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## **CHAPTER 1 OVERVIEW**

### **1.1 Purpose**

To establish policies, guidance, and assign responsibilities for the Bureau of Land Management (BLM) stewardship of water resources, including protecting, restoring, and maintaining the quality of waters located on the National System of Public Lands (public lands).

### **1.2 Objectives**

The objectives of the water quality program on the National System of Public Lands are to:

A. Maintain and/or Restore Water Quality.

In managing the public lands, protect, restore and maintain the chemical, physical, and biological (ecological) services of surface and groundwater to support resource management needs.

B. Maintain Functioning Hydrologic Systems.

This section includes in-stream flows and surface and groundwater interactions. In managing the public lands, protect, restore and maintain the hydrologic regime (i.e., timing, magnitude, recharge, duration, stream network/groundwater connectivity, temperature, and spatial distribution of peak, high, and low flows) of surface and ground water, to the extent practical, to achieve sustainable riparian, aquatic, and wetland habitats.

C. Provide for Compliance with Applicable Anti-Pollution Laws and Water Quality Regulations.

In managing and administering BLM programs, projects, and land use activities, require users of the public lands to comply with applicable federal law, and to the extent applicable to the BLM under the provisions of the Clean Water Act (specifically 33 U.S.C. 1323), state, tribal, and local water laws and regulations.

D. Cooperate with Stakeholders.

Coordinate, cooperate, and consult with federal, tribal, state, and local agencies, private landowners, and stakeholder organizations to foster a watershed-based approach to water resource stewardship.

E. Incorporate a Watershed Approach for Water Quality Protection and Restoration.

Provide a science-based watershed (and landscape) approach to natural and human-influenced water systems. This approach should be consistent with federal and state water quality

assessment methods, including monitoring, sampling, and reporting protocols and public availability, for example, following guidance provided in the Unified Watershed Assessment Framework developed under the Clean Water Action Plan.

F. Protect Municipal and Sole Source Aquifers.

Engage in collaborative planning, protection and remediation efforts that focuses on Municipal Supply watersheds and Drinking Water Source Protection Zones. Many of these areas occur where the source or diversion is off BLM lands, but the contributing surface/groundwater system extends onto the National System of Public Lands.

### 1.3 Authority

Principal authorities relating to BLM activities as they relate to water quality are:

A. Legislation

1. Federal Land Policy and Management Act of 1976 (FLPMA; 43 U.S.C. §§ 1701-1785).
2. Clean Water Act (CWA) of 1977 as amended.
3. Safe Drinking Water Act (SDWA) of 1974 (42 U.S.C. §§ 300f-300j).
4. Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA; 42 U.S.C. §§ 9601-9675).
5. Coastal Zone Management Act of 1972 (CZMA; 16 U.S.C. §§ 1451-1466) as amended by the Coastal Zone Act Reauthorization Amendments of 1990 (P.L. 101-508).
6. Watershed and Flood Prevention Act of 1954 (16 U.S.C §§ 1001-1012) as amended by the “Wyden Amendment” (P.L. 104-208) in 1997.
7. Omnibus Public Lands Act of 2009 (Public Law 111-11), Subtitle F.
8. Colorado River Basin Salinity Control Act of 1974 (43 U.S.C. §§ 1571-1599; amended in 1984, Public Law 98-569)..
9. Resource Conservation and Recovery Act of 1976 (RCRA) (42 U.S.C. § 6901 et seq.).
10. National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. § 4321 et seq.).
11. Wild and Scenic Rivers Act of 1968 as amended (16 U.S.C. § 1271 et seq.).

