLA.

(d) Hazardous Waste Facility Contingency Plan mandated by the RCRA.

(e) Air Emissions Risk Management Plan mandated by the CAA.

(3) *Integrated Contingency Plan (ICP) Guidance.*

(a) The NRT, in conjunction with representatives from State, Tribal, and local agencies; industry; and environmental groups, has developed the ICP Guidance to provide managers with a way to consolidate multiple contingency plans into a single functional response plan. The EPA, the U.S. Coast Guard, the Research and Special Program Administration (RSPA) of the U.S. Department of Transportation, the U.S. Department of Labor, and the Bureau of Safety and Environmental Enforcement (BSEE) signed the ICP Guidance and agreed that integrated response plans prepared in the format provided therein will be acceptable and will be the federally preferred method of response planning.

(b) The purposes of the ICP Guidance are as follows:

(i) Provides a mechanism for consolidating multiple facility response plans into one plan to be used in an emergency.

(ii) Improves the coordination of response activities within the location and with public responders.

(iii) Minimizes duplication and simplifies plan development and maintenance.

(c) The ICP Guidance addresses the planning requirements found in the following Federal regulations:

(i) Oil Pollution Act Facility Response Plan Regulations.

(ii) The EPA's Clean Air Act Risk Management Regulation, Oil Pollution Prevention Regulation, and RCRA Contingency Planning Requirements.

(iii) OSHA's Emergency Action Plan Regulation, Process Safety Standards, and Hazardous Waste Operations and Emergency Response Regulation.

(d) The ICP Guidance format includes the following three sections:

(i) Plan introduction.

(ii) A core plan that serves as the primary response tool.

(iii) A series of appendixes that provide more detailed supporting information and regulatory compliance documentation.

(e) The ICP Guidance format is based on the Incident Command System (ICS). This organization allows the plan to dovetail with established response management practices, thereby

promoting its usefulness in an emergency. The ICP Guidance format also promotes a system of linkages to facilitate coordination with other facility plans as well as external plans, such as the Local Emergency Planning Committee (LEPC) Comprehensive Emergency Response Plan and the Area Contingency Plan (ACP) required by OPA.

(f) Personnel can obtain copies of the ICP Guidance by contacting the EPCRA Hotline at 1-800-424-9346.

(4) *Spill Prevention Control and Countermeasure (SPCC) Plan.*

(a) *Purpose.* The SPCC Plan accomplishes the following:

(i) Establishes procedures to prevent an oil spill into waters of the United States.

(ii) Documents existing oil spill prevention structures, procedures, and equipment.

(iii) Recommends additional containment structures if needed.

(b) Owners or operators of onshore non-transportation-related facilities that have discharged or, due to their location, might discharge oil in harmful quantities into or upon navigable waters of the United States or adjoining shorelines are required to prepare SPCC Plans.

(c) SPCC plans are not required for onshore fixed or portable facilities if one of the two following conditions apply:

(i) The location has an aggregate aboveground storage capacity of 1,320 U.S. gallons or less of oil, has no single container capacity that exceeds 660 U.S. gallons, and has a total underground storage capacity of 42,000 U.S. gallons or less.

(ii) The location, due to its location, is not expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. This determination is based solely upon consideration of the geographical aspects (for example, proximity to navigable waters or adjoining shorelines, topography, drainage patterns, proximity to sensitive environments for fish and wildlife, and so on) of the location and will exclude artificial dikes or other structures that would serve to hinder, contain, or otherwise prevent an oil discharge from reaching navigable waters or adjoining shorelines.

(d) *SPCC Plan Contents.*

(i) A description of all spill events that have occurred in the preceding 12 months, the corrective actions that were taken, and plans for preventing the recurrence of such spills.

(ii) Predictions of the direction, rate of flow, and total quantity of oil that could be discharged from the location as a result of each major type of equipment failure (such as tank overflow, rupture, or leakage).

(iii) An accounting of appropriate containment measures, diversionary structures, or equipment to prevent discharged oil from reaching navigable waters. For portable structures, such containment measures could include the construction of earthen berms or the placement of sand bags around and installation of liners beneath fuel containers.

(iv) Additional spill prevention standards for drainage areas, bulk storage tanks, transfer operations and pumps, and tank car and tank truck loading and unloading racks.

(v) Provisions for periodic inspections, adequate recordkeeping, site security, and personnel training or briefings on spill prevention procedures.

(vi) A strong oil spill contingency plan following the provisions of 40 CFR 109 and a written commitment to personnel, equipment, and materials required for the expeditious control and removal of any harmful quantity of discharged oil if the implementation of appropriate containment measures or diversionary structures is not practicable. Such impracticability must be clearly demonstrated and a copy of the justification must be provided to the EPA Regional Administrator, per 40 CFR 112(d).

(e) *SPCC Plan Certification.* A registered professional engineer (PE) will initially certify each SPCC Plan. In addition, the owner or operator of the location will review, update, and amend the plan at least once every 5 years. No amendment to an SPCC plan can satisfy the requirements unless a PE has certified it. In some cases the owner or operator can self-certify the plan if the following criteria are met:

(i) The total aboveground oil storage capacity is 10,000 U.S. gallons or less.

(ii) The location does not have an individual aboveground oil storage container with a capacity greater than 5,000 U.S. gallons.

(iii) In the 3 years prior to the date that the SPCC Plan was certified, there was no single discharge of oil to navigable waters or adjoining shorelines exceeding 1,000 U.S. gallons, or no two discharges of oil to navigable waters or adjoining shorelines each exceeding 42 U.S. gallons within any 12-month period.

(f) *SPCC Plan Availability.* A complete copy of each SPCC Plan will be maintained at the subject location. The SPCC Plan also will be available to regulatory representatives for onsite review during normal working hours. An editable Microsoft Word® template is available at http://www.epa.gov/osweroe1/content/spcc/tier1temp.htm.

(g) *SPCC Plan Amendments.*

(i) The EPA Regional Administrator may require the owner or operator of a location to revise its SPCC plan if the location, within any 12-month period, has discharged more than 1,000 U.S. gallons of oil or has discharged oil in harmful quantities in two reportable spill events into or upon U.S. navigable waters.

(ii) The owner or operator of a location will amend its SPCC plan whenever there is a change in location design, construction, operation, or maintenance that materially affects the location's potential for discharging oil. The amendments will be fully implemented no later than 6 months after such change occurs.

(5) *Oil and Hazardous Substances Spill Contingency Plan (SCP).*

(a) *Purpose.* SCPs are used to identify areas where spill incidents are likely to occur and to predetermine the appropriate responses to future spills and releases.

(b) *Plan Contents.*

(i) The SCP will be compatible and coordinated with the LEPC Comprehensive Emergency Response Plan for the adjacent community. Compatibility is important because a USGS incident could threaten surrounding areas. The USGS manager will contact the LEPC to obtain a copy of its response plan.

(ii) The SCP will include information from RCRA plans.

(c) *Plan Approval.* Unlike SPCC plans, SCPs do not require certification by a registered P E; however, the senior USGS management official at the location will approve them.

(d) *Plan Amendments.* The SCP will be reviewed at least annually to incorporate any changes that have occurred at the location, in the response organization, or in related plans.

(6) *RCRA Facility Contingency Plans.*

(a) *Purpose.* RCRA facility contingency plans exist in order to minimize hazards to human health or the environment from fires, explosions, or any unplanned release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

(b) *Regulated Facilities.* Owners and operators of permitted hazardous waste treatment, storage, or disposal facilities will develop contingency plans.

(c) *Plan Contents.* The plan will describe the following:

(i) Actions personnel must take to be in compliance with the emergency procedures.

(ii) Procedures for conducting pre-emergency planning and coordination with outside parties such as the State Emergency Response Commission (SERC), LEPC, and local emergency response teams.

(iii) Personnel roles, lines of authority or command, and lines of communication.

(iv) Emergency recognition and prevention schemes.

(v) Safe distances and places of refuge during an emergency situation.

(vi) Site security and access control.

(vii) Evacuation routes and procedures.

(viii) Decontamination procedures.

(ix) Emergency medical treatment and first aid.

(x) Emergency alert and response procedures.

(xi) Use of personal protective equipment and emergency equipment.

(xii) Critique of response actions and follow-up discussions.

(d) If the activity already has a certified oil SPCC plan that complies with applicable requirements in 40 CFR 112.7, the existing plan can be amended to incorporate hazardous waste management provisions into the existing oil SPCC plan.

(e) The contingency plan also will incorporate the Occupational Safety and Health Act (OSHA) requirements in 29 CFR 1910.120(p) for an emergency response plan to protect operators.

(f) *Plan Certification.*

(i) If the contingency plan is incorporated into an oil SPCC plan, it will be certified by a registered PE, unless it is eligible for self-certification. Subsequently, the plan will be reviewed, updated, and recertified by a registered PE at 5-year intervals, unless self-certified.

(ii) If the contingency plan is incorporated into an Oil and Hazardous Substances SCP, it does not require certification by a registered PE. However, the senior USGS management official will approve it.

(g) *Plan Availability.* Complete copies of the contingency plan must be maintained at the subject location and submitted to all local police and fire departments, hospitals, and State, Tribal, and local emergency response teams, which may provide assistance.

(h) *Plan Amendments*. The owner or operator of a location will amend its contingency plan whenever one of the following occurs:

(i) The permit is revised.

(ii) The plan fails in an emergency.

(iii) The location changes in its design, construction, operation, maintenance, or other circumstance in a manner that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or in a manner that changes the type of emergency response necessary.

(iv) The list of emergency coordinators changes.

(v) The list of emergency equipment changes.

(7) *EPCRA.* It is USGS policy to comply with all requirements of the EPCRA. The USGS will comply with the EPCRA programs within their respective States. The following procedures will be used by managers at all USGS locations:

(a) Define the boundaries of the location in support of EPCRA requirements. Support agreements will be updated to reflect the data collection requirements of the tenants to the host.

(b) Determine whether threshold requirements are met or exceeded for an extremely hazardous substance (EHS) or hazardous substance (HS) used at the location. Each USGS location that exceeds a threshold is subject to the reporting requirements of the EPCRA for emergency planning, providing information, and emergency notification. Host organizations will ensure that thresholds are calculated using the entire location inventory.

(i) Managers of each location that meet or exceed a threshold planning quantity for an EHS will notify the SERC and the LEPC and provide a point of contact, telephone number, and an alternate point of contact.

(ii) Managers of each covered facility (referred to as covered location hereafter) will request that a local representative participate in local emergency planning functions and will appoint a representative to actively serve on the LEPC. As much as possible, managers of each covered location will provide any emergency planning information requested by the LEPC.

(iii) Managers of each location that releases an EHS or HS in excess of the reportable quantity (RQ) for that substance into the air or water or onto land will immediately provide verbal notification to all LEPCs and SERCs in the area(s) likely to be affected. They will also submit a written follow-up notification of the release and actions taken as soon as practicable after the release.

(iv) In general, the quantity of a hazardous chemical in amounts equal to or greater than 10,000 pounds is reportable. The quantity of an EHS in amounts equal to or greater than 500 pounds (or 55 U.S. gallons) or its threshold planning quantity (TPQ), whichever is less, is also reportable. For each reportable hazardous chemical, the manager will provide a one-time submission of a copy of the MSDS or a list of reportable hazardous chemicals, grouped by hazard category, to the LEPC, SERC, and the local fire department. The MSDS will be submitted to the fire department that would routinely be the first to be alerted during an emergency.

(c) If a list of reportable hazardous chemicals is submitted as described in section E(7)(b)(iv) above, it will contain the following information:

(i) A list of the hazardous chemicals for which an MSDS or Globally Harmonized System (GHS) is required under OSHA regulations, grouped by hazard category. The list need only include those chemicals (either in mixtures or in the pure form) that meet or exceed threshold levels.

(ii) The hazardous chemical listed under all applicable hazard categories.

(iii) The chemical and common name of each hazardous chemical as provided on the MSDS.

(d) Managers of locations that meet or exceed hazardous chemical threshold requirements will annually submit Emergency and Hazardous Chemical Inventory Forms (also known as Tier I or Tier II Inventory Reports) for those hazardous chemicals to the LEPC, SERC, and the local fire department or other regulatory agencies by March 1 covering the previous calendar year's inventory. Tier I and Tier II reporting forms, as well as the Confidential Location Information Sheet, have been revised. The revisions add some new data elements and revise some existing data elements. The USGS must use new Tier II inventory form. The new Tier II forms are available at the EPA web site at https://www.epa.gov/epcra/tier-ii-forms-and-instructions. Some States may have specific requirements for formatting or submitting the completed Tier II inventory form and (or) the State's reporting form. It is recommended that the managers contact the appropriate State office for the reporting requirements.

(i) Managers will submit either Tier I or Tier II information; however, most States require the completed Tier II form. Tier II form requires basic location identification information, employee contact information for both emergencies and non-emergencies, and information about chemicals stored or used at the location.

(ii) The SERC and the LEPC have the authority to request Tier II information for HCs present at the location that are below threshold levels if the requester provides a written statement of need.

(e) All managers will determine whether they have exceeded any of the reporting thresholds for toxic chemicals used each calendar year. Managers of each USGS location that exceeds the threshold are required to complete the Toxic Release Inventory (TRI) Program Form R (https://www.epa.gov/toxics-release-inventory-tri-program/tri-reporting-forms-and-instructions). Host organizations will ensure that thresholds are calculated using the entire location inventory.

4. **Responsibilities.**

A. *Chief, Office of Management Services.*

(1) Provides information to and advises USGS personnel regarding proposed and final rules and regulations pertaining to emergency planning and response.

(2) Advises the Environmental Protection Specialist (EPS) on preparing required plans and conducting response exercises.

(3) Assists managers in resolving disputes with Federal, State, Tribal, and local regulatory agencies, as required.

(4) Ensures USGS cooperation and compliance with Federal, State, Tribal, and local agencies with regard to emergency planning and response.

B. *Associate Director or Regional Director.*

(1) Ensures that all activities comply with current Federal, State, Tribal, and local requirements for managing hazardous material.

(2) Approves budgets for personnel, equipment, materials, training, and monitoring required for compliance with emergency planning and response requirements within the region.

C. *Environmental Protection Specialist.*

(1) Reviews emergency response plans and ensures that they are updated using standard formats consistent with regulatory requirements throughout the region.

(2) Verifies that SPCC plans are current, reviewed at least every 5 years, and recertified by a PE, if necessary.

(3) Verifies that the USGS meet applicable EPA, State, Tribal, and local requirements related to the prevention of oil spills.

D. *Science Center Director.*

(1) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with emergency planning and response requirements within the organization.

(2) Ensures that payment of appropriate Federal, State, Tribal, and local fees is accomplished.

(3) Ensures that all required Federal, State, Tribal, and local permits are applied for and obtained.

(4) Ensures that SPCC plans are up-to-date, reviewed at least every 5 years, and recertified by a PE, if necessary.

(5) Ensures that the USGS meet applicable EPA, State, Tribal, and local requirements related to the prevention of oil spills.

(6) Oversees response efforts for oil and hazardous substance release at the location and supports other efforts, as necessary.

(7) Coordinates response operations with adjacent communities for oil and hazardous substance releases that may impact more than one building or activity or may impact the surrounding community.

(8) Coordinates the development of the emergency response plan. Coordinates the review and needed updates to the plan and its submittal to the appropriate Federal, State, Tribal, and local environmental and emergency planning authorities.

(9) Conducts exercises and drills. Provides, operates, and maintains response equipment.

E. *Collateral Duty Environmental Program Coordinator.*

(1) Coordinates the application for any required Federal, State, Tribal, and local permits.

(2) Notifies all required Federal, State, Tribal, and local agencies of oil and hazardous substance releases by the USGS and notifies local, regional, and national USGS environmental management, as directed by the organization's manager or supervisor.

(3) Coordinates with the EPS, EMB, and local regulatory agencies in matters relating to emergency planning and emergency response actions, as appropriate.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 7. HAZARDOUS WASTE MANAGEMENT

1. **Scope.** This chapter establishes USGS policy for compliance with statutory requirements for hazardous waste management by identifying the hazardous waste management requirements necessary to ensure the protection of human health and the environment.

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased, or otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than this handbook will be followed.

B. *Background.* The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 as an amendment to the Solid Waste Disposal Act (SWDA). The RCRA has since been amended by several public laws, including the Hazardous and Solid Waste Amendments (HSWA), the Used Oil Recycling Act, and the Federal Facilities Compliance Act (FFCA). The objectives of the RCRA are to provide assistance to State, Tribal, and local agencies for developing solid waste management plans, prohibit open dumping on the land, and require the conversion of existing open dumps that do not pose a danger to the environment or to human health, and that hazardous waste management practices are conducted in a manner that protects human health and the environment. The RCRA supports the "cradle-to-grave" tracking of hazardous waste from generator to storage, treatment, and ultimate disposal.

(1) The EPA may delegate authority to a State to manage an RCRA program in lieu of part or the entire Federal hazardous waste program.

(2) In a State that has the final authority to manage an RCRA program, all locations generating hazardous waste are subject to the State program, which must be at least as stringent as the Federal program. A few States also have been granted certain oversight authority for the HSWA.

(3) The FFCA waived sovereign immunity under the RCRA; therefore, the USGS is subject to civil and administrative fines and penalties levied by Federal, State, Tribal, and local regulators.

2. **Authorities and References.**

A. Federal Facility Compliance Act of 1992 (Public Law 102–386).

B. Hazardous Materials Transportation Act of 1975 (49 U.S.C. 5101 et seq.).

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

3. **Requirements.**

A. *General.* The USGS will comply with all Federal, State, Tribal, and local regulatory requirements relating to hazardous waste. Compliance with all aspects of EPA-approved State hazardous waste management programs is deemed to be in compliance with all Federal requirements. If a State has a program that is not approved by the EPA, the USGS and tenants in the given State will comply with both the State and Federal program requirements.

B. *Minimization.*

(1) USGS policy is to reduce the quantity of hazardous waste it disposes of by using the pollution prevention hierarchy: reduce, reuse, recycle, treat, and dispose.

(2) Federal and State regulations require all hazardous waste generators to certify (on each Uniform Hazardous Waste Manifest, EPA, https://www.epa.gov/hwgenerators/uniform-hazardous-waste-manifest-instructions-sample-form-and-continuation-sheet-and) that a program exists to minimize the volume and toxicity of hazardous waste generated, insofar as it is economically feasible. The USGS activities that have programs either for avoiding or reducing the generation of hazardous waste, or for recycling, reusing, and treating the generated hazardous waste to the maximum extent practicable, may make such a certification.

(3) The USGS will achieve continuous reduction of hazardous waste generation through pollution prevention initiatives and best management practices, and use of the best demonstrated available technology.

C. *Management.*

(1) Any location that generates more than 220 pounds of hazardous waste in a calendar month and transports, treats, stores, or disposes of hazardous waste will notify the appropriate EPA regional office and State environmental agency of its activities and comply with the RCRA and (or) the authorized State hazardous waste program.

(a) Upon presenting proper credentials, Federal, State, and USGS environmental compliance officials with responsibility over the hazardous waste programs or USGS-approved external auditors will be allowed access to USGS locations to perform compliance inspections, staff assistance visits, or audits.

(b) The location will maintain and forward records and reports as required to Federal, State, Tribal, or local environmental agencies.

(2) *Identification of Hazardous Waste.* One of the characteristics of the hazardous waste is that it has no other use. There are two means by which a solid waste is designated as a hazardous waste; either it is listed as such or it exhibits at least one of four hazardous characteristics. Both listed wastes and characteristic wastes are categorized using the applicable EPA Hazardous Waste numbers.

(a) Listed hazardous wastes are located in several sections within 40 CFR 261 and are grouped into the following categories of Industry and EPA Hazardous Waste numbers (the letters F, K, P, and U refer to the prefix attached to specific lists of Industry and EPA Hazardous Waste numbers in the tables that are included in 40 CFR 261):

(i) F-Listed Wastes. This list includes wastes from common processes, such as solvents that have been used in cleaning or degreasing operations. Because the processes producing these wastes can occur in different sectors of industry, the F-listed wastes are known as wastes from nonspecific sources. Wastes included on the F-list can be found in the regulations at 40 CFR 261.31.

(ii) K-Listed Wastes. This list includes certain wastes from specific industries, such as petroleum refining or pesticide manufacturing. Certain sludges and wastewaters from treatment and production processes in these industries are examples of source-specific wastes. Wastes included on the K-list can be found in the regulations at 40 CFR 261.32.

(iii) P-Listed Wastes. Acutely hazardous discarded commercial chemical products, off-specification products, container residues, and spill residues thereof. Wastes included on the P-list can be found in the regulations at 40 CFR 261.33.

(iv) U-Listed Wastes. Toxic discarded commercial chemical products, off-specification products, container residues, and spill residues thereof. Wastes included on the U-list can be found in the regulations at 40 CFR 261.33.

(b) Hazardous wastes that are identified by at least one of four characteristics are designated by EPA waste numbers beginning with the letter "D" and are described in 40 CFR 261.20–24. They are identified as follows:

(i) Ignitability (D001): Ignitable wastes can create fires under certain conditions, are spontaneously combustible, or have a flash point less than 60 °C (140 °F). Examples include waste oils and used solvents. For more details, see 40 CFR 261.21.

(ii) Corrosivity (D002): Corrosive wastes are acids or bases (pH is less than or equal to 2, or greater than or equal to 12.5) that are capable of corroding metal containers, such as storage tanks, drums, and barrels (for example, battery acid). For more details, see 40 CFR 261.22.

(iii) Reactivity (D003): Reactive wastes are unstable under “normal” conditions. They can cause explosions, toxic fumes, gases, or vapors when heated, compressed, or mixed with water. Examples include lithium-sulfur batteries and explosives. For more details, see 40 CFR 261.23.

(iv) Toxicity (D004–D043). Toxic wastes (for example, those containing mercury, lead, and so on) are harmful or fatal when ingested or absorbed. When toxic wastes are disposed of on land surfaces or in the subsurface, contaminated liquid may leach from the waste and pollute groundwater. Toxicity is defined through a laboratory procedure called the Toxicity Characteristic Leaching Procedure (TCLP). For more details, see 40 CFR 261.24.

(c) Emission residues from air pollution control equipment and sludge from wastewater treatment plants may display a hazardous waste characteristic. Toxicity is the most common characteristic of these residues and sludges. Therefore, these residues and sludges will be evaluated to determine whether they are hazardous waste; if they are, they will be managed appropriately.

(d) Several pesticides exhibit toxic waste characteristics. USGS locations that use pesticides will determine whether the waste pesticides and pesticide waste products (containers, rinsate, and so on) meet the definition of toxic hazardous waste.

(e) Mixtures of a nonhazardous waste and a listed hazardous waste are considered to be hazardous waste and will be managed appropriately.

(f) Mixtures of a nonhazardous waste and a characteristic hazardous waste are considered to be hazardous waste only if the entire mixture exhibits one of the four hazardous characteristics described above. Mixing a nonhazardous waste with a hazardous waste with the intent of eliminating the hazardous characteristic is prohibited. This practice may result in the designation as a treatment, storage and/or disposal facility (TSDF).

(g) Because of the regulations summarized above, the hazardous waste stream will be segregated from nonhazardous waste stream. Segregation also avoids the added expense of managing waste that otherwise might not be considered as "hazardous."

(3) *Generation of Hazardous Waste.* The USGS will comply with the State, Tribal, and local hazardous waste generation requirements that are more stringent than Federal requirements, in addition to the requirements cited in this section.

(a) Monthly generation rates, accumulation times, and accumulation quantities for hazardous waste (HW) generators are established at 40 CFR 261.5 and 40 CFR 262. Those requirements are outlined below. State, Tribal, and local regulations may be more stringent.

(i) Conditionally exempt small quantity generators (CESQGs) generate no more than 220 pounds (100 kilograms) of HW and less than 2.2 pounds (1 kilogram) of acute HW per month and accumulate no more than 2,200 pounds (1,000 kilograms) of HW on site at any given time. CESQGs are exempt from all of the HW management regulations, except for HW identification and disposal requirements. However, CESQGs will document HW generation volumes to determine the proper generator status.

