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DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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Subject

6720 - AQUATIC RESOURCE MANAGEMENT

1. Explanation of Material Transmitted: This release transmits a revised Manual Section. It defines the Bureau of Land Management's (BLM's) objectives and policy for those species of invertebrates, fish, and wildlife dependent upon aquatic habitats.
2. Reports Required: None.
3. Material Superseded: The Manual Section superseded by this release is listed under "REMOVE" below. No other directives are superseded.
4. Filing Instructions: File as directed below.

REMOVE:

6720 (Rel. 6-92)

(Total: 8 sheets)

INSERT:

6720

(Total: 11 sheets)

Assistant Director, Land and Renewable Resources

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.01 Purpose. This Manual Section defines the Bureau of Land Management's (BLM's) objectives and policy for those species of invertebrates, fish, and wildlife dependent upon aquatic habitats.

.02 Objectives. The BLM's overall objectives for aquatic resource management of public lands are to:

A. Ensure that the natural integrity of aquatic ecosystems is restored and managed in an ecologically sound manner.

B. Ensure that the natural diversity of aquatic biota is maintained or restored as appropriate.

C. Manage habitat for anadromous and resident species that are of high economic, social, or scientific value.

D. Expand recreational fisheries by developing and strengthening partnerships, considering needs and opportunities in the development and amendment of RMP's, and responding to changing attitudes and desires of the public.

E. Ensure full compliance with applicable Federal laws, Executive Orders, and regulations.

.03 Authority. See also Manual Sections 1737 and 6500.

A. Legislation.

1. Fish and Wildlife Coordination Act of 1958 (16 U.S.C. 661 et seq.). Requires wildlife conservation be given equal consideration with other features of water resource developments.

2. Sikes Act of 1960 (16 U.S.C. 670a-f). Provides for conservation and habitat rehabilitation programs for certain public lands, and collection of fees for such purposes.

3. National Environmental Policy Act of 1969 (42 U.S.C. 1701 et seq.). Encourages harmonious relationships between man and his environment by requiring preparation of detailed statements of environmental impacts from Federal projects and directs Federal agencies to use ecological information in the development of resource programs.

4. Endangered Species Act of 1973 (16 U.S.C. 153 et seq.). Provides for conservation of ecosystems upon which endangered or threatened species depend and consultation between Federal agencies on actions that affect threatened, endangered, and proposed species.

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5. Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.). Requires that public lands be managed in a manner that will provide food and habitat for fish and wildlife, and protect the quality of water resources. Section 201(a) provides for the preparation and maintenance of an inventory of public land resources on a continuing basis.

6. Oregon and California Act of 1937 (43 U.S.C. 1181). Provides for management of revested Oregon and California Railroad and reconveyed Coos Bay Wagon Road Grant Lands by BLM.

7. Water Quality Act of 1987, as amended from the Federal Water Pollution Control Act (Clean Water Act) of 1977 (33 U.S.C. 1251 et seq.). Provides for restoration and maintenance of the chemical, physical, and biological integrity of the Nation's water at a level of quality which provides protection for fish, shellfish, wildlife, and recreational use.

8. Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901 et seq.). Directs and provides funds for rangeland improvements in accordance with land use planning.

9. Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271 et seq.). Provides for recognition and protection of certain rivers through designation as wild, scenic, or recreational.

B. Executive Orders.

1. Executive Order 11987, Exotic Organisms (dated May 24, 1977). Restricts the introduction of exotic species into natural ecosystems of the United States.

2. Executive Order 11988, Floodplain Management (dated May 24, 1977). Directs Federal agencies to avoid, to the extent possible, the long-term and short-term adverse impacts associated with the occupancy and modification of floodplains.

3. Executive Order 11990, Protection of Wetlands (dated May 24, 1977). Directs Federal agencies to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in carrying out programs affecting land use.

.04 Responsibility.

A. The Director and Deputy Director are responsible for overall aquatic resource management on public lands, and for the interactions between programs managing aquatic resources and all other BLM programs.

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B. Assistant Director, Land and Renewable Resources is responsible for the overall coordination and integration of aquatic resource management, policies, and procedures. The Assistant Director provides policy and program interpretations, direction, and leadership to ensure consistent field implementation of policies and procedures to manage aquatic resources. The Assistant Director also reconciles aquatic resource-related issues and conflicts among Land and Renewable Resource programs.