B. Regulations

12. Water Quality Planning and Management (in 40 C.F.R. part 130), the states and eligible tribes are given the authority to adopt water quality standards, conduct water quality monitoring, and develop and implement water quality management (WQM) plans.
13. Total maximum daily loads (TMDL) and Individual Water Quality-based Effluent Limitations (40 C.F.R § 130.7). States and eligible tribes establish TMDLs, which refer to the maximum amount of a pollutant a waterbody can receive and still meet water quality standards and an allocation of that load among various sources, for certain waters. Determinations of TMDLs take into account critical conditions for stream flow, loading, and water quality parameters.
14. Water Quality Standards. Federal agencies are subject to and must comply with state, tribal, interstate and local requirements respecting the control and abatement of water pollution. (CWA (33 U.S.C. § 1323)). The CWA's regulations (40 C.F.R. part 131) describe state responsibilities for developing, reviewing, revising, and approving water quality standards, which may be more stringent than those required by federal regulation and include designation of uses of waters, establishment of water quality criteria, and adoption of an anti-degradation policy.
15. Fundamentals of Rangeland Health (43 C.F.R. 4180.1(a) and (c)), provide that the authorized officer shall take appropriate action upon determining that existing grazing management needs to be modified to, among other things, ensure that watersheds are in or making progress toward properly functioning physical condition, including maintaining or improving water quality and that water quality complies with state water quality standards and achieves, or is making significant progress toward achieving, established BLM management objectives such as meeting wildlife needs.
16. Surface Management (43 C.F.R. part 3809), requires that BLM prevent unnecessary or undue degradation of public lands by operations authorized by the mining laws, provide for reclamation of disturbed areas, and provide for maximum possible coordination with appropriate state agencies to avoid adverse environmental impacts.

### C. Executive Orders

1. Executive Order 11514, Protection and Enhancement of Environmental Quality (March 5, 1970), as amended by Executive Order 11991, directs federal agencies to initiate measures to direct their policies, plans, and programs so as to meet national environmental goals, to protect and enhance environmental quality, and to assess progress in meeting the specific objectives of such activities.
2. Executive Order 12088, Federal Compliance with Pollution Control Standards (October 13, 1978), as amended by Executive Order 12580, Superfund Implementation, January 23, 1997, makes the head of each Executive agency responsible for ensuring that all necessary actions are taken for the prevention, control, and abatement of environmental pollution with

respect to federal facilities and activities under the control of the agency and responsible for compliance with applicable pollution control standards, including the Clean Water Act.

3. Executive Order 11988, Floodplain Management (May 24, 1977) provides for the restoration and preservation of national and beneficial floodplain values and enhancement of the natural and beneficial values of wetlands in carrying out programs affecting land use.
4. Executive Order 11990, Protection of Wetlands (May 24, 1977) states that each Federal agency must provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. Each agency, to the extent permitted by law, must avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds: there is no practical alternative to such construction; the proposed action includes all practical measures to minimize harm to wetlands that may result from such use. In making this finding the head of the agency may take into account economic, environmental and other pertinent factors (Section 2(a)). Each agency must also provide opportunity for early public review of any plans or proposals for new construction in wetlands (Section 2(b)).

#### A. Other

1. Unified Federal Policy for a Watershed Approach to Federal Land and Resource Management October 18, 2000, (65 F.R. 62566). To protect water quality and aquatic ecosystems on public lands, federal agencies, including the Department of the Interior, adopted this policy. It is intended to reduce water pollution from federal activities and foster a unified, watershed-based approach to federal land and resource management in order to accelerate federal progress toward achieving the goals of the CWA.

## 1.4 Responsibility

### A. Director

The Director is responsible for protecting, restoring, and maintaining water quality on public lands. Responsibilities include:

1. Developing necessary directives and guidelines to implement Department water-quality management policy.
2. Providing technical guidance and implementation procedures for BLM field personnel through BLM manual sections, handbooks, and directives.

3. Providing liaison at the national level with other federal agencies and organizations for water quality and training on policy, laws, regulations, and technical guidance affecting water quality on public lands.
4. Managing the Soil, Water and Air (SWA) program and other BLM programs with water-quality management responsibilities, including, including establishing policy, providing program leadership and guidance, and coordinating program funding.
5. Establishing a national strategy for meeting water quality goals and objectives, consistent with Department of the Interior (DOI) and BLM strategic plans.
6. Ensuring that water quality objectives and policy on National System of Public Lands are addressed by all BLM programs and activities through internal and external coordination, and by providing appropriate guidance to other programs to protect, maintain and restore water quality.
7. Directing the National Operations Center (NOC) and the National Training Center (NTC) to provide states, districts and field offices with technical assistance, guidance, and/or training.

#### B. State Directors

State directors are responsible for overall guidance, support, and staffing to achieve water quality goals and objectives for the National System of Public Lands within their management areas by:

1. Implementing BLM policy on water quality, collaborating with state agencies for setting water quality monitoring, protection standards and goals, and restoration priorities on the National system of Public Lands.
2. Preparing supplemental directives and guidance on water quality for consistent application within the state.
3. Compiling and reporting BLM water quality performance measures for the National System of Public Lands within their areas of responsibility to the Washington Headquarters Office.
4. If appropriate, seeking designation by EPA or state water quality management agency to be the responsible or designated management agency for the implementation and management of nonpoint source pollution on the National System of Public Lands. This may include working with the state and other landowners in developing WQM plans for watersheds that include public lands.