(ii) Small quantity generators (SQGs) generate more than 220 pounds (100 kilograms) and less than 2,200 pounds (1,000 kilograms) of HW per month and less than 2.2 pounds (1 kilogram) of acute HW per month and will accumulate no more than 13,200 pounds (6,000 kilograms) of HW onsite at any given time. The SQGs are subject to limited HW management regulations, which include obtaining an EPA identification number, properly maintaining HW storage containers and tanks, using the Uniform Hazardous Waste Manifest (EPA Form 8700–22) to ship HW offsite, limiting onsite storage to 180 days (270 days if the HW has to be shipped more than 200 miles), and properly disposing of HW.

(iii) Large quantity generators (LQGs) generate more than 2,200 pounds (1,000 kilograms) of HW per month or more than 2.2 pounds (1 kilogram) of acute HW per month. LQGs are subject to all HW management regulations, unless the onsite storage of HW is limited to less than 90 days.

(b) If the monthly quantities for the CESQGs are exceeded but remain within the SQG quantity range, the generator status changes to SQG. Likewise if the quantities for the SQGs are exceeded, the generator is then classified as an LQG and is subject to all hazardous waste management regulations. Managers of locations that change its generator status to a higher-level status are required to notify Federal and (or) State agencies of their new generator status (EPA Form 8700-12). If storage time frames are exceeded, then the generator is also designated as an operator of a hazardous waste storage facility and will apply for an RCRA Part B permit to remain in operation.

(c) Before offering hazardous waste for transport offsite, the hazardous waste generator will ensure that all DOT requirements for labeling, marking, placarding, and transferring to containers are met. The hazardous waste generator will also ensure that the transporter has obtained the appropriate EPA identification number for the transportation of hazardous waste, which indicates that a valid hazardous waste transporter permit is in place, and that a Uniform Hazardous Waste Manifest accompanies each shipment.

(d) Generators will send their hazardous waste to permitted TSDFs that comply with hazardous waste regulations. Generators will certify that the site selected to receive the waste employs treatment, storage, or disposal methods that are the most practically and currently available for minimizing present and future threats to human health and the environment.

(e) The EPA has promulgated land disposal restrictions (LDRs) that limit or prohibit the disposal of certain hazardous wastes. Treatment standards for each type of hazardous waste were also set to reduce substantially the toxicity or likelihood of migration. Wastes that meet the treatment standards, or for which there will be no migration of hazardous constituents for as long as the wastes remain hazardous, may be disposed of on land surfaces or in the subsurface. Specific hazardous wastes prohibited from disposal on land surfaces or in the subsurface and the effective dates of the prohibitions are listed in 40 CFR 268. Generators of hazardous waste will take the following steps to ensure that the requirements of the LDRs are met:

(i) Waste analyses or generator knowledge of the waste will be used to determine if the waste is on one of the LDR lists and is, therefore, a restricted hazardous waste.

(ii) If the hazardous waste is restricted and does not meet the established treatment standard, a written notice will accompany each shipment of the waste, which notifies the TSDF of the appropriate treatment standards that must be met before disposal of the hazardous waste on land surfaces or in the subsurface can take place.

(iii) If the hazardous waste is restricted and meets the established treatment standards, a written certification of this fact will accompany each shipment of the waste to the TSDF. In this case, further treatment of the hazardous waste is not required prior to disposal on land surfaces or in the subsurface.

(iv) If restricted hazardous wastes are being treated onsite to meet the established treatment standards, a written waste analysis plan will be developed, which describes the procedures used to comply with the treatment standards. The plan will be filed with the EPA regional office or with the authorized State office at least 30 days prior to commencing the onsite treatment process.

(v) Records of all notices, certifications, demonstrations, waste analysis data, and other documentation produced to satisfy the LDR requirements will be kept onsite for 5 years from the date the hazardous waste was sent to a TSDF.

(4) *Transportation of Hazardous Wastes.* The USGS normally contracts with private transporters to ship hazardous waste offsite for recycling, treatment, storage, or disposal. The USGS is responsible for ensuring that the transporter meets all Federal, State, Tribal, and local hazardous waste transportation regulations.

(5) *Manifest System.*

(a) The Uniform Hazardous Waste Manifest (EPA Form 8700-22) is the document used to track hazardous waste from the generation point to the final disposal destination. Federal regulations do not require CESQGs to use a uniform hazardous waste manifest. All hazardous waste transported over public roads will be accompanied by a manifest prepared by the EPA-registered facility. Each transporter and the owner or operator of the facility designated to receive the hazardous waste will sign the manifest and keep a record copy. A copy of the signed manifest will then be returned to the hazardous waste generator.

(b) The USGS hazardous waste generator is responsible for preparing a Uniform Hazardous Waste Manifest (EPA Form 8700–22) and ensuring that is accompanies each shipment of hazardous waste transported for offsite treatment, storage, and (or) disposal. If the USGS hazardous waste generator has contracted for hazardous waste transport and disposal services and requires that contractor to prepare the manifest, then the hazardous waste generator will review the manifest for the accuracy of each entry and sign as the generator. All signatories

must be authorized, in writing, to sign as a generator by the senior USGS management official at the location (for example, Science Center Director).

(c) In addition to fulfilling EPA requirements, the USGS will include a 24-hour attended telephone number on each manifest.

(6) *Accumulation and Storage.*

(a) *Accumulation and Storage of Hazardous Waste by CESQGs.* CESQGs are not subject to the accumulation and storage requirements of Federal regulations. State, Tribal, and local requirements will be considered when establishing accumulation and storage practices for CESQGs.

(b) *Accumulation and Storage of Hazardous Waste by SQGs.* An SQG generates more than 220 pounds (100 kilograms) and less than 2,200 pounds (1,000 kilograms) of hazardous waste per month and less than 2.2 pounds (1 kilogram) of acute hazardous waste per month and will accumulate no more than 13,200 pounds (6,000 kilograms) of hazardous waste onsite at any given time. These criteria apply to the location as a whole, not to individual accumulation or generation sites. Accumulation and storage requirements for SQGs are comparable to, but not as stringent as, less-than-90-day storage sites. Key requirements are as follows:

(i) The accumulation time limit is 180 days, unless the TSDF to which wastes will be transported for disposal is more than 200 miles away, in which case the accumulation time is 270 days.

(ii) Each container will be in good condition, compatible with the hazardous waste, and marked with the words "Hazardous Waste" and the accumulation start date.

(iii) Each container will be closed in a manner to prevent accidental release of the contained material (and vapors, where applicable) at all times except when adding or removing hazardous waste. The EPA's definition of "closed" is sealed to prevent accidental leakage or spillage. Generators should be aware that all seals can erode over time and should be periodically checked and replaced as necessary.

(iv) The storage area will be inspected at least weekly for container leaks, deterioration of containers, open containers, and the condition of emergency response and spill control equipment.

(v) Incompatible hazardous wastes will not be stored in the same container under any circumstance. Incompatible waste in separate containers will be separated by a berm, dike, wall, or other device.

(vi) Storage areas will be maintained, operated, and equipped to meet preparedness and prevention requirements outlined in subpart C of 40 CFR 265.

(vii) An emergency coordinator will be onsite or on call at all times. The contact information will be prominently displayed to allow personnel access in the case of an emergency.

(viii) Preparations for responses to spills and other emergencies will be made, including posting emergency response telephone numbers, providing and identifying locations of fire extinguishers and spill control equipment, and familiarizing all employees with proper waste handling and emergency response procedures appropriate to the site.

(c) *Accumulation and Storage of Hazardous Waste by LQGs.* There are three types of hazardous waste accumulation and storage areas: satellite, less-than-90-day, and permitted. The regulatory requirements differ for each type. It is not a requirement to use all three types of areas. For example, hazardous waste can be accumulated at a satellite area and can be transferred later to a permitted storage area. Each location will set up the appropriate number and types of accumulation and storage areas necessary to manage its hazardous waste properly.

(i) A satellite accumulation area is at or near the point of generation where wastes initially accumulate and is under the control of the operator of the process generating the wastes. In order to manage satellite areas effectively and to prevent waste stream contamination, hazardous waste container access will be restricted to authorized personnel only. Although not required, it is good practice to place spill control and emergency equipment (for example, eyewash and a fire extinguisher) near a satellite accumulation area. The other requirements for operating a satellite accumulation area are as follows:

(aa) Each container will be in good condition, compatible with the hazardous waste, and marked with the words "Hazardous Waste" and its type or with other words that identify the contents of the container.

(bb) Each container will be kept closed at all times except when actively adding or removing hazardous waste.

(cc) Generators may accumulate up to 55 gallons of hazardous waste or 1 quart of acute hazardous waste at a satellite area for a maximum of 1 year. These quantity limits are for the total amount of hazardous waste or acute hazardous waste at the site.

(dd) When the first drop of hazardous waste or acute hazardous waste listed above enters the container, the operator will write the date on the container and move it to a less-than-90-day or permitted storage area within 72 hours. The date on the container then becomes the accumulation start date, and a non-permitted location then has 90 days to move or transport the waste to a TSDF.

(ii) Less-than-90-day storage areas are used to store hazardous waste temporarily until it is either listed on a manifest and shipped offsite for disposal or transferred to an onsite permitted storage facility. Hazardous wastes at these areas may be stored only for 90 days. There is no quantity limit for less-than-90-day storage areas as long as all the regulatory requirements listed below are met:

(aa) Each container will be in good condition, compatible with the hazardous waste, and marked with the words "Hazardous Waste" and the accumulation start date.

(bb) Each container will be closed at all times except when actively adding or removing hazardous waste.

(cc) The area will be inspected at least weekly for container leaks, deterioration of containers, open containers, and the condition of emergency response and spill control equipment. An inspection log will be kept in order to show compliance with the weekly inspection requirement.

(dd) Containers holding hazardous waste that is incompatible with other hazardous waste or materials stored nearby will be separated by a berm, dike, wall, or other device.

(ee) The areas will be maintained, operated, and equipped to meet preparedness and prevention requirements outlined in subpart C of 40 CFR 265.

(ff) A contingency plan and emergency procedures will be developed for each area as outlined in subpart D of 40 CFR 265.

(gg) Personnel responsible for the area will be trained in the proper handling of hazardous waste (40 CFR 265.16).

(hh) As part of the effort to minimize the possibility of releases to the environment, secondary containment will be provided for liquid hazardous waste stored in these areas.

(ii) If the area uses tanks to store hazardous waste, then the requirements of subpart J of 40 CFR 265 will be met.

(iii) Permitted Storage. An RCRA permit is required in order to store hazardous waste in excess of 90 days except as specified for CESQGs and SQGs above. Storage requirements are specified as a part of the permit conditions in the RCRA permit.

(7) *Reporting and Recordkeeping.*

(a) The owners and operators of LQGs and TSDFs will submit annual or biennial reports (EPA Form 8700.13A) to the appropriate regional EPA office or State agency by March 1 of each even-numbered year or at such time as required by the State agency. These reports will be kept at least 3 years from the due date of the report. Owners and operators of LQGs and TSDFs will check State reporting requirements, which may be more stringent.

(b) If an LQG has not received a return copy of the hazardous waste manifest within 35 days of the date the waste was accepted by the initial transporter, the transporter and (or) the owner or operator of the TSDF will be contacted to determine the location of the waste and its status. The owner or operator of an LQG will provide an immediate exception report to the EPA regional or State regulatory authorities if the TSDF designated to receive the hazardous waste has not

returned a copy of the manifest with the handwritten signature of the TSDF owner or operator within 45 days of the date the hazardous waste was accepted by the initial transporter. A copy of each exception report filed with the EPA or the State authority will be kept at least 100 years from the date of the report, according to the USGS records disposition schedule.

(c) Records of test results or waste analyses of the waste manifested offsite will be kept according to the USGS records disposition schedule.

(d) Hazardous waste generators and transporters will retain copies of manifests for the hazardous waste accepted by the initial transporter signed by the generator, transporter, and TSDF owner or operator. Records of the signed manifests will be kept according to the USGS records disposition schedule.

(e) Records of all required inspections, including emergency equipment tests, at hazardous waste accumulation and storage areas will be kept onsite. All inspection records will be maintained according to the USGS records disposition schedule.

(f) SQGs are exempt from the EPA biennial reporting requirements, but reporting may be required by individual States or localities. Owners and operators of SQGs will check State and local reporting requirements. With regard to exception reporting, owners and operators of SQGs have 60 days from the date the hazardous waste is accepted by the initial transporter to notify the appropriate regulatory authority. Owners and operators of SQGs are recommended but not required to expend efforts to determine the location of the hazardous waste and its status.

(g) CESQGs are exempt from the requirements listed above, provided they do not exceed the hazardous waste generation quantities.

(h) All organizations will establish policies and procedures to protect hazardous waste inventories and records during natural disasters in order to identify and quantify any losses caused by a natural disaster.

4. **Responsibilities.**

A. *Chief, Office of Management Services.*

(1) Implements USGS hazardous waste management policy.

(2) Provides support by interpreting Federal, State, Tribal, and local hazardous waste regulatory requirements and by uniformly applying USGS policy as set forth in this handbook.

(3) Assists in resolving disputes with Federal, State, Tribal, and local regulatory agencies, as required.

(4) Conducts special environmental compliance and protection studies with regard to hazardous waste management to assist in establishing policy or initiating actions.

(5) Ensures USGS cooperation and compliance with Federal, State, Tribal, and local agencies with regard to hazardous waste regulations.

(6) Develops directives as needed to implement USGS hazardous waste management policy.

B. *Associate Director or Regional Director.*

(1) Ensures that all area activities comply with current Federal, State, Tribal, and local hazardous waste management requirements.

(2) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with emergency planning and response requirements within the region.

(3) Develops directives as needed to implement USGS hazardous waste management policy.

C. *Environmental Protection Specialist.*

(1) Implements hazardous waste management policy.

(2) Provides technical assistance and support to organizations and tenants as needed.

(3) Ensures that the USGS meet applicable EPA and State requirements related to the management of hazardous waste.

D. *Science Center Director.*

(1) Ensures all required Federal, State, Tribal, and local hazardous waste permits are applied for, obtained, and kept current.

(2) Acquires the EPA hazardous waste generator identification number as required and certifies that all hazardous waste transported from the center is manifested in accordance with Federal and State requirements. Hazardous waste manifest signature authority may be delegated in writing to the Collateral Duty Environmental Program Coordinator (CDEPC) if that person has had the appropriate training that would permit him or her to sign.

(3) Ensures that only properly permitted transporters are used for the offsite transport of hazardous waste, the hazardous waste is disposed of in accordance with Federal and State hazardous waste rules and regulations, and the hazardous waste is disposed of at a properly permitted treatment, storage, and disposal facility.

(4) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with hazardous waste management requirements.

(5) Pays appropriate Federal, State, Tribal, and local fees.

(6) Ensures that a hazardous waste management plan for the location, as described in this chapter, is developed and implemented.

(7) Reviews and submits the biennial hazardous waste report to the EPA and State environmental regulatory agency, as required.

(8) Ensures that matters relating to the management of hazardous waste are coordinated with the Office of Management Services in matters relating to the management of hazardous waste, as appropriate.

(9) Ensures that CDEPCs and other personnel involved in hazardous waste management receive the appropriate training.

E. *Collateral Duty Environmental Program Coordinator.*

(1) Assists local management in the technical execution of the disposal of hazardous waste.

(2) Coordinates the application of all required Federal, State, Tribal, and local hazardous waste permits.

(3) Coordinates the development of a location's hazardous waste management plan, as described in this chapter.

(4) Prepares for review the biennial hazardous waste report to the EPA and State environmental regulatory agency, as required.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 8. NATURAL RESOURCES MANAGEMENT

1. **Scope.** This chapter establishes the USGS policy and responsibilities for complying with the procedural and statutory requirements for managing natural resources at USGS locations. This chapter summarizes the Natural Resource Management Program, which consists of land management, fish and wildlife management, forest management, and resource-based outdoor management.

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased, or otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

2. **Authorities and References.**

A. Bald Eagle Protection Act of 1940, as amended (16 U.S.C. 688 et seq.).

B. Clean Water Act (CWA) of 1977, as amended (Public Law 95–217, 33 U.S.C. 1251, et seq.).

C. Coastal Zone Management Act (CZMA) of 1972 (16 U.S.C. 1451 et seq.).

D. Conservation Programs on Reservations (Sikes Act) of 1960, as amended (16 U.S.C. 670(a) et seq.).

E. Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531 et seq.).

F. Federal Noxious Weed Act of 1974 (7 U.S.C. 2801 et seq.).

G. Fish and Wildlife Conservation Act of 1980 (16 U.S.C. 2901 et seq.).

H. Marine Mammal Protection Act (MMPA) of 1972, as amended (16 U.S.C. 1361 et seq.).

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

J. Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703 et seq.).

K. National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.).

L. Outdoor Recreation -Federal/State Program Act (16 U.S.C. 460(L) et seq.).

M. Protection of Wetlands, Executive Order (EO) 11990, May 24, 1977; Floodplain Management, EO 11988, May 24, 1977; and Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input, EO 13690, January 30, 2015.

N. Soil Conservation Act (16 U.S.C. 5901 et seq.).

3. **Requirements.**

A. *General.* This chapter summarizes the requirements of the laws, regulations, and Executive Orders (EO) that apply to natural resources and is organized by subject areas. Those subject areas include fish and wildlife management, land management, forestry management, outdoor recreation, and environmental restoration.

(1) *Stewardship.* Natural resources under the stewardship and control of the USGS will be managed to support the USGS mission while preserving, protecting, and enhancing these resources. Land use practices and decisions will coincide with the mission, rely on scientifically sound conservation procedures and techniques, and employ scientific methods and an interdisciplinary approach.

(a) Responsibility for good stewardship of natural resources will be an important and identifiable function of all levels of management. Establish procedures at each location to ensure that USGS decision-makers are kept informed of the conditions of natural resources, the objectives of natural resources management plans, and the potential or actual conflicts between USGS actions and the policies and procedures herein. Stewardship will be given a high priority in retaining control and use of USGS-administered lands for mission needs.

(b) The policy of the USGS is to act responsibly in the public interest to restore, improve, preserve, and properly use natural resources on USGS-administered lands. There will be a conscious and active concern for the inherent values of natural resources in all USGS plans, actions, and programs. Action sponsors will coordinate proposals for new and continuing actions that affect natural resources with the managers of those resources. Incorporate recommendations from natural resource managers to minimize impacts to natural resources.

(c) The management and conservation of natural resources under USGS control (including planning, implementation, and enforcement functions) are inherently governmental functions that will not be outsourced by the USGS.

(d) The principles of good stewardship also will be applied to natural resources that are not administered by the USGS, including such resources as marine mammals, coral reefs, and others that are potentially affected by USGS operations.

(2) *Natural Resource Management.* Managers will manage its natural resources to provide for sustained use of the land.

(a) *Natural Resource Management Plans.* Managers that have custody of land or water that is suitable for the conservation and management of natural resources will prepare (or ensure the preparation of) and implement a natural resource management plan that includes all elements of natural resource management that apply to the location. Management plans will be prepared by professionally trained personnel, address compliance with legal mandates protecting specific natural resources, and include sections (as appropriate) on various programs discussed in this chapter. Management plans will be monitored continually, reviewed annually, and revised and (or) reapproved at least every 5 years.

(b) *Use of Pesticides.* The use of pesticides in support of a location's natural resource management activities will comply with applicable requirements, particularly those of the Federal Insecticide, Fungicide, and Rodenticide Act. Pesticide use will be minimized.

(c) *Access by Federal and State Conservation Officials.* Federal, State, Tribal, and local officials will be permitted access to USGS lands and waters for official purposes after proper safety and security measures are taken.

(d) *Consistency with Coastal Zone Plans.* In accordance with the Coastal Zone Management Act (CZMA), managers will ensure that those operations, activities, projects, and programs that affect the coastal zone in or on coastal lands or waters are consistent to the maximum extent practicable with the federally approved Coastal Zone Management Plan of the respective State. The location's natural resource management plan will comply with this mandate.

(e) *Protection of Coastal Barriers.* Before construction, maintenance, activities, implementation of natural resources management projects, or other Federal expenditures occur on coastal barrier islands, the Director of the USGS will consult with the Secretary of the Interior to determine the impacts of those actions on these resources. In areas designated as coastal barriers, the USGS will only expend funds for projects for the study, management, protection, and enhancement of natural resources; scientific research; essential emergency actions; maintenance (but not expansion) of publicly owned structures; and nonstructural projects for shoreline stabilization.

(f) *Exotic Organisms.* Managers will prevent the introduction of exotic species into any natural ecosystem unless either the Secretary of Agriculture or the Secretary of the Interior finds that such introduction will not have an adverse effect on those ecosystems, per EO 11987, May 24, 1977. Exotic species with a potential for adverse effects on natural ecosystems will not be used in a manner that may result in their escape to the wild. Whenever exotic plant or animal species threaten native plant communities or ecosystems, measures will be taken to curtail or eradicate their growth or expansion.

(g) *Partnerships and Volunteer Programs.* Whenever practicable, managers will make use of appropriate partnerships and volunteers to enhance conservation programs.

(3) *Land Management.*

(a) *Wetland Protection.* Managers will obtain a permit from the U.S. Army Corps of Engineers prior to discharging dredged or fill material into waters of the United States, including wetlands, in compliance with section 404 of the Clean Water Act (CWA). The managers will comply with the national goal of no net loss of wetlands and will avoid the loss of the size, function, and value of wetlands. In addition, they will preserve and enhance the natural and beneficial values of wetlands while conducting its activities.

(b) *Soil Conservation.* The managers will manage lands to control and prevent soil erosion and to preserve natural resources by conducting surveys and implementing soil conservation measures. Altered or degraded landscapes and associated habitats will be restored and rehabilitated whenever practicable.

(c) *Farmland Protection.* The managers will identify prime and unique farmland and take into account the adverse effects of its actions on the preservation of farmland; consider alternative actions, as appropriate, to reduce such adverse effects; and ensure that such actions, to the extent practicable, are compatible with State, Tribal, and local government and private programs and policies to protect farmland.

(d) *Control of Noxious Weeds.* Managers will cooperate with State programs for controlling noxious plants and allow access for that control, provided that it is consistent with the location's safety and security considerations and that the control measures are acceptable and have been followed on privately owned lands.

(e) *Floodplain Management.* As the USGS implements land management, construction, and land use actions, the managers provide leadership in avoiding direct or indirect development of floodplains as described in Section 3 (C) of Chapter 16 in this handbook, and in restoring and preserving the natural and beneficial values served by floodplains.

(f) *Wildfire Suppression and Prescribed Burning.* Fire is an important component of ecosystem management. Some vegetative types require fire for their maintenance; others are extremely susceptible to fire damage. Prescribed burning is an important tool to reduce fuel loading and to maintain fire-dependent ecosystems. Accordingly, locations prone to wildfire due to the type of vegetation on their grounds will create and implement fire management plans in their natural resources management plans.

(4) *Fish and Wildlife Management.*

(a) *Endangered Species.* The managers will consult with the U.S. Fish and Wildlife Service (USFWS) concerning any USGS action(s) that may affect any federally listed, threatened, or endangered species or their critical habitat. This consultation is required in order to ensure that USGS actions are not likely to jeopardize the continued existence of the species or result in the destruction or adverse modification of its habitat. Such consultations may be either formal or informal. When necessary, the managers will prepare a biological assessment of the effects of a

proposed action on listed species to assist the USFWS in issuing a biological opinion as to whether the action will jeopardize the continued existence of the species. In addition, the managers will use its authority to further programs for the conservation of endangered and threatened species. Science activities on endangered species will create natural resource management plan detailing protective measures that assure the continued health and viability of these species. USGS managers will assist USFWS in their efforts to prepare recovery plans for endangered species.

(b) *Marine Mammals.* Under provisions of the MMPA, the USGS managers will not "take" (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect) or attempt to "take" marine mammals on the high seas or in waters or on land under the jurisdiction of the United States. Permits for a "take" that may be incidental to a legitimate operation will be obtained through a lengthy rule-making procedure. In addition, many marine mammals are also endangered species. The USGS managers will evaluate activities that may affect marine mammals and will take the necessary steps to negatively impact these species.