C. Assistant Director, Energy and Mineral Resources is responsible for providing program interpretations, direction, and leadership to ensure consistent field implementation of necessary procedures to manage energy and mineral resources. This includes consideration of aquatic resources in development programs.

D. Chief, Division of Wildlife and Fisheries is responsible for the following:

1. Developing aquatic resource management policy, strategic plans, and technical guidance.

2. Developing guidance for the preparation of habitat management plans to maintain aquatic habitats at desired levels and in compliance with applicable Federal laws, executive orders, and regulations.

3. Ensuring that aquatic resource management procedures are incorporated into the BLM programs.

4. Evaluating the effectiveness of aquatic resource management programs and procedures.

5. Systematically reviewing rules, regulations, procedures, and proposed legislation to establish and update the BLM's efforts to maintain aquatic resources and habitats on public lands.

E. Chief, Division of Rangeland Resources is responsible for developing and issuing guidelines for water quality, riparian and floodplain management on public lands. These responsibilities also include ensuring compliance with Federal, State, and local water quality standards and developing policy and guidance for preparing allotment and watershed management plans, and to manage beneficial and natural floodplain functions in accordance with applicable executive orders.

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F. Other Division and Office Chiefs are responsible for ensuring that policies and guidelines for their respective resources are coordinated with the aquatic resource management policies and guidance, to the extent applicable.

G. Service Center Director is responsible for providing technical support to Field Offices in new and emerging natural resource technologies, assistance to Washington Office, and development and information transfer of aquatic resource-related inventories, data storage, and other appropriate technical expertise.

H. State Directors are responsible for the following:

1. Ensuring compliance with the BLM policies and procedures for aquatic resource management and protection.

2. Ensuring coordination and cooperation with the States and other cooperators in aquatic resource management programs and issues.

3. Monitoring aquatic resource management effectiveness on public lands within the State to ensure that every effort is made to meet management objectives in State Fish and Wildlife 2000 plans, resource management plans, and activity plans.

4. Ensuring that when aquatic habitats on public lands, or portions thereof, are proposed for exchange, lease, easement, or right-of-way that the BLM retains ownership of aquatic habitats containing special status species, anadromous species, or other significant aquatic resources, and attaches appropriate stipulations to the uses of properties by the grantee or purchaser and any successor that are necessary to protect aquatic resources.

I. District Managers are responsible for the following (those in Alaska, also are responsible for items listed under .04(J) below):

1. Monitoring aquatic habitat, population and water quality characteristics to assure maintenance of aquatic communities in compliance with Federal laws, regulations, and resource management plans.

2. Storing aquatic habitat, population and water quality information in approved data bases such as Riparian Aquatic Information Data Summary (RAIDS), Threatened and Endangered Species Data System (TEDS), Environmental Protection Agency water quality data management system, Storage Retrieval (STORET) (water quality), etc.

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J. Area Managers are responsible for the following:

1. Maintaining up-to-date inventories of aquatic habitats and populations, analyzing and identifying protection and enhancement opportunities, and formulating management recommendations concerning aquatic resource management.
2. Developing, implementing, and maintaining aquatic habitat management plans and projects that are consistent with legal and policy requirements.

.05 References.

A. Fish Habitat Inventory and Monitoring. BLM Manual Handbook 6720-1.

B. Rapid Bioassessment Protocols for Use in Streams and Rivers: Benthic Macroinvertebrates and Fish. U.S. Environmental Protection Agency Report No. EPA/444/4-89-001, dated May 1989.

C. Fish and Wildlife 2000: a plan for the future.

D. National Recreational Fisheries Policy, dated June 6, 1988.

E. Forest Service and Bureau of Land Management Recreational Fisheries Policy, dated March 19, 1990.

F. Riparian-Wetland Initiative for the 1990's.

.06 Policy. See also Manual Sections 1737, 6500, and 6820. BLM policy with respect to aquatic resources is to:

A. Inventory, evaluate, and monitor aquatic habitats on public lands to determine existing conditions and those habitats supporting aquatic vertebrate and macroinvertebrate species.