5. Developing and coordinating partnerships with other federal and state agencies, non-governmental organizations, watershed groups, and adjoining BLM state offices to provide for efficient and effective landscape or watershed-based water quality stewardship.
6. Furnishing (or requesting from WO and the NOC) technical direction and standards, providing technical assistance, evaluating quality of work, and evaluating technical performance of district and field offices in carrying out their water quality responsibilities.
7. Establishing and maintaining adequate staff at the State Office, District Office, and Field Office levels, as appropriate, and supporting opportunities (across the many programs involved in water) for training, workshops, and technical competency to ensure that proficiency is maintained by employees to meet water quality responsibilities on the National System of Public Lands.
8. Working cooperatively with the EPA and state water quality agencies to establish baseline conditions, identify water quality related issues, and develop a strategy to improve or protect water quality for designated National Wild and Scenic Rivers.

#### C. District Managers

The district managers are responsible for achieving BLM and state water quality goals and objectives within their respective field office and district boundaries by:

1. Implementing BLM water quality policies, setting field office water quality priorities, and providing direction and guidance.
2. Evaluating field office water quality protection and restoration effectiveness by annually or bi-annually reviewing field office work accomplishments for technical adequacy and compliance with BLM, state, and field offices policies.
3. Ensuring water quality is adequately addressed in land use plans, Comprehensive Wild and Scenic River Management Plans, and associated NEPA documents and that Applicant-Committed Design Features or Conditions of Approval (COAs) are implemented to ensure water quality protection.
4. Ensuring water quality planning, environmental evaluation, and project implementation are carried out in accordance with established law, policies, and technical standards by qualified BLM personnel, other agencies through interagency agreements, or contractors.

## 1.5 References

BLM Manual Section 6720 – Aquatic Resource Management  
BLM Manual Section 7000 – Soil, Water, and Air Management

BLM Manual 6400 – Wild and Scenic Rivers  
BLM Handbook 1601-1 – Land Use Planning Handbook  
BLM Manual Section 1610 – Land Use Planning  
BLM Manual 3720 – Abandoned Mine Land Program Policy  
BLM Manual 1703 – Hazard Management and Resource Restoration Manual  
BLM Manual Section 7250 – Water Rights Manual  
BLM Manual Section 4180.08(D) – Water Quality Land Health Standards

## 1.6 Policy

The water quality policy of the BLM is to:

1. In managing the public lands, protect, restore and maintain the chemical, physical, and biological (ecological) services of surface and groundwater to support resource management needs in a manner consistent with the Clean Water Act, other federal laws, and, as applicable to the BLM under 33 U.S.C. § 1323, state and local laws and tribal concerns, in a way that maximizes public benefit from investments in water resource projects, addressing both point and nonpoint sources of pollution.
2. Recognize that some states and tribes have been delegated the primary authority and responsibility to promulgate water quality standards in accordance with guidance contained in the Clean Water Act, administer the National Pollutant Discharge Elimination System (NPDES) permitting program, and designate beneficial uses for water bodies. Work with state water quality agencies, EPA, tribes, and other agencies and stakeholders to ensure that identified impairments are evaluated using best available scientific methods.
3. Maintain current Memoranda of Understanding (MOUs) between BLM State Offices and state water-quality management agencies for data sharing, program coordination, and other management activities.
4. Encourage the use of biological indicators of water quality for monitoring/assessing the condition and trend of water resources on public lands (recognized/accepted by state water-quality management agencies to be cost effective and comprehensive indicators of water quality).
5. Meet the BLM's Clean Water Act responsibility to comply with applicable federal, state, tribal, interstate, and local requirements respecting the control and abatement of water pollution in the same manner and to the same extent as non-governmental entities.
6. As appropriate and permitted by applicable law, incorporate design features, conditions of approval, and stipulations to protect water quality in a way that maintains functioning ecosystems into BLM authorizations for uses of the public lands.