(c) *Migratory Birds.* Managers will informally consult with the USFWS to ensure that actions resulting in the incidental "taking" of migratory birds are carried out in a manner that minimizes the "taking" of the species listed in 50 CFR 10.13. Managers will discuss with local USFWS officers any actions where the primary intent is to kill migratory birds, their young, or eggs for which the general public would be required to obtain a depredation permit. The lawful pursuit of migratory game birds is permitted in compliance with Federal, State, Tribal, and local hunting regulations.

(d) *Fish and Wildlife Conservation.* The USGS managers will, to the extent practicable, conserve and promote conservation of nongame fish and wildlife and their habitats.

(5) *Forest Management.*

(a) *Management Requirements.* Managers of USGS locations that contain forests will develop, when appropriate, natural resource management plans that include current forest inventories and conditions; maintenance schedules of forested areas and access roads; forest and stand improvement methods; harvesting and reforestation methods and schedules; and information about the protection and enhancement of other natural resources.

(b) *Forest Pest Suppression.* Managers of USGS locations with forest resources will cooperate fully in the planning, coordination, and execution of field operations to prevent and suppress damage to forests as well as insect and disease outbreaks whenever it is determined to be necessary by either the U.S. Forest Service's Regional Forester or the cooperating State forestry department or commission.

(6) *Outdoor Recreation.*

(a) *Recreation Opportunities.* The USGS will provide the public with access to natural resources.

(b) *Off-Road Vehicles.* In accordance with EO 11644, February 8, 1972, which pertains to the use of off-road vehicles on public land, recreational off-road vehicle use on USGS land will be permitted only in areas and on trails designated by the senior USGS management official at the location, with written approval from the land owner. Existing unimproved roads will be monitored to prevent the roadway from moving into sensitive areas.

(7) *Environmental Restoration.*

(a) *Natural Resource Trustees.* The CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA; part 101, section 6), defines natural resources as "land, fish, wildlife, biota, air, water, groundwater, drinking supplies, and other such resources." The CERCLA designates the U.S. President as the trustee for federally protected or managed natural resources on behalf of the public. In addition, EO 12580, January 23, 1987, the National Oil and Hazardous Substances Pollution Contingency Plan, designates heads of specified departments as natural resources trustees. Accordingly, the USGS will act as a natural resources trustee for those resources it manages.

(b) *Natural Resource Trustee Responsibilities.* After notification or discovery of a natural resource injury, loss, or threat, the trustee will take appropriate actions. These actions include conducting a preliminary survey of areas affected by a discharge or release to determine if natural resources are or may be affected; cooperating with the on-scene coordinator or the project manager in coordinating assessments, investigations, and planning; and carrying out a plan for the restoration, rehabilitation, replacement, or acquisition of equivalent natural resources. The USGS will take these actions when acting as a trustee.

(c) *Ecological Risk Assessments.* Through the authority found in the CERCLA and other statutes, the USGS will perform ecological risk assessments at any site listed in the EPA's National Priorities List in order to protect wildlife, fisheries, and endangered and threatened species and their habitat where mission work will be undertaken. During the remedial investigation or feasibility study stages, ecological effects and routes of exposure will be examined so that important impacts and transport pathways are not overlooked and so that reasonable estimates are made of the health, safety, and environmental effects of various remedial alternatives. These assessments require natural resource expertise in site reviews, work plans, contractor qualifications, and final product, as well as remedial action decisions.

B. *Ecosystem Management.* It is USGS policy to incorporate ecosystem management as the basis for land use planning and management on USGS property. This approach takes a long-term view of human activities, including uses and biological resources as part of the same system. The goals of ecosystem management are to preserve and enhance ecosystem integrity and sustain both the biological diversity and continued availability of those resources for human uses. Biologically or geographically significant or sensitive natural resources or species will be inventoried and managed in order to protect these resources and promote biodiversity. Ecosystem-based management will include a shift from single species to multiple species conservation, the formation of partnerships necessary to consider and manage ecosystems that

cross organizational boundaries, the use of the best available scientific information in decision-making, and the use of adaptive management techniques in natural resources management.

C. *Recordkeeping and Reporting.* Managers will maintain data regarding natural resources to facilitate and ensure the efficient and effective accomplishment of program goals and objectives. Periodic reports will be required at the discretion of the USGS Environmental Program Manager to ensure compliance with legal requirements and to facilitate the implementation and coordination of program responsibilities.

D. *NEPA Compliance.* Managers must conduct environmental review of natural resources management actions under the NEPA.

4. **Responsibilities.**

A. *Chief, Office of Management Services.*

(1) Conducts environmental compliance and protection studies and provides policy to establish and maintain a program for the management, conservation, and enhancement of natural resources on USGS lands.

(2) Coordinates pertinent aspects of the USGS natural resources program with the headquarters' officials of other Federal agencies and private organizations.

(3) Through staff assistance visits and the Environmental Compliance Auditing Program, ensures that USGS cooperates and complies with Federal, State, Tribal, and local regulatory agencies with regard to natural resource management regulations.

(4) Provides support to USGS regions by interpreting Federal, State, Tribal, and local natural resource management regulatory requirements and by uniformly applying USGS policy as set forth in this handbook.

(5) Seeks the aid of and coordinates the natural resource program with Federal, State, Tribal, and local agencies. Coordinates proposals for new and continuing actions that affect natural resources with the managers of those resources.

B. *Associate Director or Regional Director.*

(1) Takes appropriate action necessary to ensure that authorized, funded, or conducted actions comply with the ESA, the MMPA, Section 106 of the NHPA, NEPA, the CWA, and Tribal requirements.

(2) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with natural resource management and planning within the region.

(3) Develops directives as needed to implement USGS natural resource management policy.

(4) Coordinates pertinent aspects of the local natural resources program with the headquarters' officials of other Federal agencies and private organizations.

C. *Environmental Protection Specialist.*

(1) Coordinates proposals for new and continuing actions that affect natural resources with the managers of those resources.

(2) Through staff assistance visits and the Environmental Compliance Auditing Program, ensures that the USGS cooperates and complies with Federal, State, Tribal, and local regulatory agencies with regard to natural resource management regulations.

(3) Coordinates pertinent aspects of the natural resource program and issues with the EMB.

D. *Science Center Director.*

(1) Ensures the incorporation of soil and water conservation measures and landscaping with native vegetation, as appropriate, in the preliminary engineering, design, and construction of facilities involving ground disturbance.

(2) Ensures that erosion prevention and control measures are included as requirements in the specifications for all ground-disturbing construction projects. Includes the costs of these measures as a specific item in new project investigations and preliminary engineering reports.

(3) Ensures that the location or organizational directives to implement provisions set forth in this chapter and to integrate natural resources requirements into the day-to-day decision-making process are prepared, distributed, and followed.

(4) Acts as a trustee for natural resources under his or her jurisdiction and develops and maintains an effective conservation program.

(5) Programs and budgets for sufficient funding to ensure the support of a natural resources management program that complies with all EOs, Federal natural and cultural resource statutory and regulatory requirements, and State regulations.

(6) Ensures that a natural resource management plan is prepared, includes the designation and special management provisions for special natural areas, and systematically applies accepted conservation practices.

(7) Encourages appropriate personnel to participate in natural resource job training activities and professional meetings.
(8) Ensures that any action affecting natural resources is given proper consideration in the environmental review and public notification process.

(9) Provides support to the CDEPC in order to accomplish the tasks outlined in section E.

E. *Collateral Duty Environmental Program Coordinator.*

(1) Coordinates the preparation of a natural resource management plan to include the designation and special management provisions for special natural areas and systematically apply accepted conservation practices.

(2) Seeks the aid of, and coordinate the natural resources program with, the EPS and Federal, State, Tribal, and local agencies.

(3) Coordinates proposals for new and continuing actions that affect natural resources with the managers of those resources.

(4) Coordinates surveys and other appropriate actions as necessary with the EPS to document the presence of threatened or endangered species, identify currently used and periodically or indirectly used habitats for these species, and assist in determining whether any such habitats should be considered for designation as "critical habitat."

(5) Coordinates surveys with the EPS to determine the presence and distribution of proposed threatened and endangered species, species under review for threatened or endangered status, and rare and endangered species in States or U.S. territories.

(6) Coordinates the identification of the boundaries of habitat areas of endangered and threatened species and their delineation on maps with the EPS.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 9. PESTICIDE MANAGEMENT

1. **Scope.** This chapter establishes the USGS policy and responsibilities for complying with the legal use of pesticides.

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased, or otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements which go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

B. *Background.*

The first pesticide control law was enacted in 1910. This law was primarily aimed at protecting consumers from ineffective products and deceptive labeling. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) established procedures for registering pesticides with the Department of Agriculture when it was initially passed in 1947. The FIFRA was essentially rewritten in 1972 and regulatory oversight was transferred to EPA at that time. The objective of the FIFRA is to provide Federal control of pesticide distribution, sale, and use. All pesticides used in the United States must be registered (licensed) by the EPA. Registration assures that pesticides will be properly labeled and that, if used in accordance with specifications, they will not cause unreasonable harm to the environment. Use of each registered pesticide must be consistent with use directions or other information on the label.

2. **Authorities and References.**

A. Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (42 U.S.C. 1100 et seq.).

B. Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531 et seq.).

C. Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1972, as amended (Public Law 92–516, 7 U.S.C. 136 et seq.).

D. Federal Noxious Weed Act of 1974 (7 U.S.C 2801 et seq.).

E. Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251 et seq.).

F. Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703 et seq.).

G. National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.).

H. Resource Conservation and Recovery Act (RCRA) of 1976, as amended (42 U.S.C. et seq.).

I. Toxic Substances Control Act (TSCA) of 1976 (15 U.S.C. 2601 et seq.).

3. **Requirements.**

A. *Pesticide Application.* Only properly trained personnel or contractors will apply.

B. *Pesticide Use.* Pesticides will be used in accordance with applicable laws, including the FIFRA.

C. *Pesticide Management.* Complete daily pesticide application and pest management operations records will be maintained, as required by the FIFRA and 7 U.S.C.136i-1; these records will be archived after 2 years for permanent retention. If needed, an Integrated Pest Management (IPM) Plan for the location will be developed and implemented. An IPM is a plan that uses best management practices (BMPs) to solve pest problems. The BMPs are developed to minimize risks to people and the environment.

D. *Pest Management Contracts.* Pest management contracts will be used when they are more cost-effective than in-house services or when they are advantageous for nonroutine, large-scale, or emergency services, especially when specialized equipment or expertise is needed. Contractors must comply with the regulatory requirements of the State in which the work will be performed with regard to the certification, licensing, and registration of pest management companies and their employees.

E. *Pesticide Disposal.* Every effort will be made to ensure that pesticides do not become hazardous waste. Excess EPA-registered pesticides should be returned to the supplier, transferred to another USGS location that is able to use the material, transferred to another DOI bureau, or disposed of in accordance with the regulations.

F. *Pesticide Safety.* To ensure the safe use of pesticides, USGS personnel will handle and apply pesticides in accordance with the product's label directions and MSDS information. Certain pesticides will be applied only by licensed and certified applicators.

G. *Paints and Coatings Containing Pesticides and Other Biocides.* The use of paints containing insecticides is generally prohibited. However, paints containing fungicides to inhibit mildew may be used when the application directions specify that there no special restrictions due to the

fungicide. Approved marine antifouling compounds or coatings may be applied to protect the surfaces of watercraft.

H. *Specialized Pest Management Operations.*

(1) *Aerial Application of Pesticides.* Documentation for aerial application projects will be kept in accordance with DOI and USGS environmental requirements. Approval for aerial application will be obtained by a pest management consultant who is certified in the aerial application of pesticides before aerial application operations commence. If subsequent aerial application operations are planned, managers must ensure that the documentation is updated that copies of each applicator's certification is obtained for each subsequent application.

(2) *Disinfection of USGS Aircraft.* USGS personnel will disinfect aircraft for disease-bearing and agricultural pests only when the following apply:

(a) Mandated by the United States Department of Health and Human Services or the United States Department of Agriculture (USDA).

(b) Directed by a bureau-level or higher authority.

(c) No passengers are onboard.

(3) *Forest Pests.* USGS managers must cooperate with the U.S. Forest Service on applicable pest management programs.

(4) *Pesticide Applications in the Range of Endangered Species.* The USGS managers will comply with regulations, including those issued under the ESA, which require Federal agencies to ensure that their actions will not jeopardize endangered or threatened species (ETS) or associated habitat. Managers will ensure that personnel using pesticides on the property know the potential impact that pesticide applications could have on ETS. It is recommended that a pest management plan be submitted to the regional U.S. Fish and Wildlife Service (USFWS) office for review and comment. Personnel should consult with the appropriate EPS when developing a pest management plan. Further coordination with the USFWS is not required unless the conditions of the pesticide applications are changed as indicated by State requirements, pesticide labels, ETS status, or land use. If the USFWS determines that the pesticide application may affect the ETS and if the pesticide application is considered a firm requirement by the USGS manager, then a request for an informal or formal consultation with the USFWS will be submitted.

(5) *Pest Management at Closing Facilities.* Because pests may cause serious damage, managers will ensure that pest management consultants provide guidance needed to protect all closing or closed facilities from pests from the beginning of closure until final disposition of the property through property transfer, sale, or demolition.

(6) *Turf and Ornamental Pests.* Managers will implement measures to prevent unacceptable damage to shade trees, ornamental plantings, and turf by insects, diseases, and weeds. Furthermore, they will ensure that trained personnel apply pesticides on the basis of the specific identification of the target pest. The pest management plan will identify recurring infestations.

(7) *Undesirable Plants.* Managers will develop programs to comply with the Federal Noxious Weed Act and must do the following:

(a) Designate an office or person adequately trained in the management of undesirable plant species to develop and coordinate an undesirable plant management program for the location, as needed.

(b) Plan, program, and budget to achieve, maintain, and monitor compliance with the Federal Noxious Weed Act.

(c) Ensure that cooperative agreements with State agencies regarding the management of undesirable plant species on the property grounds are completed and carried out, as needed.

(8) *Vertebrate Pests.* Vertebrate pest management programs will be implemented as required to prevent the destruction of real property and adverse impacts on health and morale. Managers will do the following:

(a) Cooperate with Federal, State, Tribal, and local agencies that have implemented animal damage control programs on adjacent public and private lands.

(b) Identify the potential for secondary effects or effects on other organisms or design programs to preclude or minimize the risks to them.

(c) Obtain all applicable Federal, State, Tribal, and local permits.

I. *Reports and Records.*

(1*) Recordkeeping.* Daily records of pesticide applications and pest management operations will be maintained. These records will account for pest management operations and pesticide applications for each building, structure, or outdoor site.

(a) Records will include information on the type, amount, use, date, and place of pesticide application, the applicator's name(s), and the certification numbers.

(b) The record will include all pesticide applications performed at the location.

(c) The records will be retained according to the USGS record retention schedule.

4. **Responsibilities.**

A. *Chief, Office of Management Services.*

(1) Establishes and maintains programs that conform to the policy, procedures, and requirements specified in this chapter.

(2) Emphasizes techniques to reduce pesticide risk and prevent pollution.

(3) Ensures that the USGS cooperates and complies with Federal, State, Tribal, and local regulatory agencies with regard to pesticide management regulations.

(4) When human health is an issue, coordinates pest management actions, as appropriate, with State, Tribal, and local governments involved in pest management.

(5) Provides support by interpreting Federal, State, Tribal, and local pest management regulatory requirements and by uniformly applying USGS policy as set forth in this handbook.

(6) Conducts special environmental compliance and protection studies with regard to pest management to assist in establishing policy or initiating actions.

B. *Associate Director or Regional Director.*

(1) Establishes and maintains programs that conform to the policy, procedures, and requirements specified in this chapter.

(2) Implements programs to achieve, maintain, and monitor compliance with applicable Federal, State, Tribal, and local statutory and regulatory requirements for pest management.

C. *Environmental Protection Specialist.*

(1) Through staff assistance visits and the Environmental Compliance Auditing Program, ensures cooperation and compliance with Federal, State, Tribal, and local regulatory agencies with regard to pesticide management regulations.

(2) Monitors pesticides to ensure the available pesticides are least-hazardous pesticides that comply with applicable Federal, State, Tribal, and local laws.

(3) Cooperates with State, Tribal, and local government agencies involved with pest management.

(4) Monitors the use of best management practices and reduction of pesticides in the pest management programs.

D. *Science Center Director.*

(1) Establishes and maintains programs that conform to the policy, procedures, and requirements specified within this chapter.

(2) Emphasizes pest management techniques and organizational pest management programs as a means to reduce pesticide risk and prevent pollution under his or her control.

(3) Exercises oversight and review of pest management programs that are under his or her control.

(4) Ensures that implemented pest management programs achieve, maintain, and monitor compliance with applicable Federal, State, Tribal, and local statutory and regulatory requirements.

(5) Establishes surveillance programs to assess potential adverse environmental or public health effects from pesticide use and monitor the health and safety of personnel who apply pesticides.

(6) Ensures that procedures are established so that recommendations from onsite pest management program reviews will result in appropriate corrective action.

(7) Ensures that all pest management operations performed at the location, except those for personal relief, are properly recorded and that all records are properly maintained.

E. *Collateral Duty Environmental Program Coordinator.*

(1) Coordinates the implementation of pest management programs to achieve, maintain, and monitor compliance with applicable Federal, State, Tribal, and local statutory and regulatory requirements.

(2) When human health is an issue, coordinates pest management actions with the EPS or with State, Tribal, and local governments involved with pest management, as appropriate.

(3) Cooperates with State, Tribal, and local government agencies involved with pest management.

(4) Ensures that pest management operations are properly recorded and that all records are properly maintained.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 10. SOLID WASTE MANAGEMENT

1. **Scope.** This chapter establishes USGS policy and responsibilities for complying with statutory and procedural requirements for solid waste disposal, waste minimization, recycling, and resource recovery requirements. The Solid Waste Disposal Act of 1965, as amended by the Resource Conservation and Recovery Act of 1976, establishes requirements concerning the disposal and management of solid wastes.

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased, and otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

2. **Authorities and References.**

A. Clean Air Act (CAA) of 1970, as amended (42 U.S.C. 7401 et seq.).

B. Executive Order (EO) 12873, Federal Acquisition, Recycling, and Waste Prevention, October 20, 1993.

C. Executive Order (EO) 13101, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, September 14, 1998.

D. Pollution Prevention Act (PPA) of 1990 (42 U.S.C. 13101 et seq.).

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

F. Solid Waste Disposal Act of 1965, as amended of 1976 (42 U.S.C. 6901 et seq.).

3. **Requirements**

A. *Solid Waste Collection, Storage, and Disposal.*

(1) Federal, State, Tribal, and local requirements concerning collection, storage, and disposal apply to USGS locations that engage in the following activities:

(a) Generates solid waste, whether collected by the USGS, the General Service Administration (GSA), or by a contract collector.

(b) Disposes of solid waste on USGS property, regardless of whether the source of the waste is the USGS or others.

(c) Disposes of solid waste off USGS property if the waste is generated by the USGS and if the manager directly manages the disposal operation.

(2) 40 CFR 240-247 and 40 CFR 257-258 contain applicable Federal regulations for nonhazardous solid waste management, including requirements for disposal at municipal solid waste landfills (40 CFR 258) and requirements for procuring selected products containing recovered materials and postconsumer wastes, including oil, paper, tires, and building insulation.

(3) USGS waste materials (including trash, rubbish, garbage, and construction debris) will not be burned in open fires, except in limited situations after considering health and safety issues and with the approval of the appropriate State, Tribal, or local agencies and the EPA regional office.

B. *Recycling Programs.*

(1) All USGS managers will establish recycling programs and procedures that ensure the following:

(a) Where cost-effective, all activities have, or participate in, a recycling program. These recycling programs will be made available to all host and tenant organizations that occupy space at the location, regardless of space acquisition method (for example but not limited to USGS owned, USGS leased, GSA provided, or space agreements).

(b) After the effective date of this handbook and where cost effective, contracts that provide for contractor operation of a Government-owned or Government-leased space located within the United States, its territories, or possessions will include provisions that obligate the contractor to participate in a recycling program. Where cost-effective, existing contracts covering Government-owned or contractor-operated facilities will be modified to incorporate recycling provisions.

(c) Recyclable materials will be segregated from the nonhazardous solid waste stream where economically feasible. Individual types of recyclable materials that make up a substantial percentage of the nonhazardous waste stream should be included in recycling programs, unless doing so will make the overall recycling program unprofitable.

(2) Managers that do not have comingled waste recycling will implement procedures for local reuse screening to consider reuse, transfer, and donation programs prior to selling recyclable materials.

(3) An accounting and control system will be established for the recycling program that provides detailed management and audit information, tracks the quantity of material that is handled, calculates the sales and handling costs for recycled material, and tracks expenditures made for appropriate projects.

(4) Managers will ensure that appropriate controls are in place for recyclable materials that may be hazardous, such as lead-acid batteries.

(5) Manager will operate a composting program or participate in a composting program if it is practical to do so. Managers should check State, Tribal, or local regulations prior to doing so.

C. *Paper.* Waste paper generated at USGS locations will be separated at the source of generation, separately collected, and sold for the purpose of recycling, unless single stream recycling programs are in place. Exceptions may be made only if analysis by the manager determines that a market for recovered products is not available, or that compliance is not economical. In situations where the USGS is a tenant, the host is responsible for establishing a source separation program. The USGS must encourage the establishment of such programs and cooperate by separating high-grade paper.

D. *Used Newspaper.* Used newspapers will be separated at the source of generation, separately collected, and sold for recycling. Exceptions are appropriate only if the manager determines through analysis that markets are not available or that compliance is not economical. Such analyses must include the applicable portions of the life-cycle costs associated with disposal by contract.

E. *Corrugated Containers.* Waste corrugated containers will be collected and sold for recycling in a manner that prevents nuisance situations. Exceptions are appropriate only if the manager determines through analysis that markets are not available or that compliance is not economical. Such analyses must include the applicable portions of the life-cycle costs associated by contract.

F. *Returnable Beverage Containers.* The USGS will comply with State laws regarding beverage containers.

G. *Recyclable Materials Sales Program.* The USGS can use the proceeds from the sale of recyclable materials to cover the operation, maintenance, and overhead costs incurred in the recycling operation. Excess funds will be used for pollution prevention, environmental compliance, and energy projects.

H. *Records Requirements.* Federal regulations require that the USGS will determine which actions have been or will be adopted with respect to separating recyclable materials at their source of generation. A decision not to separate recyclable materials at their source of generation will be based on a fully supported analysis. This procedure does not apply to waste materials turned over to voluntary organizations or local communities for recycling.

I. *Procurement.* The following products require affirmative procurement actions: recycled paper, cement or concrete containing fly ash, retread tires, building insulation, and used oil. USGS managers will promote procurement of these and other recovered materials.

J. *USGS Solid Waste Management Programs.*

(1) *General.*

(a) For disposal purposes, all solid waste generated at USGS locations are considered to be the property of the U.S. Government, and the USGS will strive to reduce solid waste generation. Solid waste collection, disposal, and resource recovery programs at USGS locations will be implemented in the most cost-effective and environmentally acceptable manner. Changing location requirements, the availability of commercial solid-waste facilities, and market conditions will necessitate the periodic review of these operations.

(b) Contractors performing activities at USGS locations will dispose of their solid waste per their contract requirements.

(c) The USGS manager will design a solid waste disposal program as a total system that considers the relative economic advantages of the latest technology as well as the potential for resource recovery and explore shredding, compacting, energy recovery, and similar processes. A solid waste management plan will be developed that addresses each of the following:

(i) Source reduction.

(ii) Material reuse.

(iii) Recycling.

(iv) Energy recovery.

(v) Disposal.

(2) *Source Reduction.* USGS source reduction programs will incorporate the following, where feasible:

(a) Composting to facilitate the reduction of lawn care waste.

(b) Reducing excessive packaging, especially where packaging is used for attractive merchandising or convenience functions.

(c) Reducing waste generation in offices by practicing the following:

(i) Reusing materials (for example, file folders, paper clips, and interoffice routing envelopes).

(ii) Dual-sided copying.

(iii) Using electronic mail instead of paper memorandums.

(iv) Reducing mail and distribution lists.

(3) *Solid Waste Resource Recovery*.

(a) Where cost effective, all USGS managers will implement the separation of recyclable materials at their source. All USGS organizations and tenants are strongly encouraged to participate in the host's recycling program.