B. Restore, enhance, and protect aquatic habitats by preventing their loss, and implementing and monitoring habitat management or restoration projects as identified during resource management planning process.

C. Recover threatened or endangered aquatic species, and protect, restore, and monitor other special status aquatic species so that listing as threatened or endangered is not necessary.

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D. Maintain or restore natural ecosystem functions, such as water flow regimes and energy cycles, that are necessary for maintenance of aquatic biodiversity at population, species, and ecosystem levels.

E. Enhance anadromous fisheries by increasing habitat integrity and productivity in coastal drainages of the states of Alaska, California, Idaho, Oregon, and Washington.

F. Enhance the quality and quantity of recreational fishing opportunities by increasing habitat integrity and productivity.

G. Promote the use of native fishes for recreational use, where possible. Introductions of nonnative and exotic species should be prevented in habitats where they would be harmful to the native biota or where it is against the established policy of the State fish and wildlife agency.

H. Manage aquatic habitats in a manner that facilitates restoration of riparian areas to proper functional condition.

I. Determine fisheries-related allocations, objectives, and management directions through resource management planning.

J. Coordinate and cooperate among field managers/offices, State agencies, Federal agencies, fisheries organizations, conservation organizations and universities to identify and implement cooperative projects and activities for aquatic habitats as consistent with other policy statements.

.07 File and Records Maintenance. See BLM Manual Section 1272 for records maintenance and the BLM Records Schedule for the disposition of records.

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.1 Aquatic Resource Management Guidelines.

.11 Program Priorities. Within the framework of BLM's overall program priorities, give attention to aquatic habitats in the following order:

- A. Threatened or Endangered Species. Aquatic habitats supporting federally listed threatened or endangered species, or those species proposed for such designation by the Secretary of the Interior.
- B. Other Special Status Species. Aquatic habitats supporting Federal candidate species, BLM sensitive species, or species listed by State governments as endangered or threatened.
- C. Anadromous Species. Aquatic habitats supporting anadromous species.
- D. Resident Species. Aquatic habitats supporting resident game and nongame species.
- E. Exotic Species. Aquatic habitats supporting exotic species.

.12 Inventories. To provide the necessary information for management decisions, including the resolution of planning issues, maintain and update aquatic resource inventories.

.13 Aquatic Resources and the Bureau Planning System.

A. Policy Tier. Policy guidance for managing aquatic resources is set forth in this Manual Section, Manual Sections concerning riparian-wetland management (M.S. 1737), introductions and transplants (1745), and special status species (6840), and further relevant directives that may be issued periodically by the Director. These policies may be supplemented by pertinent State Director guidance issued pursuant to 43 CFR 1610.1(a)(3).

B. RMP Tier. How specific aquatic habitats and resources are to be managed is determined through resource management planning. Aquatic resource condition objectives, allowable uses on aquatic habitats, and management prescriptions for aquatic habitats are established in resource management plans. Resource management planning is the principal means for accomplishing interdisciplinary coordination and establishing integrated resource management. Guidance is found in Manual Section 1622.1.

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C. Activity Plan Tier. Activity plans are prepared only when necessary to show how particular uses provided for at the RMP tier are to be carried out (see Manual Section 1601.12). Activity plans involving aquatic habitats and resources should describe more fully capital improvements, investment schedules and/or priorities, and goals and objectives. Activity plans may be for single or multiple activities. Wherever appropriate, activity-level provisions for aquatic resources may be included in any Bureau activity plan.

.14 Protection for Special Status Species. See also Manual Section 6840. The aquatic resource management program must include the following components to protect threatened and endangered species, species proposed for such designation, Federal candidate species, BLM sensitive species, or species listed by States as endangered, threatened, or of special concern:

A. Species Identification. Identification of special status aquatic species on public lands in cooperation with the States and the U.S. Fish and Wildlife Service (FWS).

B. Habitat Identification. Identification and protection of critical or essential habitat necessary for the survival or recovery of such designated aquatic species.

C. Habitat Management Plans. Develop, implement, and maintain habitat management plans to aid the recovery and possible delisting of threatened or endangered species, and to prevent the need to list candidate species as threatened or endangered.