7. Ensure that users of BLM-administered public lands comply with applicable laws and regulations and acquire appropriate permits.
8. Develop action plans that will ensure the BLM is fully engaged in collaborative planning, protection, and remediation efforts that focus on Municipal Supply watersheds and Drinking Water Source Protection Zones.
9. Meet the BLM's Wild and Scenic Rivers Act responsibility to manage designated WSRs so as to protect and enhance the values which caused them to be designated as WSRs, including, as applicable, protection and enhancement of water quality.
10. Maintain up-to-date geospatial data of permitted water sources and designated use locations compatible with BLM corporate data standards such as those for the Cadastral National Spatial Data Infrastructure (CadNSDI) and Land Status Records System (LR2000 etc.)
11. Inventory, monitor, and evaluate natural and human influenced water bodies (rivers, streams, seeps, springs, waterholes, groundwater, snowpack), especially where permitted uses of public lands may result in water quality degradation, and to secure the expertise necessary to conduct investigations that can determine whether sufficient progress is being made in improving water quality.
12. Initiate appropriate aquatic invasive control measures to prevent new introductions or to reduce/eliminate the spread of existing populations.
13. Consider water quality information at multiple scales (when appropriate) and be consistent with applicable protocols, best available scientific approaches, and/or models established through the BLM Landscape Approach (Manual 4180, Water Quality Land Health Standards), BLM Assessment, Inventory, and Monitoring Strategy, and related Departmental guidance. Watershed assessment information will become part of the basis for identifying opportunities and for developing alternatives to protect, maintain and restore water quality. Watershed restoration and monitoring plans should be developed to accelerate improvements in water quality, aquatic habitat, and watershed conditions. Watershed factors to consider should include:
  - a. The percentage of the watershed under federal management;
  - b. the magnitude of water quality impairment and the number of associated 303(d) listings;
  - c. the threat to public health, safety, or the environment;
  - d. the watershed priorities of state governments and other federal agencies, which includes addressing TMDL;
  - e. the vulnerability of a watershed to further water quality and environmental degradation; and
  - f. substantive public interest, the potential for partnerships, and the potential for fund leveraging.

## 1.7 File and Records Maintenance

All BLM water quality records and data shall be managed according to established records policies to support agency missions and linked to the National Hydrography Dataset (NHD) and Watershed Boundary Dataset (WBD). All approved water quality data for the National System of Public Lands shall be posted to a national or state-based on-line data warehouse and be available to the public.

### A. STORET Data Warehouse

The EPA's STORET system (<http://www.epa.gov/STORET/>) should be used as the primary repository for water quality data collected by the BLM. Ensure that all water quality and quantity data placed on the STORET system is collected and analyzed utilizing current standard methods and procedures, reviewed and approved by qualified personnel, and entered with descriptive qualifiers specifying the method(s) of collection and analysis.

### B. National Water Inventory System (NWIS)

The USGS National Water Inventory System (<http://waterdata.usgs.gov/nwis/>) is the primary repository for water quality data collected by the USGS. Ensure water resource data collected by the USGS on the National System of Public Lands are available on the NWIS web site.

### C. CWA Sections 303(d) and 305 (b) Data

Ensure that water quality data collected for the bi-annual Integrated Report for CWA 303(d) and 305(b) through state/local government partnerships are stored in an appropriate database where partners (including BLM) and the EPA have access.

### D. Retention and Maintenance

Protecting water quality involves the management of authorized land uses consistent with the Water Rights Manual. The BLM Land Status System is the primary repository for documenting and tracking water right source locations. Ensure water resource rights and locations data are available on the BLM Land Status Records System. Permitted water sources and designated use locations data standards will be compatible with BLM corporate data standards such as those for the Cadastral National Spatial Data Infrastructure (NSDI), Land Status System (LR2000 etc.), and the Water Rights Manual.

## 1.8 Program Structure and Function

Water quality stewardship at the BLM is administered by the SWA within the Washington Office Division of Environmental Quality and Protection and other multiple resource programs such as Range Management, Forestry, Riparian, Fisheries, Wildlife, Weeds and Invasive Species, Minerals, National Conservation Lands, Fire and Aviation, Planning and NEPA, as well as additional programs. The implementation of water quality stewardship on the National System of Public Lands is through BLM state and district/field program leads, multiple resource specialists and resource staff, and supported with knowledge and skills of the National Operation Center and the National Training Center. Elements of water quality stewardship on the National System of Public Lands include:

### A. Policy and Guidance

The SWA program staff recommends and implements water resource policy, guidance, and procedures for BLM activities, programs, and projects and authorized activities. BLM programs use an interdisciplinary, cooperative, science-based approach for the protection, restoration, and maintenance of water quality.