(b) All USGS locations will establish a site-wide recycling program for the following purposes:

(i) To protect the environment and prevent the depletion of valuable natural resources.

(ii) To comply with Federal, State, Tribal, and local environmental laws and regulations.

(iii) To reduce the volume of waste disposed in landfills.

(iv) To reuse readily available resources.

(v) To avoid excessive costs for the disposal of solid waste by other means.

(vi) To obtain proceeds from the sale of recyclable material.

(c) At USGS locations, the following materials, at a minimum, will be segregated for recycling:

(i) Scrap metal.

(ii) Paper.

(iii) Corrugated containers.

(iv) Aluminum cans.

(v) Plastic.

(d) Exceptions to recycling these materials will be considered only in the following situations, when approved in writing by the Science Center Director with the concurrence of the EMB:

(i) A market analysis conducted by the manager of the activity in question indicates that the recovered materials cannot be sold or disposed of economically because of a lack of market demand.

(ii) The net costs exceed the net income plus avoided costs for disposal by another means.

(e) No exceptions will be granted where environmental laws and regulations require specific materials to be recycled or removed from the waste stream.

(f) USGS managers will develop appropriate management controls for recyclable materials that may be hazardous, such as lead-acid batteries.

(g) USGS managers will consider the following additional materials in the development of recyclable material markets:

(i) Glass.

(ii) Plastic.

(iii) Newspaper.

(iv) Scrap wood.

(v) Other waste as market demand rises.

(h) USGS managers will update economic analysis and market determinations as market conditions change significantly, and maintain such records on file at the managing location.

(i) To maximize recycling, recyclable materials that are not profitable for a recycling program will be handled through solid waste contracts where the cost in the contract to have the materials recycled is less than the cost in the contract to dispose of the material. The contract will include requirements for keeping records of the quantities and types of material recycled in this manner.

(4) *Records.*

(a) Each manager will determine actions that have been or will be taken to fulfill requirements to separate recyclable materials at their source. When a manager decides not to separate such materials, the decision will be based on a fully supported analysis approved by the Science Center Director with the concurrence of the OMS. To determine solid waste management requirements, each location will keep records of disposed solid waste and recycled materials. Records may take the form of weight tickets, an accounting of the number and size of truckloads delivered, contractor billings, or any other means of accurately determining or establishing the rate and volume of solid waste that has been generated.

(b) A recycling program will address the identification of recyclable materials and excluded materials. Proceeds from the sales of recyclable material will be returned to the location and records of the proceeds will be maintained.

4. **Responsibilities.**

A. *Chief, Office of Management Services.*

(1) Provides information and advice to the EPS regarding proposed and final rules and regulations pertaining to solid waste management and resource recovery and uniformly applies USGS policy as set forth in this handbook.

(2) Assists Regional Directors in resolving disputes with Federal, State, Tribal, and local regulatory agencies, as required.

(3) Conducts special environmental compliance and protection studies with regard to solid waste management to assist in establishing policy or initiating actions.

(4) Through site assistance visits and the Environmental Compliance Program Audit, ensures that the USGS cooperates and complies with Federal, State, Tribal, and local regulatory agencies with regard to solid waste regulations. Provides assistance visit and Environmental Compliance Program Audit findings reports to the Regional Director's staff and Center Director.

B. *Associate Director or Regional Director.*

(1) Ensures that all activities comply with current Federal, State, Tribal, and local solid waste management requirements.

(2) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with solid waste management and resource recovery requirements within the region.

C. *Environmental Protection Specialist.*

(1) Identifies solid waste management and resource recovery facilities that are required to maintain compliance with applicable existing and emerging regulations and permits.

(2) Ensures that all required Federal, State, Tribal, and local permits are applied for and obtained.

(3) Ensures that programs that separate recyclable materials at their sources are feasible and implemented at locations within the region.

(4) Ensures that solid waste management plans are developed that include source reduction and recycling programs, as required.

D. *Science Center Director.*

(1) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with solid waste management and resource recovery requirements.

(2) Ensures that pollution prevention alternatives are evaluated and lifecycle-cost impacts are assessed when evaluating and selecting projects that address compliance requirements.

(3) Ensures that all required Federal, State, Tribal, and local permits are applied for, acquired, and maintained.

(4) Ensures that programs to separate recyclable materials at their sources are established and implemented, where applicable.

(5) Ensures that solid waste management and pollution prevention plans are developed and maintained and that provisions of the plans are implemented.

E. *Collateral Duty Environmental Program Coordinator.*

(1) Coordinates the evaluation of pollution prevention alternatives and ensures that lifecycle-cost impacts are assessed when evaluating and selecting projects that address compliance requirements.

(2) Coordinates the application for all required Federal, State, Tribal, and local permits.

(3) Coordinates the establishment and implementation of programs to separate recyclable materials at their sources.

(4) Ensures that solid waste is disposed of according to applicable Federal, State, Tribal, and local requirements.

(5) Coordinates the development of solid waste management plans, including source reduction and recycling programs.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 11. STORAGE TANK MANAGEMENT

1. **Scope.** This chapter establishes USGS policy and responsibilities for compliance with statutory requirements for both aboveground storage tanks (ASTs) and underground storage tanks (USTs) that contain petroleum products and hazardous substances.

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased, and otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal and local requirements.

(3) State, Tribal and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

B. *Background.* Until the mid-1980s most USTs were made of single-walled bare steel, which was likely to corrode over time and allow the contents of the UST to leak into the environment. To address a nationwide problem of leaking USTs, Congress passed a series of laws to protect human health and the environment. The 1986 amendments to the RCRA included provisions to prevent releases from USTs and mandate a comprehensive regulatory program.

The Energy Policy Act of 2005 (EPACT05), Subtitle B is the Underground Storage Tank Compliance Act of 2005. The UST Compliance Act of 2005 contains an amendment to Subtitle I of RCRA, which significantly affects Federal and State UST programs. The UST Compliance Act of 2005 focuses on preventing releases and includes provisions regarding inspections, operator training, delivery prohibitions, secondary containment, financial responsibility, and cleanup of releases that contain oxygenated fuel additives. Section 15228 of EPACT05 modified section 9007 of the SWDA. This modification waived sovereign immunity for reasonable nondiscriminatory user fees, inspection fees, and monitoring fees; civil sanctions; civil fines; and criminal acts in owning, managing, and oversight of USTs.

The goal of the Clean Water Act is to protect the surface waters of the United States. Under the CWA, the EPA published oil pollution prevention regulations in 1973 (amended in 1974, 1976, 2002, and 2004). These regulations require the preparation of Spill Prevention Control and Countermeasure (SPCC) Plans and contain specific guidelines for the design and operation of bulk storage containers. The guidelines for oil storage tanks, specifically bulk storage containers, include preventative measures such as requirements for secondary containment, control of drainage from containment areas, protection of buried metallic tanks and piping from corrosion, inspection and testing of aboveground tanks and piping, requirements for spill prevention

devices (such as high-level alarms), security requirements for oil storage areas, and personnel training requirements.

2. **Authorities and References.**

A. Energy Policy Act of 2005 (EPACT05).

B. EPA Regulations on Discharge of Oil (40 CFR 110).

C. EPA Regulations on Oil Pollution Prevention (40 CFR 112).

D. EPA Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (40 CFR 280).

E. Federal Water Pollution Control Act (FWPCA) of 1972, as amended by the Clean Water Act (CWA) of 1977 (33 U.S.C. 1251 et seq.).

F. Hazardous and Solid Waste Amendments (HSWA) of 1984 (Public Law 98–616).

G. The Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99–499).

3. **Requirements.**

A. *General Storage Tank Standards and Operating Requirements.*

(1) Science Center Directors who manage storage tanks will monitor transfer operations to ensure that spilling or overflowing does not occur. They will install and maintain overfill protection equipment in order to prevent releases.

(2) Science Center Directors will maintain and inspect corrosion protection measures, including coatings and cathodic protection systems. Cathodic protection systems will be tested according to Federal, State, Tribal, and local laws and regulations.

(3) Science Center Directors will install storage tank systems and make repairs to existing storage tank systems according to Federal, State, Tribal, and local requirements.

(4) Science Center Directors will conduct temporary or permanent closure of storage tanks in a manner which ensure the protection of soil, surface water, and groundwater. In addition, such closures will be conducted according to Federal, State, Tribal, and local regulations.

(5) Science Center Directors will maintain written records demonstrating compliance with operational requirements.

(6) Science Center Directors will operate, monitor, and test release detection systems according to Federal, State, Tribal, and local laws and regulations.

B. *General Aboveground Storage Tank (AST) Standards and Operating Requirements.*

(1) ASTs containing petroleum are not regulated by the RCRA. For ASTs containing petroleum, current Federal regulation is limited to the petroleum pollution prevention and discharge reporting requirements. Some States, tribes, or local governments have developed regulatory standards for ASTs that contain petroleum, which may not apply to the USGS. In the event of a discrepancy, Science Center Directors will obtain assistance from EPSs to determine the applicability of regulations.

(2) Whenever possible, managers will install release detection systems on ASTs. Such release detection devices, storage tank supports, and alarms, will be routinely inspected to ensure that they are operating properly and are in good condition. Inspections will be documented and inspection records kept for at least 3 years.

(3) ASTs will have overfill prevention devices or operating procedures in place that prevent it from being overfilled. A secondary containment system will be in place for each petroleum storage tank or container that has a capacity of 55 U.S gallons or more. Spill prevention devices and secondary containment will be routinely inspected to ensure that they are operating properly and are in good condition. Inspection reports will be kept for at least 3 years.

(4) Managers will report releases of petroleum or hazardous materials from ASTs. Managers will immediately investigate suspected releases from ASTs by reviewing storage records, conducting integrity testing, and (or) by performing a subsurface investigation. If regulated substances are found in adjacent properties not known to have been previously contaminated, then the manager will conduct a release investigation of suspect ASTs in accordance with EPA or respective State regulations.

(5) Managers will conduct the permanent closure of ASTs per applicable State, Tribal, or local regulations. At a minimum, the manager will empty and clean the ASTs and associated pipelines and place locking caps on fill lines/risers. For permanent closure, if the AST is not removed, the manager will also cap, blank flange, or grout affected pipelines and maintain records on such closures. The manager will record information about the site condition, pipelines affected, actions taken, and maintain correspondence records with Federal, State, Tribal, and local regulators.

C. *General Underground Storage Tank (UST) Standards and Operating Requirements.* UST regulations that apply to Federal facilities are found in 40 CFR 280, subparts A–G. Federal UST regulations apply only to underground tanks and piping that stores either petroleum or certain hazardous substances. A brief description of the requirements follows:

(1) A UST is defined as a tank (including piping) that is used to accumulate a regulated substance, the volume of which is 10 percent or more beneath the surface of the ground (including the volume of underground piping).

(2) Federal UST regulations apply to both existing (installed in or before December 1988) and new (installed after December 1988) tanks and the associated piping network. These regulations include corrosion protection and spill and overflow prevention requirements and are applicable immediately for new tanks. Existing tanks were required to be upgraded or retrofitted by December 22, 1998. Tanks unable to meet Federal UST standards will be closed in compliance with UST closure regulations.

(3) Wastewater treatment tank systems, storm water collection systems, USTs containing radioactive material (Atomic Energy Act of 1954), UST systems that are part of emergency generator systems at nuclear-power generation facilities, airport hydrant fuel distribution systems, and UST systems with field-constructed tanks are exempt from UST regulations, except for the section governing release response and corrective action requirements.

(4) Owners or operators of USTs will monitor transfer operations to ensure that spilling or overflowing does not occur.

(5) Owners or operators of USTs will maintain and inspect corrosion protection measures, including cathodic protection, to ensure proper operation.

(6) UST systems must be constructed of, or lined with, materials that are compatible with the substances that are stored in the UST system.

(7) Owners or operators of USTs will conduct repairs to UST systems by following a code of practice developed by a nationally recognized association or an independent testing laboratory, or the manufacturer's authorized representative(s) may make repairs. Repaired tanks will be tested for tightness and corrosion protection. Records of all repairs for the remaining operating life of the UST system will be maintained. Internal inspections of repaired tanks, using appropriate confined-space entry procedures, may be permitted in lieu of tightness testing.

(8) Owners or operators of USTs will maintain written records that demonstrate compliance with operations and maintenance requirements for 100 years.

(9) Owners or operators of USTs will notify the appropriate regulatory agency and receive approval of the installation of any new UST. Owners or operators must report all existing USTs and installation certifications for new UST systems to the proper appropriate regulatory agency. Owners or operators must also report releases, spills, and corrective actions planned in cleanup procedures to the appropriate regulatory agency.

D. *Release Detection.*

(1) 40 CFR 280, subpart D, identifies release detection requirements.

(2) New, existing upgraded, and existing nonupgraded tanks and pipes will provide methods for release detection. Release detection methods were to be phased in for existing tanks and piping systems. New tanks and associated piping will have a release detection method provided at the

installation of the tank. The schedule for phasing in release detection methods in existing systems was based on the age of the tank and piping. The phase-in process began December 22, 1989, for tanks 25 years old or older. All piping and existing tanks must have been upgraded with the release detection methods by December 22, 1993.

(3) 40 CFR 280, subpart D, defines specific types of release detection methods to be used. The options outlined in subpart D are as follows:

(a) One of the monthly monitoring methods defined in 40 CFR 280.43(d)–(h).

(b) Tank tightness testing in combination with monthly inventory control may be used. Tank tightness testing is required annually for existing tanks that do not yet meet the upgrade requirements and could only be used to meet release detection requirements until December 22, 1998. Tank tightness testing at intervals of 5 years is allowed for new tanks or tanks upgraded with corrosion protection until December 22, 1998, or 10 years after installation or upgrade, whichever date is later. The employment of release detection methods required by 40 CFR 280, subpart D, is necessary for the life of the tank and piping system.

(4) Records documenting compliance with release detection requirements will be maintained for 5 years or for a length of time specified by the applicable regulatory agency.

E. *Release Reporting, Investigation, and Confirmation.*

(1) 40 CFR 280, subpart E, outlines release reporting, investigation, and confirmation requirements.

(2) A suspected release from a UST system will be reported to the appropriate State, Tribal, and local regulatory agency within 24 hours. The following can be used as evidence of a suspected release:

(a) Sudden loss of product.

(b) Erratic behavior of dispensing equipment.

(c) Unexplained presence of water in a tank.

(d) Discovery of free product or vapor at the site or surrounding area, or when release detection methods indicate a release occurrence.

(3) The following are exceptions to the reporting requirement:

(a) Tank system dispensing or pumping equipment is defective, but not leaking, and can be replaced or repaired immediately.

(b) The second month of inventory control data does not confirm the initial results.

(c) The monitoring device is found to be defective and is immediately repaired or replaced and recalibrated, and additional monitoring does not confirm the initial results.

(4) Suspected releases of regulated substances must be investigated and confirmed within 7 days by conducting a UST system test or another confirmation procedure established by the regulatory agency. Further investigation is not required if a system test indicates that a leak does not exist and no environmental contamination is present. If system testing indicates that no leak exists but environmental contamination is the cause for suspecting a release, a site check, per 40 CFR 280.52(b), is required.

(5) UST system spills or overfills will be immediately cleaned up and reported to the appropriate regulatory agency within the mandated time frame.

(6) The following will be reported to the State in writing within the specified time frames:

(a) Any UST system spills or overfills that are more than 25 gallons.

(b) UST system spills or overfills of hazardous substances that exceed reportable quantities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

(c) For tanks containing petroleum products, a petroleum sheen is present on nearby surface water.

(7) Spills and overfills resulting in the release of petroleum that are less than 25 gallons will be contained immediately and cleaned up within 24 hours. If cleanup cannot be accomplished within 24 hours, the appropriate regulatory agency and emergency services will be notified immediately. Local agencies may have more stringent response requirements.

F. *Release Response and Corrective Action.*

(1) 40 CFR 280, subpart F, outlines release response and corrective action requirements.

(2) Upon discovery of a confirmed or suspected release, owners and operators will notify the EPA and appropriate State agencies within the established timeframe (typically 24 hours). Upon confirmation of a release, owners or operators will stop further release of the regulated substance from the UST system and identify and mitigate fire, explosion, and vapor hazards. States may have more stringent response requirements.

(3) The following initial abatement measures are required for a confirmed release, as identified in 40 CFR 280.62 (States may have more stringent requirements):

(a) Remove as much of the regulated substance as necessary from the UST system to prevent further release. All waste material will be placed in approved and compatible containers.

(b) Cleanup actions to resolve hazards posed by UST releases will be communicated to and approved by the appropriate Federal, State, Tribal, or local agency. Hazards include, but are not limited to, contaminated soils on the surface and below ground level and migration of the regulated substances (known as "free product") into surrounding soils and groundwater.

(c) Continue to monitor and mitigate any fire, safety, and environmental hazards.

(d) Thoroughly measure and monitor for the presence and extent of releases around the UST site.

(e) Reduce hazards posed by contaminated soils and materials that were excavated or exposed as a result of any corrective or investigative activities. The owner or operator must comply with applicable Federal, State, Tribal, and local regulations regarding disposal or treatment of these substances.

(f) Report initial abatement steps within 20 days or as specified by Federal, State, Tribal, or local requirements.

(4) The EPA or the State agency requires the submission of an initial site characterization report that includes, at a minimum, the following:

(a) A determination of the nature and extent of the release.

(b) An estimated quantity of the release.

(c) A free-product assessment.

(d) Information on surrounding population, geology, water supply, wells, utilities, climate, and land use.

(5) A site characterization report must be submitted to the appropriate regulatory agency within 45 days of release confirmation or another reasonable time as specified by the regulatory agency.

(6) If free product is discovered, the owner or operator will begin abatement as soon as possible and to the maximum extent practical. All free-product abatement and disposal practices will comply with those listed in 40 CFR 280.64.

(7) Investigate soil and groundwater contamination to determine the extent of the contamination plume. Submit the information obtained during the investigation to the proper regulatory agency. Submission of a corrective action plan to the appropriate regulatory agency may be required along with additional information on the condition and extent of contaminated soil; groundwater remediation actions; and demonstration that adequate protection to human health, safety, and the environment is being provided. The regulatory agency will review this corrective action plan to determine if it adequately protects human health, safety, and the environment. The regulatory agency may approve the plan or make any modifications prior to implementation.

(8) The regulatory agency must notify members of the public for each confirmed release that requires a corrective action plan and make the corrective action plan available to the public, upon request. Additionally, the public must be notified if the selected corrective action fails to meet the established cleanup goals.

G. *Out-of-Service UST Systems and Closure.* The regulations that apply to this section are located in 40 CFR 280, subpart G. Many States have more stringent requirements in place for the closure of UST systems. Personnel should check with the implementing agency prior to closing USTs.

H. *Compliance with UST Requirements.* The USGS UST program policy is to comply with all Federal and applicable State, Tribal, and local regulations pertaining to the operation and management of USTs.

I. *Compliance with UST Inventory.* One of the most important initial steps in meeting UST regulatory requirements is to develop adequate baseline data regarding a tank population. USGS managers will maintain a complete and accurate UST inventory. Complete inventories will have all applicable data elements listed for each system record. Data elements will be updated to reflect significant changes in the UST condition, especially at critical points during the useful life of each UST (for example, following tank closure, when upgraded or repaired, if a release occurs, at closure, and so on).

J. *Compliance with UST Management.*

(1) No person may install a UST system listed in 40 CFR 280.10(c) for the purpose of storing regulated substances unless the UST system (whether of single- or double-wall construction) meets the following criteria:

(a) The UST system prevents releases due to corrosion or structural failure for the operational life of the UST system.

(b) The UST system is cathodically protected against corrosion, constructed of noncorrodible material, steel clad with a noncorrodible material, or designed in a manner to prevent the release of any stored substance.

(c) The UST system is constructed or lined with material that is compatible with the stored substance.

(2) A UST system without corrosion protection may be installed at a site if a corrosion expert has determined that the substance to be stored is not corrosive enough to cause a release during the system's operating life.

(3) Owners and operators of UST systems will maintain records that demonstrate compliance with the requirements of this paragraph for the remaining life of the tank.

4. **Responsibilities.**

A. *Chief, Office of Management Services.*

(1) Provides information and advice to managers regarding proposed and final rules and regulations pertaining to storage tanks and uniformly applies USGS policy as set forth in the handbook.

(2) Assists with monitoring compliance with requirements that apply to any upcoming storage tank upgrades.

(3) Assists managers in resolving disputes with Federal, State, Tribal, and local regulatory agencies, as required.

B. *Associate Director or Regional Director.*

(1) Ensures that all activities comply with current Federal, State, Tribal, and local storage tank requirements.

(2) Ensures that appropriate resources are available for the personnel, equipment, materials, training, and monitoring that are required to comply with storage tank requirements.

C. *Environmental Protection Specialist.*

(1) Ensures that all required Federal, State, Tribal, and local permits are applied for and obtained.

(2) Ensures that notification requirements for storage tanks are completed and forwarded by managers to the EPA or the appropriate State, Tribal, or local agency, as required.

(3) Maintains an accurate inventory of storage tanks and forwards a copy to the Chief, Environmental Management Branch (EMB).

(4) Through site assistance visits and the Environmental Compliance Auditing Program, ensures that the USGS comply with Federal, State, Tribal, and local regulatory agencies with regard to storage tank regulations.

D. *Science Center Director.*

(1) Identifies projects and submits, through the appropriate channels, project documentation and funding requests for storage tank systems that are required in order to maintain compliance with applicable existing and future regulations and permits.

(2) Ensures that notification requirements for storage tanks are completed and forwarded to the EPA or the appropriate State, Tribal, or local agency, as required.

(3) Ensures that leak detection and product inventory activities, recordkeeping, and monitoring at USGS locations are accomplished, as required by Federal, State, Tribal, and local UST laws and regulations.

(4) Ensures that appropriate resources are made available for the personnel, equipment, materials, training, and monitoring that are required to comply with UST requirements.

(5) Ensures that all required Federal, State, Tribal, and local permits are applied for, acquired, and maintained.

(6) Signs certifications and permit applications, as required, for construction of all UST projects and pays appropriate Federal, State, Tribal, and local fees.

(7) Ensures that an accurate UST inventory is maintained and forwarded to the appropriate EPS.

E. *Collateral Duty Environmental Program Coordinator*.

(1) Coordinates leak detection and product inventory activities, recordkeeping, and monitoring, as required by Federal, State, Tribal, and local UST laws and regulations.

(2) Coordinates compliance with Federal, State, Tribal, and local laws and regulations concerning the construction of new USTs, the upgrading of existing tanks, and the removal and closure of abandoned or unneeded tanks.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 12. TOXIC SUBSTANCES MANAGEMENT

1. **Scope.** This chapter establishes USGS policy and responsibilities for compliance with requirements under the Toxic Substances Control Act (TSCA) for managing toxic substances, including polychlorinated biphenyl (PCB), asbestos, materials that contain lead. USGS locations will comply with all applicable Federal, State, Tribal, and local regulatory requirements regarding the management of toxic substances.

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased, and otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

B. *Background.*

(1) *PCBs.* PCBs belong to a broad family of artificial organic chemicals known as chlorinated hydrocarbons. PCBs were domestically manufactured from 1929 until their manufacture was banned in 1979. Due to their chemical stability and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications, including in electrical and heat transfer equipment; in paints, plastics, and rubber products as plasticizers; and in pigments and dyes.

EPA regulations prohibit PCB manufacturing, processing, importation, and distribution in commerce except for its disposal. The regulations do allow for the continued use of some PCB-containing equipment already in service through the end of its useful life, unless otherwise prohibited (for instance, a PCB-containing transformer that is not leaking may continue to be used until the end of its useful life). The “end of useful life” is generally interpreted to be the point at which the equipment fails. Additionally, for purposes of spill reporting, PCBs are recognized as hazardous substances under the CERCLA.

(2) *Asbestos.* Asbestos is the name given to a number of naturally occurring fibrous minerals with high tensile strength, the ability to be woven, and resistance to heat and most chemicals. Because of these properties, asbestos fibers have been used in a wide range of manufactured goods, including roofing shingles, ceiling and floor tiles, paper and cement products, gaskets, pipe hanger liners, adhesives, and friction products such as automobile clutch, brake, and transmission parts. The Toxic Substances Control Act defines asbestos as the asbestiform

varieties of chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite or grunerite), anthophyllite, tremolite, and actinolite. Materials with more than 1 percent asbestos are called "asbestos-containing materials" (ACM).