D. Use of FWS and State Plans. Where approved recovery plans have been developed by the Fish and Wildlife Service for aquatic species, such plans provide the specific directions and habitat requirements to be included in the Habitat Management Plan (HMP). For those species that are listed by the State but not by the Federal Government, HMP's conform, as appropriate, to the direction and habitat requirements identified by the official State publication or status report. Should no recovery plan or status report exist, an HMP should be developed at the earliest practical opportunity based on best available data.

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.15 Instream Flow Needs. Water flow is a critical component of stream and spring habitats as well as for maintenance of many lakes and reservoirs. In all activities affecting these habitats, include estimates of flow requirements for maintenance of fisheries and aquatic habitats. Assessing streamflow requirements for maintaining aquatic habitats must be an integral part of all aquatic inventory and monitoring procedures. Instream flows necessary to protect aquatic resources should be secured in cooperation with State water management policies and regulations through guidance contained in Manual Section 7250 (Water Rights). Within this framework, the following habitats should receive priority for determination and appropriation of flow requirements.

- A. Special Status Species. Habitats supporting special status aquatic species.
- B. Anadromous Species. Habitats supporting species of salmon, steelhead, sea-run cutthroat, or other anadromous fish.
- C. Resident Species. Habitats supporting resident game and nongame species.
- D. Riparian Areas. Streams, rivers, or springs supporting significant riparian habitats.

.16 Water Quality Requirements. Resource management plans and activity plans should establish watershed management objectives where necessary to improve or protect downstream habitat quality for aquatic resources. Wherever possible, point and nonpoint water pollution sources detrimental to aquatic life should be identified. Measures to reduce sources of water pollution should be incorporated into landuse authorizations. BLM should work with States, the U.S. Environmental Protection Agency, and other appropriate agencies to ensure maintenance of water quality.

.17 Aquatic Habitat Monitoring and Evaluation. To maintain an effective aquatic habitat management program, regularly monitor aquatic habitats and/or populations, and evaluate impacts of management decisions and management practices on them to determine if management objectives are being met.

.18 Studies and Research Involving Habitat and Multiple-Use Relationships. Studies should be designed, when needed, to develop criteria for aquatic habitat management and overall management objectives. Cooperative studies should be encouraged when appropriate.

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.2 Support and Coordination with Other BLM Resource Programs.

It is essential that management of aquatic resources be coordinated with other resource uses and management activities. Many of BLM's aquatic resource responsibilities can best be met through incorporation of aquatic resource objectives and protective provisions in other BLM activities and programs. It is incumbent upon each program to ensure that its actions and plans are responsive to aquatic resource management on the public lands involved.

.21 Energy and Minerals. Energy and mineral development programs affect aquatic organisms and their habitat, primarily in terms of water quality and quantity, and physical habitat disturbance or alteration. Such development also may cause human population increases and may create additional demands or pressures on the local aquatic resources and habitats on public lands. For these reasons, activities associated with the energy and minerals program must be coordinated with management of aquatic resources. Aquatic resource program responsibilities include developing criteria to assess the impacts of energy and mineral development on aquatic resources.

.22 Lands and Realty. The aquatic resource management program shall be coordinated with the withdrawal review and land disposal programs to ensure adequate consideration of valuable aquatic resources. It also shall be coordinated with the processing of energy related applications that involve water use, such as small hydropower or geothermal projects. Resource specialists in both programs are responsible for ensuring adequate coordination. Disposal of public land or acquisition of private lands or easements for fishery values shall be considered as they affect habitat significant to the survival or recovery of endangered or threatened aquatic species, areas designated as areas of critical environmental concern, important anadromous fish habitats, and public access to the land for fishing. The existence and protection of aquatic resources shall be considered in any proposed land exchanges. Exchanges to benefit the aquatic resource management program shall demonstrate a particular need for land acquisition and adhere to public interest criteria such as public access to fishing sites or acquisition of important aquatic habitat within a given watershed.

.23 Rangeland Resources. Use of the public lands by cattle, sheep, horses, or other livestock may seriously affect aquatic resources on rangelands. The aquatic resource management program assists in actions to improve range (including aquatic) conditions, by taking the following actions.