### B. Technical Assistance

The SWA program staff, along with additional program staff including the NOC and NTC, provide consultation, training and technical assistance to BLM staff and managers in applying water quality and water quantity information when authorized activities have the potential to impact water quality or water supply. Technical assistance is often associated with how to adequately use standard methods for water data collection, analysis, and management as well as address potential water resource impacts associated with the development of land use plans, oil and gas lease sales, oil and gas development (including hydraulic fracturing), NEPA and other planning documents.

### C. Data and Records Collection, Management, and Utilization

The SWA program staff collect surface and ground water data as necessary to; 1) evaluate water resource conditions and trends; 2) manage water resources on public lands; and 3) utilize the information to track BLM performance in meeting Government Performance Results Act (GPRA) goals as stated in the DOI Strategic Plan and the BLM Operating Plan. SWA staff shall provide state water divisions with QA/QC water quality data to assist states in regulating water quality and meeting BLM's commitment under the CWA. SWA staff will strive to manage water data to make it more publically available, such as submitting data to USGS to be housed in a data repository. BLM will utilize NHD, WBD, BLM Land Status Records System, and other professionally accepted datasets for planning, storing, monitoring and analysis of water quality.

#### D. External Coordination and Cooperation.

The SWA program staff cooperates with other federal agencies, states, tribes, local governments, and private landowners to address water issues for watersheds at the national, state, and field office level. Types of cooperation and coordination undertaken by the SWA staff include: 1) developing formal Interagency or Assistance agreements to enable watershed-based approaches for preventing or reducing impacts from water uses within the watershed; 2) seeking participation by interested stakeholders in watershed planning and management decisions; 3) coordinating surface and ground water monitoring; 4) sharing information and technical expertise; and 5) transferring technologies for watershed management.

#### E. Technical Skills.

The knowledge, skills, and abilities required to successfully complete the elements of the BLM's water resource program are varied and complex. Generally, qualified individuals should have a combination of training and experience in:

1. Hydrology–Surface and ground water modeling;
2. Watershed management and best management practices;
3. Standard methods for measurement, analysis, and reporting water quality of surface and ground water;
4. Water and streambed sediment chemistry;
5. Fluvial geomorphology;
6. Monitoring and assessment methods using biotic and abiotic indicators;
7. State and federal water laws, regulations, and policies, including water rights regulations;
8. Negotiation and conflict management;
9. Developing NEPA documents including resource management plans, land-use authorizations, etc...;
10. Fundamental management of land boundary location and documentation processes.

## Glossary of Terms

**Criteria, Water Quality:** Elements of state water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use. (40 C.F.R. § 131.3 (b)).

**Monitoring:** Regular collection of data to evaluate: 1) whether objectives or land health standards are being achieved; and 2) effectiveness of management actions.

**Nonpoint Source:** Nonpoint sources are diffuse pollution sources (i.e., without a single point of origin or not introduced into a receiving stream from a specific outlet). The pollutants are generally carried off the land by storm water such as from farmland or timber harvesting

**Parameter:** A specific pollutant or other chemical/physical condition, such as phosphorus, copper, E. coli bacteria, BOD, temperature, pH, turbidity, etc.

**Point Source:** Any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation (CAFO), landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff. (40 C.F.R. § 122.2).

**Pollutant:** Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. (33 U.S.C. § 1362)

**Pollution:** The human-caused alteration of the chemical, physical, biological, and radiological integrity of water. (40 C.F.R. § 130.2)

**Source Water:** The areas that provide surface and ground water to public drinking water systems. (65 F.R. 62566)

**Total Maximum Daily Load (TMDL):** A calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards. (40 C.F.R. § 130.7)

**Watershed:** A geographic area of land, water, and biota within the confines of a drainage divide. It is the total area above a given point of a water body that contributes flow to that point. (65 F.R. 62566)

**Watershed Approach:** A framework to guide watershed management that: (1) uses watershed assessments to determine existing and reference conditions; (2) incorporates assessment results into resource management planning; and (3) fosters collaboration with all landowners in the watershed. The framework considers both ground and surface water flow within a hydrological-defined geographic area. (65 F.R. 62566)

**Watershed Assessment:** An analysis and interpretation of the physical and landscape characteristics of a watershed using scientific principles to describe watershed conditions as they affect water quality and aquatic resources. Initial watershed assessments will be conducted using existing data, where available. Data gaps may suggest the collection of additional data. (65 F.R. 62566)

**Water Quality Standards (WQS):** Provisions of state or federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. (40 C.F.R. § 130.2).