(a) *Hazard.* Asbestos exposure is a major health hazard. Three of the major health effects associated with asbestos exposure includes asbestosis, lung cancer, and mesothelioma. It can take 20 to 40 years between the first exposure to asbestos and the appearance of cancer.

(b) *Detection.* Asbestos fibers cannot be seen without a microscope and have no odor or taste. These fibers may float in the air for 24 hours or more after they are disturbed. Airborne asbestos fibers can be detected using specialized air-sampling techniques and equipment.

(c) *Exposure.* Activities that can generate airborne asbestos and have the potential to exceed permissible exposure limits (PEL) include, but are not limited to, the fabrication, installation, repair or removal of asbestos insulation materials; sawing or breaking of asbestos-containing fire retardant building materials; brake relining and repair work; and the removal of floor tiles or mastics containing asbestos. Personnel performing these tasks must be certified to do so.

(d) *Substitution.* Although asbestos-free substitute materials are being used, asbestos material may still be encountered in USGS in such applications as linings of fume hoods and chemical storage cabinets, tape and mastic on drywall, thermal insulation systems (such as those wrapped encasing heating pipes), roofing materials, gaskets, and pipe hanger liners. Some brake pads contain asbestos.

(3) *Lead.* The abundance, low melting point, high molecular weight, high density, and malleability of lead make it a useful structural material. When added to resins, grease, or rubber, lead compounds act as antioxidants (inhibit any reactions promoted by oxygen or peroxides). Common uses for lead and lead compounds include as ballast, radiation shielding, ammunition, paint filler and hardener, rubber antioxidant, an acoustical insulation component, solder for electrical components and pipe joints, high-voltage cable shielding, batteries, roof flashing, and weights. Although not an absolute indicator, red, forest green, chrome yellow, and traffic yellow paints typically contain lead components such as lead oxides and lead chromates. Lead may also be found in painted surfaces in USGS-owned residential units (commonly known as "quarters").

(a) *Hazard.* Lead has long been a recognized health hazard. Lead can damage the nervous system, blood-forming organs, kidneys, and reproductive system. Chronic (long-term) lead exposure initially damages the blood-forming and reproductive organs, with higher levels of exposure causing peripheral nerve and central nervous system damage. Lead interferes with the formation of hemoglobin in blood and will cause anemia. Lead causes cellular kidney damage, which reduces urine output and leads to water retention and kidney failure. Reduced sperm counts and decreased fertility have been found in workers chronically exposed to lead. Lead poisoning in children can be extremely serious because, in addition to the above-mentioned effects, it may also seriously impair their ability to learn.

(b) *Exposure.* Significant lead exposures can occur during lead melting and casting; ballast handling; cleanup of firing ranges; use of indoor firing ranges; spraying, sanding, grinding, burning, and abrasive blasting of lead-containing materials and paint; soldering with torches; high-voltage cable repair; abrasive blasting with smelting slag; reclamation of lead-acid batteries; machining lead; working on gasoline engine components (which have used leaded gasoline); handling of lead weights used in streamflow monitoring; and wearing or shaking lead-contaminated protective clothing.

2. **Authorities and References.**

A. Asbestos (Construction Standards), 29 CFR 1926.1101.

B. Asbestos (General Industry Standards), 29 CFR 1910.1001.

C. Asbestos Hazard Evaluation and Response Act, 40 CFR 763.

D. Lead (Construction Standards), 29 CFR 1926.62.

E. Lead (General Industry Standards), 29 CFR 1910.1025.

F. National Emissions Standards for Hazardous Air Pollutants (NESHAPS)—Asbestos, 40 CFR 61, Subpart M.

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

H. Toxic Substances Control Act (TSCA) of 1976 (15 U.S.C. 2601 et seq.).

3. **Requirements.** The safe handling and disposal of toxic substances is the direct responsibility of the manager where toxic substances are located.

A. *PCB Management Program.*

(1) *Use and Reuse.* PCBs at any concentration may be used in transformers (other than railroad) and for servicing (including rebuilding) those transformers for the remainder of their useful lives (40 CFR 761.30). The following requirements apply to the use and reuse of PCBs:

(a) The USGS will not use or store for reuse large PCB capacitors, PCB transformers, or electromagnets that pose an exposure risk to human food or animal feed. An exposure risk exists if PCBs released in any way have a potential pathway to human food or animal feed. PCB capacitors may be used only if there is no exposure risk and only within a restricted-access electrical substation or a restricted-access indoor installation. All PCB transformers and electromagnets in use or in storage for reuse will be visually inspected for leaks at least every 3 months and the finding will be documented. The initiation of cleanup and repair of leaks will occur within 48 hours of their discovery. All leaking PCB transformers will be inspected daily until the leak has been repaired. In situations where transformers have 100 percent secondary

spill containment, or have been serviced for purposes of reducing the PCB concentration and contain less than 60,000 parts per million, visual inspections may be reduced to once every 12 months (40 CFR 761.30).

(b) Installing PCB transformers that have been placed into storage for reuse or that have been removed from another location in or near commercial buildings is prohibited.

(c) The USGS must register all PCB transformers (including pole-mounted PCB transformers and those stored for reuse) with any fire department able to respond to a fire.

(2) *Markings.*

(a) Per 40 CFR 761.40, the following PCB items that were in existence on or after July 1, 1978, will be marked with the following wording:

Caution: Contains PCBs (polychlorinated biphenyls), a toxic environmental contaminant requiring special handling and disposal in accordance with U.S. Environmental Protection Agency (EPA) Regulations 40-CFR 761. For disposal information, contact the nearest EPA Office at [insert telephone number]. In case of accident or spill call the National Response Center at (800) 424-8802 (toll free). Also contact [insert telephone number].

(i) All PCB transformers and large high-voltage PCB capacitors (LHVCs) in use or removed from use.

(ii) Electric motors using PCB coolants, hydraulic systems, and heat transfer systems containing PCBs of 50 ppm or greater.

(iii) Large low-voltage PCB capacitors (LLVCs) when they are removed from service.

(iv) Containers holding articles that contain PCBs.

(v) Each storage area used to store PCBs and PCB items.

(vi) PCB transformer locations.

(b) Mark PCB storage areas and transport vehicles with special labels in accordance with 40 CFR 761.40, and the Department of Transportation's (DOT) hazardous material transportation regulations.

(c) Mark the date when PCB liquids, PCB containers, nonliquid PCBs, and PCB items are removed from service and placed in the storage location.

(3) *Storage.*

(a) Per the requirements in 40 CFR 761.65, the following storage requirements apply to PCBs at concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater:

(i) An adequate roof and walls to prevent rainwater from reaching the stored PCBs and PCB items;

(ii) An adequate floor with a continuous 6-inch-high curb;

(iii) No drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area; and

(iv) In order to minimize flood hazards, USGS locations will select one of the approaches for establishing the flood elevation and hazard area, described in Section 3 (C) of Chapter 16 in this Handbook.

(b) Items containing non-leaking PCBs or items containing leaking PCBs that are placed in non-leaking containers with an oil absorbent material may be put into temporary storage (those not meeting the requirements of a permanent structure) for up to 30 days (consult with State, Tribal, and local laws and regulations that apply to PCB item storage because some allow longer storage times for certain items). Containers with non-liquid PCB-contaminated soil, rags, or debris from spills and PCB containers with 50 to 500 ppm liquid PCB (as determined by an accredited laboratory) may also be stored in temporary facilities. However, the EPA requires that the date of removal from service be attached to all items in temporary storage. An SPCC Plan will be prepared for the temporary storage area if it is used to store containers holding liquids contaminated with 50 to 500 ppm PCB. Any container used for the storage of PCBs and PCB items will meet the requirements of 40 CFR 761.65(c).

(c) PCB items may be stored for up to 1 year in permanent PCB storage location, provided it meets the applicable minimum criteria as specified in 40 CFR 761.65.

(d) Combustible materials will not be stored within 15 feet of any PCB transformer or its enclosure.

(4) *Disposal.*

(a) Stored PCBs and PCB items with concentrations of 50 ppm or greater will be disposed of within 1 year of the date that they were placed in storage.

(b) For fluids containing more than 500 ppm of PCBs, disposal is generally accomplished by means of high-temperature incinerators that are permitted by the EPA. PCB-contaminated mineral oil (less than 500 ppm PCB) may be burned in high-efficiency boilers provided that specific EPA requirements are met and that EPA and appropriate State, Tribal, and local approvals are obtained. Hazardous waste landfills, approved by the EPA for PCB disposal, may be used for disposal of specific PCB items such as transformers, large capacitors, and debris

from PCB spills (40 CFR 761.60). PCB transformers will be emptied of fluid and rinsed with appropriate solvent before they can be moved to landfills. The rinsate will be captured and disposed of in accordance with Federal, State, Tribal, and local regulations.

(5) *Emergency Response and Reporting.*

(a) Fire-related incidents involving PCB transformers will be immediately reported by telephone to the National Response Center (NRC) at (800) 424-8802. The owner of the PCB transformer also must take measures to contain and control any potential releases of PCBs and incomplete combustion products into water. Fires involving PCBs can generate extremely toxic reaction products (for example, dioxins). The building (and possibly surrounding buildings) in which a PCB fire occurs will be evacuated immediately.

(b) PCBs are a hazardous substance under the TSCA and the CERCLA, requiring spills to be reported as follows:

(i) A spill of a reportable quantity (1 pound or greater by weight) will be reported to the appropriate response organizations and regulatory agencies.

(ii) Releases of a mixture containing PCBs will be reported only when the amount of the PCB component released exceeds the reportable quantity.

(iii) If the concentration of PCBs in the mixture is unknown, the release will be reported if the total amount of the mixture spilled is 1 pound or more (see 40 CFR 761.125).

(6) *Notification of PCB Waste Activity.* Locations that generate PCB wastes will notify the EPA and obtain an EPA identification number for PCB waste generators. It is illegal for a PCB waste generator to process, store, dispose of, transport, or offer for transportation of PCB wastes without first having obtained an EPA identification number. PCB generators will notify the EPA of such activities by filing EPA Form 7710–53 (40 CFR 761.202). Generators that do not store PCBs or PCB items for more than 30 days and that do not operate PCB storage subject to the requirements of 40 CFR 761.65(b) or 40 CFR 761.65(c)(7) are exempt from notifying the EPA. Exempt generators will use the generic identification number "40 CFR 761" or a number assigned to the activity by the EPA or State, Tribal, or local regulatory agency under RCRA.

(7) *PCB Recordkeeping.* The EPA requires that the following records be kept, as applicable:

(a) Records of inspections, maintenance, and repairs of PCB transformers and electromagnets in use, or stored for reuse, will be maintained at the location at least 3 years after disposal of the PCB transformer or electromagnet.

(b) Each owner or operator of a location using or storing at any one time at least 45 kg (99.4 pounds) of PCBs in PCB containers, one or more PCB transformers, or 50 or more large PCB capacitors will maintain annual records and a written annual document log of PCB waste disposal activities. These records and the log will be retained for 3 years after the location ceases

using or storing PCBs and PCB items in quantities described above. The document log will be completed by July 1 for the previous calendar year. Annual records will include all signed manifests for the calendar year and all certificates of disposal.

(c) The written document log will contain the following specific inventory information for each type of PCB item, as follows:

(i) Name, address, and EPA identification number of the location and the calendar year covered by the annual document log.

(ii) Manifest number of every manifest generated by the location during the calendar year.

(iii) Total number of articles, containers, and transformers by specific type of PCB.

(iv) Total weight in kilograms of PCBs in article containers, transformers, and capacitors remaining in service at the location at the end of the calendar year.

(d) A record will be kept of each telephone call or other form of communication that confirms receipt of the PCBs transported by an independent transporter.

(e) *Manifests of PCB Wastes.* A generator who relinquishes control over PCB wastes for commercial offsite disposal will prepare a manifest using EPA Form 8700–22. If the generator uses an independent transporter to ship the waste and the generator does not receive a signed copy of the manifest from the disposer or commercial storage facility within 35 days of shipment, the generator will contact the transporter and (or) disposer to determine the disposition of the waste. If the generator does not receive a manifest from the disposal facility within 45 days of shipment, then the generator will file an exception report with the EPA regional office. The generator will retain copies of the manifests for at least 3 years after the location ceases using or storing PCBs or PCB items (40 CFR 761.207).

(f) *Certificates of Disposal and 1-Year Exception Reports.* For each shipment of manifested PCB waste, the disposer is obligated to prepare a certificate of disposal that must be sent to the generator within 30 days of the date of disposal (40 CFR 761.218). A generator who provides a manifest of PCBs or PCB items to a disposer of PCB waste will submit a 1-Year Exception Report to the EPA regional administrator whenever one of the following criteria are met (40 CFR 761.215):

(i) The generator has not received a certificate of disposal within 13 months of the date of the removal of the PCBs or PCB items from service.

(ii) The generator receives a certificate of disposal for a disposal date that is more than 1 year after the date on which the PCBs or PCB items were removed from service.

(8) *USGS Operated PCB Transformers.* Managers will ensure USGS operated PCB transformers are tracked and recorded. The USGS will inform building occupants as to the location and type of any PCB transformers.

(9) *PCB Equipment Removal Policy.* It is the USGS policy is to eliminate PCBs from all USGS-owned electrical distribution systems and from the hydraulic fluids and cooling and lubricating oils in equipment by using the following procedures:

(a) *Transformers.*

(i) Determine the PCB concentration for all pad-mounted and pole-mounted transformers by gas chromatography or another appropriate method. Transformers will be marked in accordance with Federal, State, Tribal, or local requirements using a label as illustrated below. Record the PCB test results (in ppm) for each transformer.

(ii) By October 2005, all transformers containing 50 ppm or more PCBs should have been eliminated. To reduce future potential liabilities, accomplish transformer elimination by replacement, or by removal with load transfer to other non-PCB transformers.

(b) *Capacitors.*

(i) Establish an accurate inventory of PCB capacitors on the basis of their manufacturing information. Label large PCB capacitors and large non-PCB capacitors in accordance with Federal, State, Tribal, and local requirements. Record the PCB classification of each large capacitor.

(ii) By October 2005, all large PCB capacitors should have been eliminated.

(c) *Elimination Plan.* For each location, a PCB elimination plan will be completed and maintained until all PCBs and PCB items have been removed from the location. The plan will include the proposed date of removal and the requested source of funding for the disposal of each PCB item. The plan can be included as a part of the environmental management plan.

(d) *Procurement.* All future procurement of transformers or any other equipment containing dielectric or hydraulic fluid will be accompanied by a manufacturer's certification that the equipment contains no detectable PCBs or that the equipment contained less than 2 ppm PCBs at

time of shipment. Affix labels such as the following to such newly procured transformers and equipment, which will indicate that no detectable levels of PCB are present.

B. *Asbestos Management Program.*

(1) *Asbestos Operations.* Asbestos removal or containment operations will be controlled so they are not hazardous to USGS personnel. However, they must be identified, properly monitored, and evaluated by an industrial hygienist or similarly qualified individual. Control of asbestos is a mandatory requirement.

(2) *Permissible Exposure Limit (PEL).* The PEL for asbestos is 0.1 fibers per cubic centimeter (f/cc) of air, calculated as an 8-hour time-weighted average (TWA) exposure, referred to as the PEL–TWA. Fibers are defined as rod-shaped particles having a length-to-width ratio of greater than or equal to 3:1 and an overall length of more than 5 micrometers.

(3) *Excursion Limit (EL).* The EL is 1.0 f/cc averaged over a sampling period of 30 minutes, referred to as the PEL–EL. No employee will be exposed to airborne fibers in excess of either PEL–TWA or PEL–EL. The excursion limit refers to short-term permissible exposure.

(4) *Personnel Notification.* Any monitored individual will be notified in writing about the results of the monitoring within 15 working days after receipt of exposure data. Any individual found to have been exposed to airborne concentrations of asbestos fibers in excess of either PEL–TWA or PEL–EL at any time during the course of their employment or assignment will be notified in writing of their exposure as soon as practical but no later than 5 days after receipt of exposure data. The notification will contain information about corrective actions being taken to reduce employee exposure to levels below the PEL–TWA or PEL–EL.

(5) *Control Methods.*

(a) *Work Clearance.* Due to the inability to detect and contain asbestos without specialized monitoring and training, the initiation of maintenance, renovation, demolition, or self-help projects is prohibited without first contacting the manager to obtain a work clearance. Asbestos work will only to be conducted by personnel licensed and certified to do so.

(b) *Containment.* If suspected asbestos-containing material is discovered and it is broken, chipped, or in friable condition (can be crumbled by hand), personnel will evacuate the area, seal the room to prevent entry, and immediately contact the manager.

(c) *Work Protocol.* At no time may suspected asbestos-containing material be dry swept. Contractors will submit a health and safety plan detailing procedures they will employ to protect USGS personnel and the safety coordinator and EPS must review the plan.

(6) *Warning Signs and Labels.*

(a) Warning signs will be displayed at each location where airborne asbestos fibers may exceed the PEL–TWA. An example of the warning sign is as follows:

(b) The Collateral Duty Environmental Program Coordinator and Safety Coordinator will approve the signs before they are displayed.

(c) Warning labels will be affixed to containers of raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers. Warning labels will be printed in letters of sufficient size and contrast as to be readily visible and legible.

(7) *Disposal.*

(a) Only approved sealed, impermeable bags (or other closed, impermeable container at least 6 mm thick) marked with the standard asbestos warning label will be used for the disposal of asbestos waste (for example, waste generated from an asbestos rip-out operation, scrap material from asbestos gaskets, asbestos-contaminated personal protective equipment (PPE)). Impermeable bags marked in this way must not be used to carry clean PPE or tools, dispose of general trash, or store asbestos material.

(b) Asbestos waste will be adequately wetted down and double bagged; bag tops will be "goose-necked" and sealed with duct tape.

(8) *Spilled or Uncontrolled Asbestos.*

(a) *Asbestos Spill.* An asbestos spill is the inadvertent or uncontrolled release of asbestos fibers into the atmosphere. For example, personnel removing a piece of equipment may damage and break open overhead pipe insulation, causing pieces of insulation to fall to the ground and fibers to be released into the atmosphere.

(b) Any individual that causes or discovers a spill will do the following:

(i) Secure the work area and move out of area to a distance of at least 15 feet.

(ii) Warn others in the area of the spill and secure the space or have it guarded to prevent other personnel from entering area.

(iii) Ensure that any ventilation or air conditioning affecting the immediate spill area is turned off.

(iv) Contact the immediate supervisor. If the supervisor is not available, contact the location Collateral Duty Environmental Protection Coordinator and safety coordinator.

(9) *Uncontrolled Asbestos.* Uncontrolled asbestos is a material that is not properly sealed, stored, or contained, but from which there is no evidence of a release of fibrous material into the atmosphere. Small tears in the asbestos cloth covering on pipe insulation, damaged asbestos gaskets, and broken pieces of vinyl asbestos tile lying loose on the floor are a few examples of uncontrolled asbestos releases. Consult with the manager, the environmental protection specialist, or the safety coordinators for appropriate procedures to follow in the event that uncontrolled asbestos is discovered.

C. *Lead Management Program.*

(1) Mechanical vacuum capture will be the primary means of controlling exposure to lead. Dust will be collected as much as possible by local exhaust ventilation at the point of generation and will be captured by high efficiency particulate air (HEPA) filters. Emissions will not be exhausted into another workspace. Recirculation of HEPA-filtered air from lead operations is not recommended. At no time will a non-HEPA-filtered vacuum be used in lead operations.

(2) The CDEPC, in collaboration with the EPS and manager, will identify specific vacuum and ventilation requirements for dust-producing activities.

(3) Ventilation systems used to control exposure to lead will be evaluated by an industrial hygienist quarterly and within 5 days of any significant change in either the work process or equipment.

(4) *Warning Signs and Caution Labels.* Warning signs will be posted at each location where airborne lead may exceed the PEL–TWA of 50 micrograms per cubic meter of air (ug/m^3). These signs must contain, at the minimum, a listing of required PPE.

(5) *Housekeeping.* Compressed air will not be used to clean work surfaces or personnel clothing. Vacuuming with HEPA-filtered vacuum cleaners or washing down with trisodium-phosphate-based cleaners are recommended. Wet sweeping, shoveling, or brushing will be used only when other housekeeping methods are ineffective or not feasible. At no time will dry sweeping be employed. Cleaning materials, boundary materials, and wastewater will be treated as lead-contaminated hazardous materials.

(6) *Personnel Notification.* Within 5 working days after receipt of a health hazard evaluation, each worker will be notified in writing of his or her exposure.

4. **Responsibilities.**

A. *Chief, Office of Management Services.*

(1) Provides information and advice regarding proposed and final rules and regulations pertaining to PCBs, asbestos, lead-based paint, and other toxic substances.

(2) Monitors the status of inventories of PCBs, asbestos, and lead-management programs.

(3) Assists Regional Directors in resolving disputes with Federal, State, Tribal, and local regulatory agencies, as required.

(4) Conducts special environmental compliance and protection studies with regard to PCBs, asbestos, and lead to assist in establishing policy or initiating actions.

(5) Ensures that the USGS cooperates and complies with Federal, State, Tribal, and local regulatory agencies with regard to PCB, asbestos, and lead regulations.

B. *Associate Director or Regional Director.*

(1) Ensures that all activities comply with current Federal, State, Tribal, and local PCB, asbestos, and lead requirements.

(2) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with PCB, asbestos, and lead requirements.

(3) Submits project documentation and funding requests for PCB-, asbestos-, and lead-management programs that are required to maintain compliance with applicable existing and emerging regulations and permits.

C. *Environmental Protection Specialist.*

(1) Evaluates compliance with applicable Federal, State, Tribal, and local laws and regulations governing PCB, asbestos, and lead management.

(2) Ensures that the appropriate reports on PCBs, asbestos, and lead and other required data are signed and submitted to the EPA and State, Tribal, and local agencies.

(3) Ensures locations have prepared and updated PCB elimination plan, as required.

(4) Ensures that coordination occurs, as appropriate, with the BSM in matters relating to PCB, asbestos, and lead management.

(5) Ensures that all supervisors and workers involved in asbestos removal operations complete State-approved Asbestos Hazard Emergency Response Act (AHERA) training.

D. *Science Center Director.*

(1) Ensures that project documentation and funding requests are submitted for PCB, asbestos, and lead management or abatement projects for locations that are required to maintain compliance with applicable existing and emerging regulations and permits.

(2) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with PCB-, asbestos-, and lead-management requirements.

(3) Pays appropriate Federal, State, Tribal, and local fees.

(4) Ensures that all required Federal, State, Tribal, and local permits are applied for and obtained.

(5) Signs and submits, as appropriate, reports on PCBs, asbestos, and lead and other required data to the EPA and State, Tribal, and local agencies.

(6) Budgets for and funds the operation and maintenance of the structures and equipment that is necessary in order to handle, store, transport, treat, and dispose of PCB-, asbestos-, and lead-contaminated items, in compliance with applicable Federal, State, Tribal, and local requirements.

(7) Ensures that PCB spills are properly reported when the spill exceeds the reportable quantities established in Federal regulations. Ensures that fire-related incidents involving PCB transformers are immediately reported to the National Response Center, regardless of quantity.

(8) Ensures that all PCB transformers and equipment are registered with appropriate fire departments.

(9) Ensures that a PCB elimination plan is prepared and updated, as required.

(10) Ensures that coordination occurs, as appropriate, with the EPS and safety officer in matters relating to PCB, asbestos, and lead management.

(11) Ensures that records of the results of asbestos surveys are maintained indefinitely.

(12) Ensures that all individuals exposed to asbestos are notified.

E. *Collateral Duty Environmental Program Coordinator.*

(1) Coordinates the registration all PCB transformers and equipment with appropriate fire departments.

(2) Coordinates the preparation and update of a PCB elimination plan, as required.

(3) Coordinates with the EPS in matters relating to PCB, asbestos, and lead management.

(4) Takes prompt action to coordinate the containment and corrective actions for asbestos discrepancies when notified of their existence.

(5) Provides coordination for asbestos awareness training for personnel who do not ordinarily work with asbestos in the performance of their duties.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 13. WASTEWATER MANAGEMENT

1. **Scope.** This chapter establishes USGS policy and responsibilities for compliance with Federal water pollution control requirements for wastewater management programs.

A. *Applicability*

(1) This chapter applies to all USGS locations, including owned, leased, and otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

B. *Background.* USGS operations that are regulated through wastewater management programs include the following:

(1) Sanitary or industrial wastewater discharged directly to receiving waters under its National Pollutants Discharge Elimination System (NPDES) permit or through onsite USGS-owned treatment works (USGSOTW).

(2) Sanitary or industrial wastewater discharged to an offsite publicly owned treatment works (POTW) or to a treatment plant of another Federal government activity.

(3) Sewage sludge generation, processing, use, and disposal practices.

2. **Authorities and References.**

A. Coastal Zone Management Act (CZMA) of 1972 (16 U.S.C. 1451 et seq.).

B. Federal Water Pollution Control Act (FWPCA) of 1972, as amended by the Clean Water Act (CWA) of 1977 (33 U.S.C. 1251 et seq.).

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

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

E. Oil Pollution Prevention (40 CFR 112).

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

G. Rivers and Harbors Act of 1899 (33 U.S.C. 407 et seq.).

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

I. Water Quality Act (WQA) of 1965 (Public Law 89–234).

J. Water Quality Improvement Act of 1970 (Public Law 91–224).

3. **Requirements.**

A. *General.*

(1) *Statutory Requirements.* The Clean Water Act (CWA) requires compliance by Federal facilities with all requirements that apply to the control and abatement of water pollution. Furthermore, the act makes it illegal for the USGS to discharge any pollutant unless it is in compliance with effluent standards, treatment technology requirements, or other procedural requirements.

(2) *Regulatory Requirements.*

(a) Applicable requirements include Federal, State, Tribal, and local regulations.

(b) Authorized EPA, State, or other regulatory officials who have presented proper credentials must be allowed to enter USGS locations at reasonable times to examine or copy records, inspect, monitor equipment, and sample any wastewater that the official is required to monitor. Designated USGS representatives should accompany the officials during these site visits.

(3) *Executive Orders.*

(a) Executive Order 12088, Federal Compliance with Pollution Control Standards, October 13, 1978, requires executive-branch agencies to comply with applicable requirements of Federal laws, including the CWA.

(b) Executive Order 13508, Strategy for Restoring and Protecting the Chesapeake Bay Watershed, May 12, 2009, requires each Federal agency to reduce pollution from Federal lands and facilities and implement sustainable land management practices and programs in all Federal capital improvement, public works management, and energy management projects.

(4) The USGS will comply with all wastewater management regulations established by the EPA or those States that have been granted primary enforcement responsibility.

B. *Point Source Control.*

(1) It is USGS policy to reduce or eliminate wastewater treatment and disposal needs through a pollution prevention program and waste minimization practices. The program will examine and implement wastewater volume and pollutant reductions through process changes, materials substitution, recycling cooling water, water conservation practices and equipment, wastewater reclamation and reuse, and maintenance and renovation of wastewater collection systems to decrease groundwater infiltration and stormwater inflow.

(2) The USGS will use a regional or municipal POTW for wastewater collection, treatment, and disposal, whenever available.

(3) The management and operation of USGSOTW and disposal facilities are authorized whenever a municipal system or other alternatives are not available.

(4) The USGS encourages wastewater reclamation for reuse; this option will be studied during planning for the construction of new wastewater facilities or for renovation, expansion, or the upgrading of existing facilities. Reuse options include industrial wastewater recycling, aquifer recharge, construction of wetlands, wildlife habitat mitigation or enhancement, and irrigation of forests, tree lines, and landscaping.

(5) Job descriptions for operators of USGS wastewater treatment plants and collection systems will include the requirement that they have obtained a State certification or license, or that they have the ability to obtain and maintain a certification or license, as a condition of employment at all locations where State certification or licensing requirements apply, as stipulated in the Federal Personnel Manual (Supplement 271–1, subchapters 3–4, "License and Credentials").

(6) USGS laboratories that perform wastewater analyses as required in permit monitoring conditions will be certified under the applicable regulations of the Federal, State, or local permitting authority, if required. The appropriate chain of custody procedures will be used to track samples collected for analysis. 40 CFR 136 contains EPA test procedures for analyzing water pollutants.

C. *Septage Treatment and Disposal.*

(1) USGS locations with septic tanks will comply with local discharge requirements to prevent the contamination of surrounding soils and groundwater. Septage is a fluid mixture of untreated and partially treated sewage solids, liquids, and sludge of human or domestic origin which is removed from a septic tank system.

(2) A periodic inspection program of septic systems will be developed to determine if pumping is required and if any structural defects, such as broken baffles or cracked pipes, exist. The recommended frequency is every 4 to 5 years.

(3) USGS managers may select their own preferred method of septage disposal. If land disposal is selected, the USGS or its contractor will adhere to the requirements in 40 CFR 503.

D. *Groundwater Protection.*

(1) Underground injection of wastes will be used only as a last resort at USGS locations after all other disposal alternatives have been considered and rejected as unfeasible.

(2) USGS managers will inventory all class V wells to determine whether pollutants are discharged into underlying aquifers. Class V wells include certain septic system wells and cesspools, stormwater drainage wells, and dry wells used for waste disposal, such as those found in vehicle maintenance areas.

E. *Sewage Sludge Use and Disposal.*

(1) The preferred method of sewage sludge disposal is the beneficial use at surface application sites, as regulated under 40 CFR 503. This method requires the effective pretreatment of industrial wastes to prevent contamination of sewage sludge. An effective monitoring program is also necessary to ensure compliance.

(2) If sewage sludge is transported offsite for disposal, the manager will ensure that the disposal agent acts in accordance with applicable regulations and permits.

F. *Ocean Dumping.* Except in emergency situations, the EPA may authorize ocean dumping only on a case-by-case basis. An environmental assessment must accompany requests for such authorization. Full compliance with EPA regulations (40 CFR 220-229) is required.

4. **Responsibilities.**

A. *Chief, Office of Management Services.*

(1) Provides information and advice regarding proposed and final rules and regulations pertaining to wastewater management and uniformly applies USGS policy as set forth in the handbook.

(2) Assists in resolving disputes with Federal, State, Tribal, and local regulatory agencies, as required.

B. *Associate Director or Regional Director.*

(1) Ensures that all activities comply with current Federal, State, Tribal, and local wastewater requirements.

(2) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with wastewater requirements.

(3) Submits project documentation and funding requests for wastewater facilities that are required to maintain compliance with applicable existing and emerging regulations and permits.

(4) Ensures that coordination occurs, as appropriate, with the OMS in matters relating to wastewater discharges and sewage sludge use or disposal.

C. *Environmental Protection Specialist.*

(1) Provides information and advice to managers and tenants regarding proposed and final rules and regulations pertaining to wastewater management.

(2) Assists managers in resolving disputes with Federal, State, Tribal, and local regulatory agencies, as required.

(3) Through site assistance visits and the Environmental Compliance Auditing Program, ensures cooperation and compliance with Federal, State, Tribal, and local regulatory agencies with regard to wastewater management.

(4) Conducts NEPA reviews and analysis in advance of developing and filing the permit applications.

(5) Ensures that innovative treatment technology is used where technically and economically feasible in the designs for the construction or upgrading of new or existing wastewater treatment systems.

D. *Science Center Director.*

(1) Ensures that pollution prevention alternatives are considered and that lifecycle cost impacts are assessed in evaluating and selecting projects that address compliance requirements.

(2) Ensures that project documentation and funding requests for wastewater facilities comply with applicable existing and emerging regulations and that permits are submitted through the OMS.

(3) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with wastewater requirements.

(4) Pays appropriate Federal, State, Tribal, and local fees.

(5) Ensures that all required Federal, State, Tribal, and local permits are applied for and obtained.

(6) Signs and submits, as appropriate, wastewater reports and other required data to the EPA and State, Tribal, and local agencies.

(7) Signs certifications and permit applications, as required, for the construction of all wastewater management projects.

(8) Ensures that management programs and controls exist to comply with applicable regulations; permit limits; and the monitoring, recordkeeping, and reporting requirements for wastewater discharges from point and nonpoint sources.

(9) Ensures that municipal or regional wastewater collection and disposal systems are used to the maximum extent feasible.

(10) If responsible for operation of a USGSOTW, ensures that the following requirements are fulfilled:

(a) The appropriate permitting agency is notified of any changes in wastewater input to the treatment plant that may affect the ability of the plant to comply with applicable requirements.

(b) The collection system, treatment works, and effluent discharge facilities are operated and maintained in compliance with applicable permit requirements.

(11) Ensures that records of all monitoring information are maintained.

(12) Ensures that adequate access to wastewater generating and treatment facilities is provided to EPA, State, Tribal, and local pollution control authorities for the purpose of sampling wastewater and inspecting operations and records.

(13) Ensures that coordination occurs, as appropriate, with the EPS in matters relating to wastewater discharges, sewage sludge use or disposal, and dredge and fill operations.

(14) Assists with identifying the training and certification needs for operators of treatment and collection facilities and allocates needed resources.

E. *Collateral Duty Environmental Program Coordinator.*

(1) Coordinates the resources that are needed for monitoring, sampling, and testing, as well as for maintaining and demonstrating compliance with permit and pretreatment requirements.

(2) Identifies pollution prevention measures, devices, systems, and procedures to reduce the total generation of wastewater volume and pollutants.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 14. STORMWATER MANAGEMENT

1. **Scope.** This chapter establishes the USGS policy and responsibilities for compliance with Federal surface water pollution control requirements for stormwater management programs.

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased, and otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

B. *Background.* USGS operations that are regulated through stormwater management programs include the following:

(1) Stormwater runoff associated with industrial or construction activities discharged to receiving waters.

(2) Other operations that result in nonpoint source pollution.

(3) Agricultural, silvicultural, and grazing operations that contribute to polluted runoff or groundwater contamination.

(4) Activities involved in the transfer, storage, and transportation of petroleum, oil, and lubricants (POL) which, because of their location, could reasonably be expected to cause substantial harm to the environment by discharging into navigable waters or on the adjacent shoreline.

(5) Hazardous material storage areas and other regulated storage areas where runoff is likely to occur.

2. **Authorities and References.**

A. Coastal Zone Management Act (CZMA) of 1972 (16 U.S.C. 1451 et seq.).

B. Dredged or Fill Permits (33 U.S.C. 403–404 et seq.).

C. Executive Order (EO) 12088, October 13, 1978, Federal Compliance with Pollution Control Standards.

D. Executive Order 13508, May 2009, Strategy for Restoring and Protecting the Chesapeake Bay Watershed.

E. Federal Facilities Compliance Act of 1992 (42 U.S.C. 6939e et seq.).

F. Federal Responsibility to Pay for Storm Water Program (Public Law 111–378, Jan 4, 2011).

G. Federal Water Pollution Control Act (FWPCA) of 1972, as amended by Clean Water Act (CWA) of 1977 (33 U.S.C. 1251 et seq.).

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

I. National Pollutants Discharge Elimination System (NPDES) Program (33 U.S.C. 402 et seq.).

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

K. Oil Pollution Prevention (40 CFR 112).

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

M. Rivers and Harbors Act of 1899 (33 U.S.C. 407 et seq.).

N. Standards for the Use or Disposal of Sewage Sludge (40 CFR 503).

O. Storm Water Discharges (33 U.S.C. 402 et seq.).

P. Water Quality Act (WQA) of 1965 (Public Law 89–234).

Q. Water Quality Improvement Act of 1970 (Public Law 91–224).

R. Water Quality Planning and Management (TMDLs) (40 CFR 130).

3. **Requirements.**

A. *General.*

(1) *Statutory Requirements.* The Clean Water Act (CWA) requires compliance by Federal facilities with all requirements that are applicable to the control and abatement of water pollution. Furthermore, the act makes it illegal for the USGS to discharge any pollutant unless it complies with effluent standards, treatment technology requirements, or other procedural requirements.

(2) *Regulatory Requirements.*

(a) Applicable requirements include Federal, State, Tribal, and local regulations.

(b) Authorized EPA, State, or other regulatory officials who have presented proper credentials will be allowed to enter USGS locations at reasonable times to examine or copy records, inspect, monitor equipment, and sample any stormwater that the official is required to monitor. Designated USGS representatives should accompany the officials during these site visits.

(3) *Executive Orders.*

(a) Executive Order 12088, Federal Compliance with Pollution Control Standards, October 13, 1978, requires executive-branch agencies to comply with applicable requirements of Federal laws, including the CWA.

(b) Executive Order 13508, Strategy for Restoring and Protecting the Chesapeake Bay Watershed, May 12, 2009, requires each Federal agency to reduce pollution from Federal lands and implement sustainable land management practices and programs in all Federal capital improvement, public works management, and energy management projects.

(4) The USGS will comply with all stormwater management regulations established by the EPA or those States that have been granted primary enforcement responsibility.

B. *Nonpoint Source Control.*

(1) Stormwater discharges are a major contributor to the impairment of surface water quality. Significant sources of stormwater discharge include urban runoff from USGS property, industrial activity, and construction. These types of stormwater discharges are either regulated under Phase I or Phase II of the CWA Stormwater Program. The Phase I regulations apply to municipal separate storm sewer systems (MS4s) that serve a population that is greater than or equal to 100,000 and capture stormwater discharges associated with regulated industrial activities as defined in the stormwater regulations, including construction activities that disturb 5 or more acres of land. The Phase II regulations apply to MS4s that serve a population that is smaller than 100,000, that are located in an "urbanized area," and that capture stormwater discharge from construction activities that disturb 1 or more acres of land, or as specified by an individual State. Federally operated storm sewer systems are defined as MS4s. Locations subject to stormwater regulations will apply for NPDES permit coverage under either an individual or general permit.

(2) Stormwater from construction projects that increase the area of impervious surfaces will be managed in accordance with State regulations and engineering practices that manage the quantity and quality of storm water runoff.

(3) Pollutants will be reduced or eliminated from stormwater discharges by control of pollutant sources through procedural and structural best management practices (BMPs). The use of low-

impact development designs is encouraged as a means of reducing stormwater discharge volumes and controlling pollutants at the source.

(4) Managers will apply a watershed approach when evaluating the impact of their overall activities on the quality of area water resources and address water impacts by reducing pollutant discharges. A watershed approach is an integrated holistic management strategy that addresses the condition of the land area within the entire watershed and ensures that both nonpoint and point sources of pollution are addressed. Managers will consult with EPSs to fully implement the watershed approach.

(5) Managers of locations that discharge pollutants to or near impaired waters will get involved as early as possible in the State, Tribal, or local process that leads to the identification of impaired waters and the establishment of the total maximum daily load (TMDL). The TMDL is an estimate of how much of a pollutant or group of pollutants a water body (lake, pond, river, stream, or estuary) can absorb without becoming polluted. Even those locations with only a potential to discharge pollutants to an impaired water body will participate as stakeholders in the process. Participation will occur early in the TMDL establishment process, including, when practicable, before the State or other authority approves or creates a schedule for establishing the applicable TMDL.

(6) Space agreement terms will include requirements for implementing BMPs for pesticide, fertilizer, and erosion controls to reduce contaminated runoff.

C. *Dredge and Fill Operations.*

(1) USGS managers who propose to undertake any activity requiring a U.S. Army Corps of Engineers (USACE) permit must apply to the USACE District Engineer for the district in which the proposed activity is to be conducted.

(2) A NEPA analysis will be conducted for any activity that will require an individual permit for dredging and filling or the loss of wetlands. Because the NEPA analysis is complex and lengthy and must be initiated well in advance of developing and filing the permit applications, managers will contact the EPS as soon as possible.

(3) USACE permits are required for the following actions that may be proposed by the USGS:

(a) The construction of a dam or dike (33 CFR 321).

(b) The construction of a structure in, or one that will affect, waters of the United States (33 CFR 322).

(c) Dredging projects for navigation to enhance recreational activities (33 CFR 322).

(d) The discharge of dredged or fill material into the navigable waters of the United States, including wetlands (33 CFR 323).

(e) The transportation of dredged material for dumping in ocean waters (33 CFR 323).

(4) Existing disposal sites, approved by the USACE, will be used wherever possible. Proposed new disposal sites will be identified and reported to the USACE District Engineer for evaluation and approval 2 to 3 years before project initiation.

(5) If a land disposal site is proposed, consideration will be given to the liquid runoff and leaching potential of undesirable chemical constituents and to any NPDES-permit requirements. A request for the revalidation of existing permits for maintenance dredging and disposal will be received by the USACE at least 6 months before the permit expires.

(6) A permit for maintenance dredging will include an expiration date that will not extend more than 10 years from the issue date. A request for renewal from the USACE will be filed with the District Engineer at least 1 year before the permit expires.

(7) For projects requiring a USACE permit, USGS managers may request that the USACE, on a cost-reimbursable basis, prepare or assist in the preparation of an environmental assessment or environmental impact statement.

(8) Early planning for the dredge-spoil disposal site's selection, preparation, and use is essential to avoid unnecessary costs and delays.

D. *Coastal Zone Management Act (CZMA) Consistency Determinations.* USGS managers will review proposed actions to identify those that directly affect the coastal zone. For all activities affecting the coastal zone, the manager must provide a consistency determination to the appropriate State agency at least 90 days prior to final approval for the activity.

4. **Responsibilities.**

A. *Chief, Office of Management Services.*

(1) Provides information and advice regarding proposed and final rules and regulations pertaining to stormwater management.

(2) Assists in resolving disputes with Federal, State, Tribal, and local regulatory agencies as required.

B. *Associate Director or Regional Directors.*

(1) Ensures that all activities comply with current Federal, State, Tribal, and local stormwater requirements.

(2) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with stormwater requirements.

(3) Submits project documentation and funding requests for stormwater BMPs, which are required to maintain compliance with applicable existing and emerging regulations and permits.

(4) Ensures that coordination occurs as appropriate with the OMS in matters relating to stormwater discharges, dredge and fill operations, and POL management.

C. *Environmental Protection Specialist.*

(1) Provides information and advice to managers and tenants regarding proposed and final rules and regulations pertaining to stormwater management.

(2) Through site assistance visits and the Environmental Compliance Auditing Program, ensures cooperation and compliance with Federal, State, Tribal, and local regulatory agencies with regard to stormwater management.

(3) Prepares permit applications, if needed, for construction projects. Provides permit applications for submittal to the applicable regulatory agency.

(4) Assists Science Center Directors, as requested, in identifying applicable effluent standards, appropriate control technologies, and BMPs and in implementing stormwater management plans.

(5) Maintains a liaison with the USACE and State or area-wide planning organizations to ensure that USGS interests are considered during regional stormwater management planning or to facilitate dredge and fill projects.

(6) Conducts NEPA reviews and analysis in advance of developing and filing permit applications.

D. *Science Center Director.*

(1) Ensures that pollution prevention alternatives are evaluated and lifecycle cost impacts are assessed when evaluating and selecting projects that address compliance requirements.

(2) Ensures that project documentation and funding requests for stormwater facilities comply with applicable existing and emerging regulations and permits are submitted through the OMS.

(3) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with stormwater requirements.

(4) Pays appropriate Federal, State, Tribal, and local fees.

(5) Ensures that all required Federal, State, Tribal, and local permits are applied for and obtained.

(6) Signs and submits, as appropriate, stormwater reports and other required data to the EPA and State, Tribal, and local agencies.

(7) Signs certifications and permit applications, as required, for construction of all stormwater management projects.

(8) Ensures that management programs and controls exist to comply with applicable regulations; permit limits; and monitoring, recordkeeping, and reporting requirements for stormwater discharges from point and nonpoint sources.

(9) Ensures that records of all monitoring information are maintained.

(10) Ensures that adequate access to stormwater generating and treatment facilities is provided to EPA, State, Tribal, and local pollution control authorities for the purpose of sampling stormwater and the inspecting operations and records.

(11) Ensures that coordination occurs as appropriate with the EPS in matters relating to stormwater discharges and dredge and fill operations.

E. *Collateral Duty Environmental Program Coordinator.*

(1) Ensures that innovative treatment technology is used where technically and economically feasible in the designs for the construction or upgrades of new or existing stormwater treatment systems.

(2) Coordinates the resources that are needed for monitoring, sampling, and testing, as well as for maintaining and demonstrating compliance with permit requirements.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 15. WATER QUALITY MANAGEMENT

1. **Scope.** This chapter establishes USGS policy and responsibilities for compliance with statutory requirements for the protection and conservation of drinking water and irrigation water resources.

A. *Applicability*.

(1) This chapter applies to all USGS locations, including owned, leased, and otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers must obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

B. *Background.* Congress first enacted the Safe Drinking Water Act (SDWA) in 1974. The SDWA amended the Public Health Service Act by creating a new title XIV, entitled "Safety of Public Water Systems." Significant revisions to the SDWA were enacted in 1986 and subsequently in 1996. The SDWA's intent is to ensure that safe drinking water is provided to all people who are supplied by a public water system and that aquifers that can be used to provide drinking water are protected against contamination.

C. *SDWA Amendments of 1996.* The SDWA Amendments of 1996 established the following important new requirements:

(1) Section 102(b) requires the EPA to list unregulated contaminants known to occur in public water systems that may require regulation under the SDWA and to subsequently determine whether to regulate such contaminants. For unregulated contaminants, section 125 requires that the EPA Administrator establish criteria for a monitoring program.

(2) Section 102(b) requires the EPA to list unregulated contaminants based on public health concerns, including the effect of such contaminants on infants, children, pregnant women, the elderly, individuals with serious illness, or other subpopulations.

(3) Section 103 requires the EPA to establish national primary drinking water regulations that include maximum contaminant levels on the basis of the following:

(a) Analysis of the incremental costs and health risk reduction benefits associated with each alternative maximum contaminant level considered.

(b) Effects on subpopulations that are identified with the likelihood to be at greater risk than the general population for adverse health effects due to exposure to contaminants in drinking water.

(c) Analysis of the incremental costs and health risk reduction benefits associated with each alternative treatment technique considered.

(4) Section 104(b) provides authority for the EPA to promulgate rules for disinfectants and disinfectant byproducts.

(5) According to section 109, the EPA must promulgate standards based on further study or risk analysis for the following:

(a) Arsenic.

(b) Sulfate.

(c) Radon.

(6) According to section 110, the EPA must promulgate standards for recycling the water that results from backwashing filters during the treatment of public water systems.

(7) Section 114(c)(1) requires operators of public water supply systems to provide public notices of the following conditions; the EPA Administrator is required to prescribe the manner, form, frequency, and content of such public notices:

(a) Failure to comply with an applicable maximum contaminant level, a treatment technique, or a testing procedure prescribed by a national primary drinking water regulation.

(b) Failure to perform required monitoring.

(c) The existence of any variance or exemption granted for an inability to meet a maximum contaminant level requirement.

(d) The concentration level of any contaminant for which the EPA Administrator has required public notice.

(8) Section 114(c)(4) requires operators of public water supply system operators to maintain applicable records and mail annual reports (consumer confidence reports) to consumers on the level of contaminants in the drinking water purveyed by the system. The EPA Administrator must issue regulations by August 6, 1998, on this reporting requirement.

(9) Section 118 specifically prohibits the use of lead in any pipes, plumbing fittings or fixtures, solder, and flux that is used in maintaining or repairing public water supply systems and in any plumbing in residential or nonresidential facilities providing water for human consumption.

(10) According to section 123, the EPA must publish minimum standards for certifying operators of public water supply systems within 30 months of the date of enactment (February 6, 1998).

(11) According to section 125, operators of public water supply system must establish and maintain records relevant to compliance with the SDWA Amendments of 1996, conduct monitoring, and make such information available to the EPA Administrator.

(12) Section 129 expressly waives sovereign immunity for Federal facilities. It states that each department, agency, and instrument of the executive, legislative, and judicial branches of the Federal Government will be subject to and comply with all Federal, State, Tribal, and local requirements pertaining to public water supply systems; these government organizations include those that meet the following criteria:

(a) Own or operate any public water supply system.

(b) Engage in any activity that results (or may result) in the contamination of the public water supply in its area.

(c) Engage in any activity that results (or may result) in the underground injection of fluids that endanger drinking water.

(13) Section 129 also specifies that if the EPA Administrator finds that a Federal agency has violated an applicable requirement of the SDWA, the EPA Administrator may assess a penalty against the Federal agency in an amount not to exceed $25,000 per day per violation.

(14) Section 132 requires the EPA to publish guidelines for State source-water assessment programs, which will delineate the boundaries of the areas providing source waters for public water systems in the State, and (2) identify (to the extent practicable) the origins of regulated and certain unregulated contaminants in the delineated area to determine the susceptibility of public water systems to such contaminants.

(15) Section 134 requires the EPA to have published, by August 6, 1998, guidelines for water conservation plans for public water systems that fall into one of three categories: serve fewer than 3,300 people, serve between 3,300 and 10,000 people, or serve more than 10,000 people.

(16) Section 136 authorizes the EPA Administrator to provide for the screening of estrogenic substances in drinking water.

2. **Authorities and References.**

A. Energy Policy Act (EPACT) of 1992 (Public Law 102–486).

B. Safe Drinking Water Act of 1974, as amended (42 U.S.C. 300(f) et seq.).

3. **Requirements.** Implementation of water-quality management programs is the direct responsibility of the USGS manager.

A. *General.* The USGS will comply with all applicable drinking water regulations established by the EPA or by those States that have been granted primary enforcement responsibility.

B. *Regulatory Requirements.*

(1) EO12088, Federal Compliance with Pollution Control Standards, October 13, 1978, requires executive-branch agencies to comply with applicable requirements of Federal laws, including the CWA.

(2) Executive Order 13693, Planning for Federal Sustainability in the Next Decade (March 19, 2015), requires Federal agencies to lead by example in advancing the Nation's energy security and environmental performance, and expands on the energy reduction and environmental performance requirements for Federal agencies.

(3) EO 13508, Strategy for Restoring and Protecting the Chesapeake Bay Watershed, May 12, 2009, requires Federal agencies to reduce pollution from Federal lands and facilities and implement sustainable land management practices and programs into all Federal capital improvement, public works management, and energy management projects.

(4) The USGS will comply with all water quality standards established by the EPA or those States that have been granted primary enforcement responsibility.

C. *Drinking Water Program.*

(1) The USGS policy is to provide personnel who reside or work in its locations with drinking water of the highest quality possible.

(2) Regional or municipal public water supplies will be the preferred sources of drinking water whenever an analysis of lifecycle costs and environmental impacts indicates that the use of such a supply is as or more economical and environmentally beneficial than constructing, upgrading, and operating a water collection and water treatment facility.

(3) The development, expansion, and operation of USGS-owned locations that collect, treat, store, and distribute drinking water are authorized whenever a municipal system or other alternatives are not available or cost-effective.

(4) USGS locations that purchase water from a public water system and distribute it to onsite activities may be subject to the National Primary Drinking Water Regulation (NPDWR). Contact the appropriate State agency to determine whether compliance with all or part of the NPDWR is required.

(a) If the USGS distributes water to onsite tenant activities or commercial businesses and charges those entities only a prorated share of its water costs and a maintenance surcharges, then the practice normally is not considered to be selling water to people. This situation is similar to an office or industrial park that charges tenants a prorated share for utilities services.

(b) If the USGS sells water to entities either onsite or offsite, the sale renders the activity a "public water supply" that is subject to the monitoring and reporting requirements imposed by the EPA and (or) the State, Tribal, or local regulatory agency.

(c) USGS locations that chlorinate or fluoridate water purchased from a public water system may be considered to be operating a treatment process and may be required to comply with the NPDWR.

(d) A USGS location that purchases water from a public water system subject to SDWA regulations, operates no collection or treatment facilities of its own, and does not sell water to another entity normally is not subject to the NPDWR (40 CFR 141.3).

(5) USGS water system operators will meet the licensing or certification requirements of the State in which the system is located. Job descriptions for USGS water system operators require a State certification or license (or the ability to obtain and maintain a certification or license) as a condition of employment at all locations where State certification requirements apply.

(6) USGS laboratories that perform drinking water analyses will be certified under applicable regulations of the Federal, State, Tribal, or local authority, as required under the NPDWR and National Secondary Drinking Water Regulations (NSDWR). Appropriate chain-of-custody procedures will be used to track samples collected for analysis. Laboratories will use EPA-approved test procedures contained in 40 CFR 141 and 40 CFR 143 for analyzing drinking water.

(7) Managers will establish, implement, and maintain a cross-connection control and backflow prevention program for a water system.

D. *Water Conservation Program.*

(1) USGS managers will develop a water conservation program with initial emphasis on reducing the use of potable water for USGS industrial processes and irrigation. The priorities of the program must reflect economic feasibility and water conservation needs.

(2) The water conservation program will address both short- and long-term measures necessary to optimize potable water usage and decrease the use of potable water for nonpotable purposes. Such measures should include the following:

(a) Conducting leak detection surveys and implementing repair programs. These surveys should target water distribution mains and service connections as well as plumbing and water fixtures.

(b) Replacing inefficient plumbing fixtures with water-conserving showerheads, faucets, urinals, and commodes.

(c) Replacing once-through cooling-water applications with recirculating cooling towers.

(d) Installing automatic irrigation control systems that adjust watering rates on the basis of weather conditions and evapotranspiration rates instead of timed cycles.

(e) Irrigating during late evening and early morning hours rather than daylight hours.

(f) Reusing reclaimed wastewater to irrigate forests, tree lines, and landscaping.

(g) Replacing water-intensive turf landscaping with native drought-tolerant vegetation.

(h) Using mulches in landscaping to reduce water loss by evaporation.

E. *Sole-Source Aquifer Program.*

(1) Managers will contact the EPA regional office to determine if proposed USGS construction projects or activities are subject to review under the sole-source aquifer program.

(2) Managers will ensure that projects within sole-source aquifer areas that are reviewed by the EPA are designed and constructed to meet conditions stipulated under the EPA-approved program. The completed activity must be operated such that it will not result in or contribute to conditions that would create a significant hazard to public health.

F. *Wellhead Protection Program (WHP).*

(1) USGS locations with jurisdiction over any potential source of contaminants identified by a State, Tribal or local WHP, or by a State, Tribal, or local source-water assessment program, will comply with all applicable requirements.

(2) If a community adjacent to a USGS site initiates a WHP, the senior USGS onsite supervisor will request representation on the community planning team to ensure that the USGS interests are considered and protected. The manager will locate and identify potential contaminant sources within the appropriate boundaries and provide this information to the team.

(3) Any USGS location or activity located within a designated WHP area will comply with all regulatory and nonregulatory controls to manage activities that have the potential to contaminate the groundwater source within that area.

4. **Responsibilities.**

A. *Chief, Office of Management Services.*

(1) Provides information and advice to the regions regarding proposed and final rules and regulations pertaining to drinking water systems and water conservation and uniformly applies USGS policy as set forth in the handbook.

(2) Assists in resolving disputes with Federal, State, Tribal, and local regulatory agencies, as required.

(3) Through site assistance visits and the Environmental Compliance Auditing Program, ensures that the USGS cooperates and complies with Federal, State, Tribal, and local regulatory agencies with regard to drinking water systems and water conservation regulations.

(4) Revises instructions and other appropriate documents to reflect health concerns and health-related requirements for drinking water systems.

(5) Provides health-related advice to Regional Directors and Science Center Directors for carrying out their responsibilities for managing drinking water quality and the water supply systems.

(6) Establishes the Water Catchment Program and assists with policy-related queries.

B. *Associate Director or Regional Director.*

(1) Provides information and advice to managers and tenants regarding proposed and final rules and regulations pertaining to drinking water systems and water conservation and uniformly applies USGS policy as set forth in the handbook at all locations.

(2) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with drinking water and water conservation requirements.

(3) Tracks progress toward meeting established and future drinking water quality and water conservation goals.

C. *Environmental Protection Specialist.*

(1) Assists managers in resolving disputes with Federal, State, Tribal, and local regulatory agencies as required.

(2) Through site assistance visits and the Environmental Compliance Auditing Program, ensures cooperation and compliance with Federal, State, Tribal, and local regulatory agencies with regard to drinking water systems and water conservation regulations.

D. *Science Center Director.*

(1) Identifies and submits to the EPS project documentation and funding requests for drinking water systems that are required to maintain compliance with applicable existing and upcoming

regulations and permits. Ensures that pollution prevention alternatives are evaluated and lifecycle cost impacts are assessed in evaluating and selecting projects that address compliance requirements.

(2) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with drinking water systems and water conservation requirements.

(3) Pays appropriate Federal, State, Tribal, and local fees.

(4) Ensures that all required Federal, State, Tribal, and local permits are applied for and obtained. Sign certifications and permit applications, as required, for construction of all drinking water systems and water conservation projects.

(5) Ensures that management programs and controls exist to comply with applicable regulations; NPDWR and treatment techniques; and monitoring, recordkeeping, public notification, and reporting requirements for drinking water systems and underground injection wells.

(6) Ensures compliance with all applicable water system operators' certification requirements. Identifies training and certification needs for USGS operators of public water systems and allocates needed resources.

(7) Provides resources for monitoring, recordkeeping, reporting, public notification practices, and the use of certified laboratories for analyses in compliance with EPA or EPA-approved State requirements.

(8) Ensures that a cross-connection control and backflow prevention program is developed and implemented for a location.

(9) Ensures that a multifaceted USGS water conservation program is implemented. Executes water conservation studies to reduce water usage. Reviews the various uses of water at respective locations to ensure that all economically practical water conservation measures are considered and implemented.

(10) Ensures that adequate access to drinking water system and underground injection wells is provided to the EPA, State, Tribal, and local regulatory agencies for the purpose of sampling water and injected wastes and for the inspecting operations and records.

(11) Ensures that the Water Catchment Program is implemented at voluntary sites.

E. *Collateral Duty Environmental Program Coordinator.*

(1) Assists with identifying training and certification needs for USGS operators of public water systems.

(2) Coordinates recordkeeping, reporting, public notification practices, and the use of certified laboratories for analyses in compliance with EPA or EPA-approved State requirements.

(3) Coordinates the inspection, operation, and maintenance of backflow prevention devices, altitude- and pressure-reducing valves, water meters, water-saving devices, and water reuse and recycle systems.

(4) Coordinates the implementation of a multifaceted USGS water conservation program that includes water conservation studies to reduce water usage and a review of the various uses of water at respective locations to ensure that all economically practical water conservation measures are taken.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

CHAPTER 16. OTHER ENVIRONMENTAL REQUIREMENTS

1. **Scope.** This chapter establishes USGS policy and responsibilities for compliance with both statutory and regulatory requirements and for the management of USGS programs that are consistent with the National Environmental Policy Act of 1969 and the Noise Control Act of 1972.

A. *Applicability.*

(1) This chapter applies to all USGS locations, including owned, leased, and otherwise provided.

(2) Executive Order 12088 waives sovereign immunity. Waiving sovereign immunity requires the USGS to comply not only with Federal requirements, but also with State, Tribal, and local requirements.

(3) State, Tribal, and local regulatory agencies may establish regulations that are more stringent than the Federal requirements. Managers should obtain copies of their respective State, Tribal, and local regulations to determine if their activities are subject to requirements that go beyond the Federal laws and regulations. Applicable Federal, State, Tribal, and local requirements or Executive Orders (EO) that are more stringent than those in this handbook will be followed.

2. **Authorities and References.**

A. National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

B. DOI Departmental Manual, Managing NEPA Process—U.S. Geological Survey, 516 DM 9.

C. Executive Order 12088, October 13, 1978, Federal Compliance with Pollution Control Standards.

D. Noise Control Act of 1972 (42 U.S.C. 4901 et seq.).

E. Guidelines for Implementing Executive Order 11988, Floodplain Management, and Executive Order 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input, WRC October 22, 2015 (80 FR 64008);

F. Protection of Wetlands, Executive Order (EO) 11990, May 24, 1977;

G. Floodplain Management, EO 11988, May 24, 1977; and Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input, EO 13690, January 30, 2015; and

H. 520 DM 1, Floodplain Management and Wetlands Protection Procedures

A number of the environmental statutes, implementing regulations, and EOs that impose procedural requirements may apply to a proposed action. The NEPA process facilitates the identification of applicable statutes, regulations, and EOs with which the proponent of the action will also comply.

3. **Requirements.**

A. *National Environmental Policy Act.* The EMB manages and establishes NEPA policy. Refer to the USGS's National Environmental Policy Act (NEPA) SharePoint site at https://insight.usgs.gov/aei/offices/oa/oms/em/SitePages/page_compliance_area.aspx?Compliance Area=NEPA for NEPA program policy and program implementation.

B. *Environmental Noise.*

(1) *Background.*

(a) The Noise Control Act seeks to protect Americans from "noise that jeopardizes their health or welfare." This act directs Federal agencies to further this policy within their programs.

(b) Noise resulting from USGS operations has the potential to cause adverse effects on surrounding communities. State, Tribal, and local laws may also prescribe maximum noise levels to control these impacts.

(2) Unless specifically exempted, USGS organizations engaged in any activity resulting in noise emissions must comply with Federal, State, Tribal, and local requirements for the control and management of environmental noise.

(3) Managers who administer USGS noise control and management programs will do the following:

(a) Coordinate with other Federal agencies to maintain active programs to protect the health and welfare of both onsite and offsite personnel from hazardous noise levels.

(b) Whenever feasible, procure or promote procurement of low-noise-emission products. Emphasize a "buy quiet" approach in procurement actions.

(c) Locate noise-sensitive areas away from major noise sources.

(d) Consider noise problems when planning, acquiring, and siting noise-generating equipment. Give full attention to all available noise-lessening measures, such as remote siting and sound-suppression equipment.

(e) Notify the public, to the extent feasible, of any significant increases in noise generation or in deviations from normal noise generation patterns. Also, where the generation of significant

noise routinely affects the community, institute a program of community education to develop positive public relations.

(f) Minimize disruption to the local community regarding operations that are known to generate complaints. These activities should still be consistent with the efficiency of operations, but they should be conducted at such times, locations, and under such conditions as to minimize the disruption to the local community. Managers will verify the existence of local noise ordinances and ensure compliance with them.

(4) *Workplace Noise.* Workplace noise is not considered to be environmental noise.

(5) *Restricting Noisy Operations.* As much as possible, personnel will limit to normal working hours the use of power tools, machinery, construction equipment, and other noisy devices. The operation will comply with any applicable noise ordinance and may require a noise permit.

C. Floodplain Management

(1) The area subject to flooding is established using one of the following approaches, unless an exception is made by the Secretary the floodplain:

(a) Use best available actionable hydrologic, hydraulic, topographic, and engineering data and methods informed by projected climate-related science to determine the flood elevation and corresponding floodplain in a manner appropriate to policy, practices, criticality, and consequences;

(b) Use the Base Flood Elevation (or 1-percent-annual-chance flood elevation determined using best available data) plus an additional two feet for non-critical actions or an additional three feet for critical actions;

(c) Use the 500-year (0.2%-annual-chance) flood elevation; or

(d) Use the elevation and flood hazard area resulting from using any other method identified and approved by the Federal Flood Risk Management Standard.

(2) Avoid floodplain development whenever there is a practicable alternative.

(3) Avoid destruction or modification of wetlands whenever there is a practicable alternative.

(4) Reduce the risk of flood loss and minimize the impact of floods on human health, safety, and welfare.

(5) Restore and preserve the natural and beneficial values and ecological services provided by floodplains and wetlands; and where possible use natural systems, ecosystem processes, and nature-based approaches when developing alternatives for consideration to avoid adverse effects and incompatible development in floodplains.

(6) Develop an integrated process to involve the public in the floodplain management decision-making process.

4. **Responsibilities.**

A. *Chief, Office of Management Services.*

(1) Promotes research to define and study noise pollution problems unique to the USGS and coordinates such research with the EPSs and the EPA.

(2) Provides support to the regions by interpreting Federal, State, Tribal, and local noise management requirements and by uniformly applying USGS policy as set forth in the handbook.

(3) Assists in resolving disputes with Federal, State, Tribal, and local regulatory agencies, as required.

(4) Conducts special environmental compliance and protection studies with regard to noise management to assist in establishing policy or initiating actions.

(5) Ensures that the USGS cooperates and complies with Federal, State, Tribal, and local regulatory agencies with regard to noise management.

(6) Tracks USGS progress toward meeting established and future noise management goals.

B. *Associate Director or Regional Director.*

(1) Provides information and advice to managers and tenants regarding proposed and final rules and regulations pertaining to the environmental programs covered in this chapter and uniformly applies USGS policy, as set forth in this handbook, at all locations.

(2) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with the requirements of the environmental media covered in this chapter.

C. *Environmental Protection Specialist.*

(1) Assists locations in resolving disputes with State, Tribal, and local regulatory agencies, as required.

(2) Through site assistance visits and the Environmental Compliance Auditing Program, ensures USGS cooperation and compliance with Federal, State, Tribal, and local regulatory agencies with regard to regulations pertaining to the environmental programs covered by this chapter.

(3) Tracks progress toward meeting any established and future goals pertaining to the environmental media covered in this chapter.

D. *Science Center Director.*

(1) Initiates procurement procedures to ensure that products and equipment in use meet Federal noise standards.

(2) Ensures that coordination occurs, as appropriate, with the EPS in matters relating to noise exposure.

(3) Ensures that the scope of a project addresses noise pollution compliance requirements. Ensure that pollution prevention alternatives are included in the lifecycle cost analysis and that funds are available for noise pollution management.

(4) Programs and budgets for personnel, equipment, materials, training, and monitoring required for compliance with environmental noise management requirements.

(5) Pays appropriate Federal, State, Tribal, and local fees.

E. *Collateral Duty Environmental Program Coordinator.*

(1) Coordinate the activities required to assure compliance with the requirements of the environmental programs covered by this chapter and performs duties as assigned by the Science Center Directors and supervisors responsible for environmental compliance.

(2) Consult with EPSs, as appropriate.

5. **Additional Resources.**

A. DOI, Office of Environmental Policy and Compliance (OEPC).

B. EPA, Federal Facilities Enforcement Office (FFEO). Information on the EPA's Guide to Enforcement and Compliance at Federal Facilities is also available on this site.

C. EPA, Main web site.

D. EPA, Laws and Regulations.

E. EPA, National Environmental Policy Act (NEPA).

APPENDIX A. RISK CLASSIFICATION WORKSHEET INSTRUCTIONS

USGS compliance audit frequencies will be determined based on the activities and operations as it relates to the environment. A targeted approach is being adopted to determine the frequency of environmental compliance audits for USGS business entities (BE)/facilities. The risk based approach takes into account the following factors for each BE within a Science Center/Cost Center (CC):

1. Area of the buildings (square footage) of the BE.
2. Number of employees working at the BE within the CC.
3. Distance to storm sewer/water body from the property boundary.
4. Age of the largest building at the BE (for owned location).
5. Population density around the BE.
6. Air Permits/Registrations.
7. National Pollution Discharge Elimination (NPDES) Permits.
8. Underground Storage Tanks (UST).
9. Above Ground Storage Tanks (AST) of >1,320 Gallon Capacity.
10. Hazardous Materials Usage.
11. Hazardous Waste Generator Classification.
12. Treatment of Onsite Wastewater.
13. PCB containing Equipment.
14. Spills; EPA, State, City, County Compliance Record.

The workbook located on the EMS SharePoint site (https://insight.usgs.gov/aei/offices/oa/oms/em/SitePages/Home.aspx) summarizes how each of these factors contributes to the environmental risk and aids in determining the audit frequency for a BE within a CC. The instructions below describes the process used to calculate the audit frequency for each of the BE within a CC.

1. Open the workbook (https://insight.usgs.gov/aei/offices/oa/oms/em/SitePages/Home.aspx) by clicking on the link.

2. Select your CC using the drop down list in Column 1.

3. All of the BEs associated with the CC will be selected. Each row visible in the spreadsheet will correspond to a BE listed in the column 2 within the CC. Select a BE for which the audit frequency is to be determined.

4. Information in Columns 3 through 16 are needed to calculate the audit frequency for a BE in the Column 17. Some of the information is already populated for you in gray cells. Please review the information and let your Environmental Protection Specialist (EPS) know of any discrepancies.

5. All cells marked yellow require location specific information. All information in the yellow cells is required in order to calculate the audit frequency for that BE.

6. Column #3 provides the area occupied by a CC in square feet (SF) within the BE, as well as area in SF of the BE. Please review the information and let your EPS know of a discrepancy.

7. Column #4 provides information on the number of employees working for a CC within the BE, as well as total number of employees working in the BE. Please review the information and let your EPS know of a discrepancy.

8. Environmental reports, such as Phase I Environmental Site Assessment Report, typically includes a radius map report providing information on sensitive environmental receptors within 1/8 (=0.125)-mile radius, ¼ (=0.25)-mile radius, ½ (=0.5)-mile radius, and 1-mile radius. Please provide approximate distance of the water body or storm sewer inlet from the property boundary from the list in the Column 5. For example, if stormwater discharges to a water body located within 1/8 mile radius, select <1/8 mile. If the water body is located on site, select 0.

9. The age of the largest building at the BE (for owned locations) is provided for you in the Column #6. Please review the information and let your EPS know of a discrepancy. For some CCs, no information on age of the building/asset (USGS owned) is available. These cells are yellow and information is required. If you have information on the age of the building for BEs not owned by the USGS, provide that information by over-writing "Non-owned," otherwise leave it as it is.

10. Population density information (typically that of the city/township) for the vicinity of the BE is provided in the Column # 7. Please review the information and let your EPS know of a discrepancy. If the information is missing, the cell will be yellow. Please provide an estimate of the population density. You may use the procedure described later in this write-up.

11. If the BE has any air permit or registration for which your CC is responsible, please select Yes from the drop down list in the Column 8, otherwise select No.

12. If the BE has any National Pollution Discharge Elimination System (NPDES) permit for which your CC is responsible, please select Yes from the drop down list in the Column 9, otherwise select No.

13. Information on the Underground Storage Tank (UST) to store petroleum, oil, lubricant (POL) or hazardous material/waste for the BE is provided in the Column 10. Please review the information and let your Environmental Protection Specialist (EPS) know of any discrepancies.

14. Information on the Aboveground Storage Tank (AST), of capacity greater than 1,320 gallons, to store petroleum, oil, lubricant (POL) or hazardous material/waste for the BE is provided in the Column 11. Please review the information and let your Environmental Protection Specialist (EPS) know of any discrepancies.

15. If the BE has hazardous materials in excess of the reportable quantity (RQ) for which your CC is responsible, please select Yes from the drop down list in the Column 12, otherwise select No. If your center does the annual EPCRA reporting for the BE, answer Yes for this column. You may use the procedure described later in the write-up to determine the RQ.

16. If the BE generates hazardous waste for which your CC is responsible, please select the generator's classification from the dropdown list in the Column #13.

17. If the BE treats the wastewater onsite and your CC is responsible for managing the treatment system, please select Yes from the drop down list in the Column 14, otherwise select No.

18. If the BE has PCB equipment (for example electrical transformers, fluorescent light ballasts, and old electrical devices or appliances containing PCB capacitors) in use or stored and your CC is responsible for maintain the equipment, please select Yes from the drop down list in the Column 15, otherwise select No.

19. Please review the results of any environmental compliance audit conducted by EPA, State, city, or county environmental agencies for the past 5 years and select the appropriate item from the dropdown list in the Column 16. If the BE has experienced spills that required a report to the local regulatory agency, select the appropriate category from the dropdown box. You may access the record of past audits from the EPA database. The process to access the database is described later in this write-up.

Once you have provided all of the information requested, the audit frequency for the BE within your CC will be automatically calculated. *If all of the required information is provided, the last column of the business entity cost center combination will have "Complete" written in the last column of that row with cell shaded green. If any information is missing, the cell will be shaded red with "Missing data" written in the cell.*

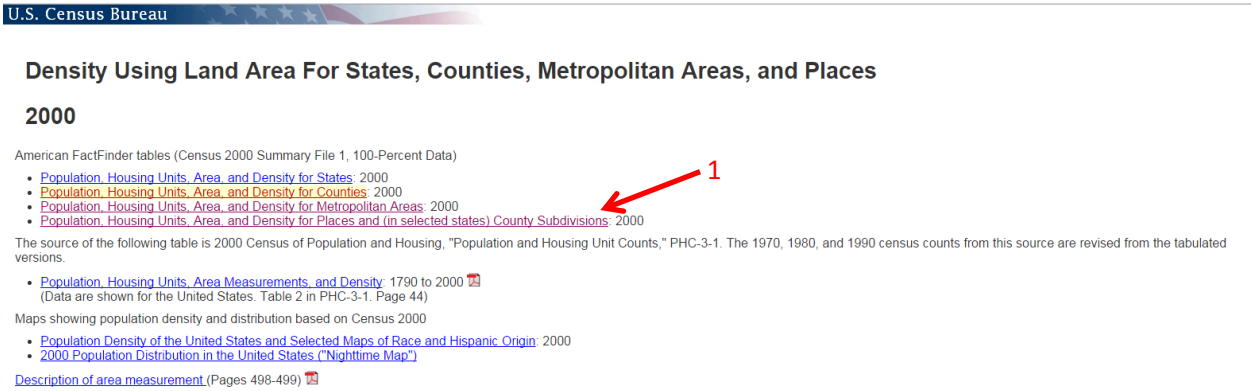
An example calculation for the Cost Center GGEMNC0000 is shown in the workbook located on the SharePoint site. Please note that the values selected for the BE/CC combination are for illustration purposes only and may not represent the actual values for that BE/CC.

Process for estimating the population density, reportable quantity, and accessing the EPA database are given below.

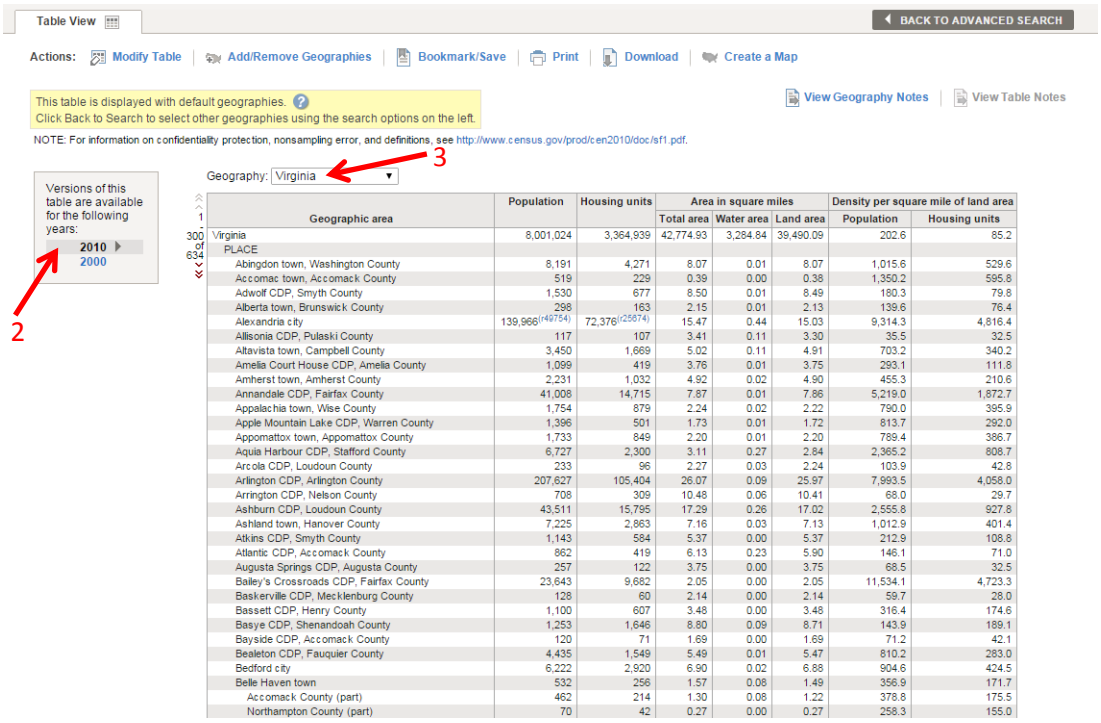
Population Density: Information on the population density in the area can be obtained from the U.S. Census Bureau using the following link,

http://www.census.gov/population/www/censusdata/density.html.

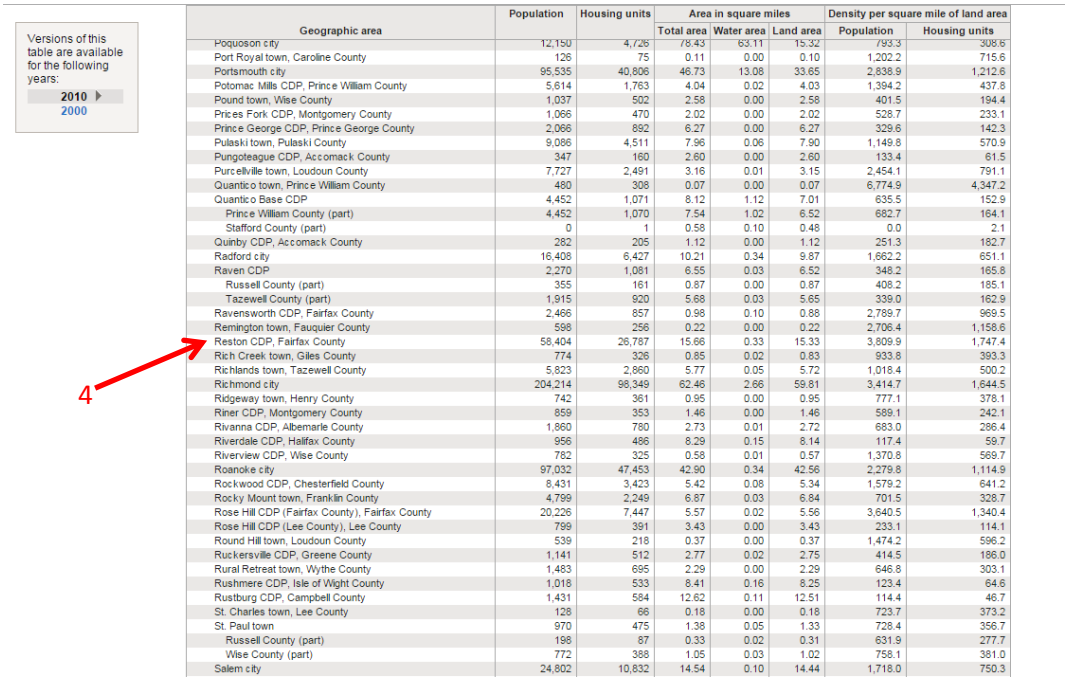
This link provides you with links for the population density for States, counties, metropolitan areas, and places. Click on the link for Population, Housing Units, Area, and Density for Places and (in selected states) County Subdivisions: 2000 (1).



Select 2010 (2) and pick the state of interest from the drop down list (3).



Select the location of interest (4). You may have to scroll down to select the city/township you are interested in.



If you have more current information, you may use it. Make sure you provide the reference for information provided.

For the example considered, we have used 2010 data for Reston (population density = 3,809.9).

Reportable Quantity: Determine if toxic materials are used at the location. If toxic materials are present in excess of their respective threshold, there is a reporting requirement. You can determine the threshold quantity of toxic chemicals using tables available from the following EPA web site,

http://www2.epa.gov/epcra/epcracerclacaa-ss112r-consolidated-list-lists-march-2015-version.

Introductory material explaining the lists and codes used in the chemical table is available in the pdf file located at the EPA web site.

It may be convenient to use the Excel spreadsheet available at the web site, http://www2.epa.gov/sites/production/files/2013-08/list_of_lists.xlsx.

Use the reportable quantity (RQ) under CERCLA or Section 304 EHS (Extremely Hazardous Substance) for the threshold. The worksheet on the EPA website lists over 2,000 chemicals. For a given chemical, you should be able to obtain the threshold quantity from that spreadsheet. For example, for benzene, the threshold will be 10 pounds (CERCLA RQ).

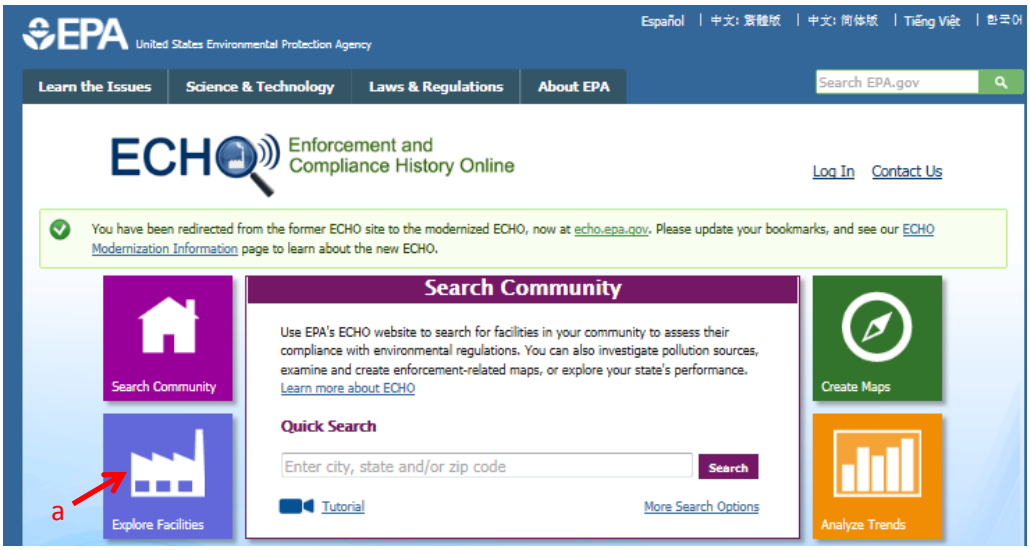
1	NAME	NAMEINDEX	CAS Sort Value	CAS/313 Category Codes	Section 302 (EHS) TPQ	Section 304 EHS RQ	CERCLA RQ	Section 313	RCRA CODE	CAA 112(r) TQ
146	Benzal chloride	BENZALCHLORIDE	98873	98-87-3	500	5,000	5,000	313	U017	
147	Benzamide	BENZAMIDE	55210	55-21-0				313		
148	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl	BENZAMIDE,3,5-DICHLORO-N-(1,1-DIMETHYL-2-PROPYNYL	23950585	23950-58-5			5,000	X	U192	
149	Benz[a]anthracene	BENZANTHRACENE	56553	56-55-3			10	313+	U018	
150	Benzenamine, 3-(trifluoromethyl)-	BENZENAMINE, 3-(TRIFLUOROMETHYL)-	98168	98-16-8	500	500				
151	Benzene	BENZENE	71432	71-43-2			10	313	U019	
152	Benzeneacetic acid, 4-chloro-.alpha.-(4-chlorophenyl)-.alpha.-hy	BENZENEACETICACIDCHLORO- ALPHA.-(4-CHLOROPHENY	510156	510-15-6			10	X	U038	
153	Benzeneamine, N-hydroxy-N-nitroso, ammonium salt	BENZENEAMINEHYDROXYNITROSO, AMMONIUM SALT	135206	135-20-6				X		
154	Benzenearsonic acid	BENZENEARSONIC ACID	98055	98-05-5	10/10,000	10				
155	Benzene, 1-(chloromethyl)-4-nitro-	BENZENECHLOROMETHYL)-4-NITRO-	100141	100-14-1	500/10,000	500				
156	1,3-Benzenedicarbonitrile, 2,4,5,6-tetrachloro-	BENZENEDICARBONITRILETETRACHLORO-	1897456	1897-45-6				X		
157	Benzene, 2,4-dichloro-1-(4-nitrophenoxy)-	BENZENEDICHLORONITROPHENOXY)-	1836755	1836-75-5				X		
158	Benzene, 2,4-diisocyanato-1-methyl-	BENZENEDIISOCYANATOMETHYLA	584849	584-84-9	500	100	100	X		10,000
159	Benzene, 1,3-diisocyanato-2-methyl-	BENZENEDIISOCYANATOMETHYLB	91087	91-08-7	100	100	100	X		10,000
160	Benzene, 1,3-diisocyanatomethyl-	BENZENEDIISOCYANATOMETHYLC	26471625	26471-62-5			100	X	U223	10,000
161	Benzene, m-dimethyl-	BENZENEDIMETHYL-M	108383	108-38-3			1,000	X	U239	
162	Benzene, o-dimethyl-	BENZENEDIMETHYL-O	95476	95-47-6			1,000	X	U239	
163	Benzene, p-dimethyl-	BENZENEDIMETHYL-P	106423	106-42-3			100	X	U239	
164	Benzeneethanamine, alpha,alpha-dimethyl-	BENZENEETHANAMINE, ALPAH,ALPHA-DIMETHYL- +	122098	122-09-8			5,000		P046	
165	Benzenemethanol, 4-chloro-.alpha.-4-chlorophenyl)-.alpha.-(tric	BENZENEMETHANOLCHLORO- ALPHA.-4-CHLOROPHENYL	115322	115-32-2			10	X		
166	Benzenesulfonyl chloride	BENZENESULFONYL CHLORIDE	98099	98-09-9			100		U020	
167	Benzenethiol	BENZENETHIOL	108985	108-98-5	500	100	100		P014	

EPA Database for Past Audit Violations: EPA maintains an Enforcement and Compliance History (ECHO) online at the following site,

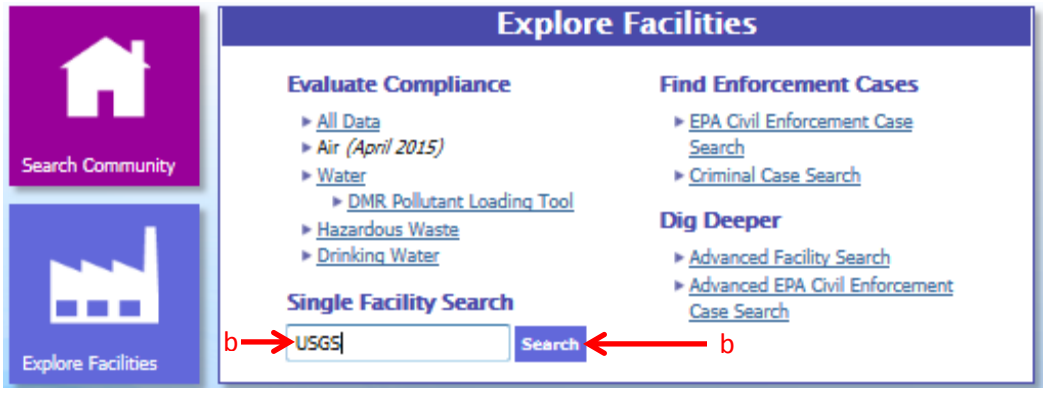
http://echo.epa.gov/?redirect=echo.

You may use this database to review the compliance history for your location.

a. Click on Explore Facilities icon.



b. Enter "USGS" or "Geological Survey" in the "Single Location Search" field and click Search. Since both terms may be used to describe our locations, use both "USGS" and "Geological Survey," one at a time, to get a complete list of USGS facilities.



c. You will get a listing of all the facilities containing USGS or Geological Survey in the name field.

d. Click on the location of interest to get more compliance related information.

e. Based on the review of the information, select the appropriate parameter from the dropdown list in the Column #16.

You may also enter the address of the location of interest in the Quick Search Menu to get compliance information. The method described above is favored, as it overcomes the limitation of entering the address, exactly as it appears in the EPA database.

As we gather more information on the results of internal and external compliance audit, we will use that information for the compliance status of the location. Due to lack of data, we are solely relying on the EPA database to determine compliance status.

Saving the Workbook on the SharePoint Site

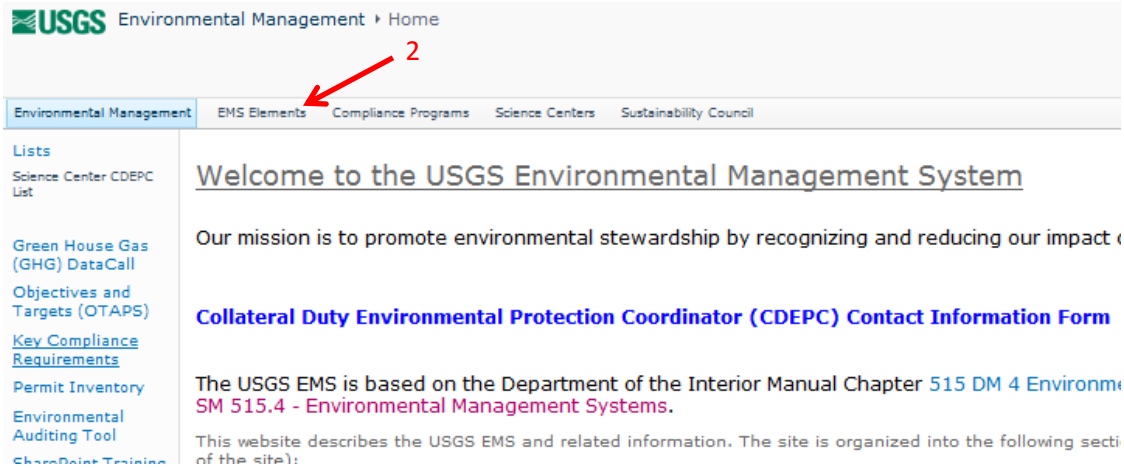
Once the workbook is completed, please rename it **AF2015-xxxxxxxxxx** [where xxxxxxxxxx (ten characters) refers to the cost center/science center code] and load it onto the SharePoint site. For the example calculation the name of the file will be AF2015-GGEMNC0000.

Instructions for loading the workbook on the USGS SharePoint site:

1. Go to the USGS EMS SharePoint site, using the following link,

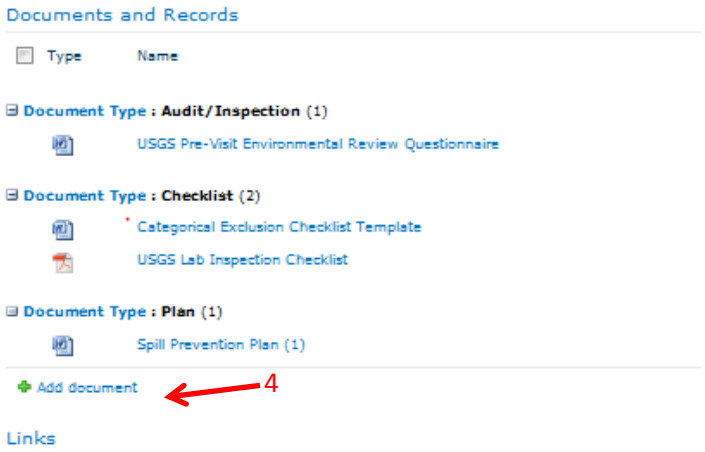
https://insight.usgs.gov/aei/offices/oa/oms/em/SitePages/Home.aspx.

2. Click on the EMS Elements tab.

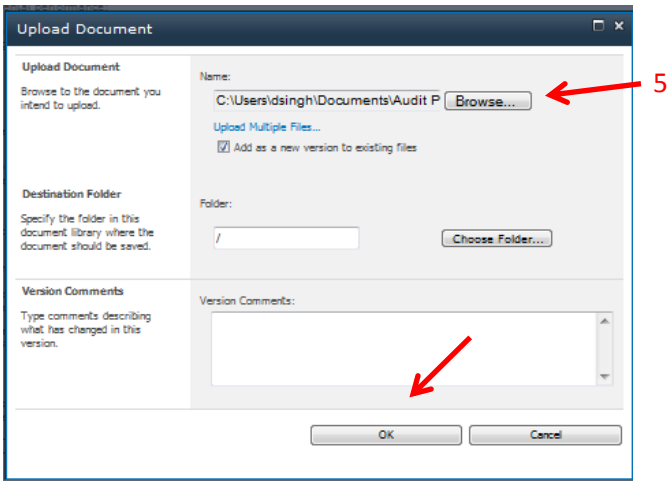


3. Select 12 Monitoring Measurement and Evaluation of Compliance.

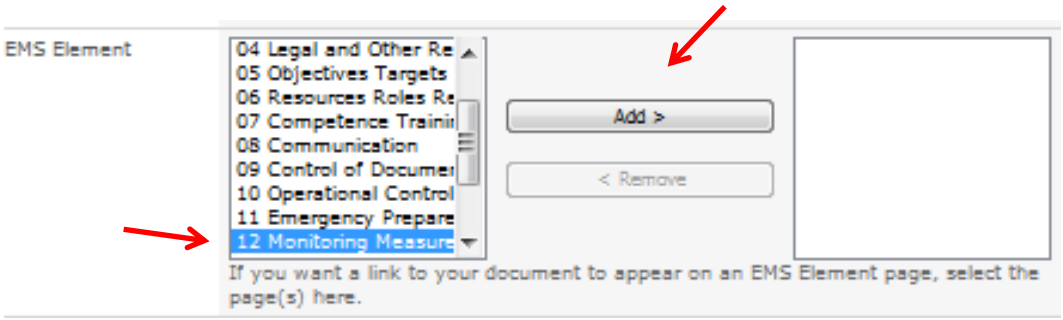
4. On the right hand side, under Documents and Records, click on Add document.



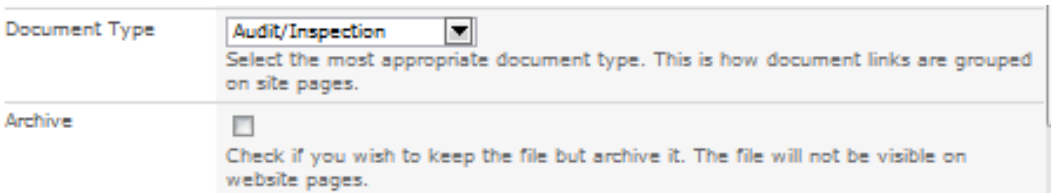
5. Select the document to load using Browse button and then click on OK.



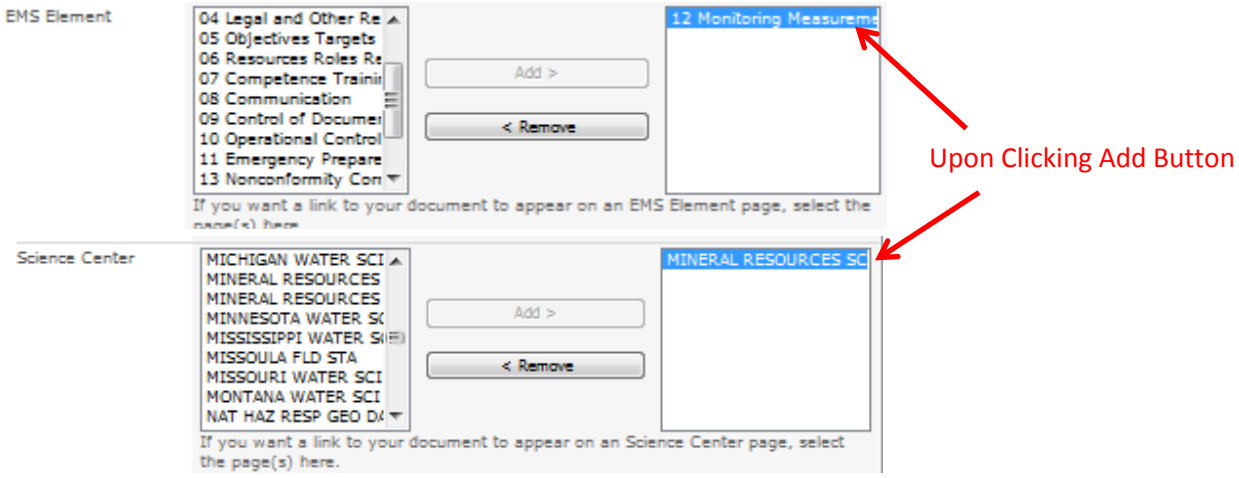
6. A dialog box is opened, From EMS Element, select 12 Monitoring Measurement and Evaluation of Compliance and click on Add.



Under Document Type, select Audit/Inspection.



7. If you want the document to show up on your Science Center Page, select your Science Center from the Science Center list and click on Add.



8. Click on Save.