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- A. Rangeland EA's and EIS's. Providing aquatic information and analyses for environmental assessments and environmental impact statements, as necessary.
- B. Grazing Systems. Providing aquatic data, analyses and interpretations for grazing systems to ensure protection and enhancement of aquatic habitat and fishery values.
- C. Rangeland Monitoring. Providing aquatic resource baseline data for monitoring and evaluating rangeland management decisions.
- D. Rangeland Practices Assessment. Coordinating with Rangeland Resources personnel in developing and implementing monitoring programs, to assess impacts of alternative grazing practices on aquatic resources.
- E. Rangeland Improvement Project Assessment. Providing analyses of rangeland improvement projects affecting aquatic habitats and recommending practices to provide optimum habitat protection or improvement.

.24 Forestry. The aquatic resource management program assists this program by taking the following actions.

- A. Forest Management Plans. Providing aquatic data and environmental analysis for the development and implementation of forest management plans where aquatic resources are affected. Makes recommendations on protection and enhancement of aquatic resources.
- B. Forest Transportation Systems. Providing design and layout information for forest transportation systems to ensure consideration and protection of aquatic resources.
- C. Forest Management Activities. Providing information for monitoring forest management activities to protect aquatic resources.

.25 Wildlife and Fisheries. Coordination of the fish and wildlife programs is needed if conflicting use demands occur. Closing reservoirs to public use as part of waterfowl management, thus precluding angling opportunities, is an example. Coordination of these programs also is needed to quantify instream flow needs. Flows identified as adequate for fishery needs in certain streams may not suffice for terrestrial wildlife needs.

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.26 Soil, Water, and Air. Point and nonpoint sources of water pollution degrade aquatic habitats. The soil and water management program provides support to improve aquatic conditions through the following:

A. Best Management Practices. Section 319 of the Clean Water Act of 1987 (P.L. 100-4) authorizes a program to restore waters impaired by nonpoint pollution sources. A major emphasis is to restore fisheries impacted by sources such as silviculture, grazing, and mining. Another goal is to prevent damage from future activities by implementation of best management practices. Funds are available through this program to State agencies for public and private lands. The aquatic resource management program should initiate projects to establish baseline water quality characteristics and to restore fisheries damaged by pollution sources. Adequate program coordination also is necessary to ensure that soil erosion and sedimentation problems affecting aquatic resources are considered in developing Best Management Practices, and that aquatic resource needs are considered in constructing erosion control structures.

B. Instream Flow Assessments. The program also must coordinate instream flow assessments necessary to preserve, restore, or enhance aquatic resource habitats. Methodologies may vary with the characteristics of the habitat in question, but should be compatible with methods utilized by other agencies, such as the Fish and Wildlife Service and State fish and wildlife agencies. Acceptable methodologies are discussed in Manual Handbook 6720-1.

.27 Recreation, Cultural, and Wilderness Resources. Aquatic resources and habitats often are a significant part of a wilderness or recreation experience, and should be considered in the review of Wilderness Study Areas. Aquatic resource data, analyses, and interpretation may be needed to complete some wilderness studies. The Recreation program is responsible for completing river management plans and providing river recreation permit programs on major recreation rivers, some of which are included in the National Wild and Scenic Rivers System. Aquatic resource data may be needed to develop management plans for recreation users and to monitor impacts from increased visitation on aquatic resources.

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.3 Support and Coordination with Other Federal Agencies, States and Interested Parties.

.31 Other Federal Agencies. Close coordination with other Federal agencies is necessary for optimum management of public lands. Special status species programs should be coordinated with U.S. Fish and Wildlife Service (for freshwater species) or National Marine Fisheries Service (for anadromous species). Close coordination with Federal agencies that manage lands upstream of public lands is critical. The joint Forest Service/BLM Recreational Fisheries Policy should facilitate and guide cooperation between those two agencies on matters relating to recreational fisheries.

.32 State Fish and Wildlife Agencies. The aquatic resource specialist must coordinate aquatic resource programs with State agencies. State fish and wildlife agencies or commissions typically are responsible for fishing regulations and introductions of game and forage species into aquatic habitats. Introductions of sportfishes should be coordinated so that the most suitable habitats are stocked and that stocking does not conflict with special status species management.

.33 Interested Parties. The BLM maintains national-level and State Memorandum of Understandings (MOU's) with various organizations for the purposes of promoting cooperation with interested parties, facilitating volunteer participation in projects, and cooperative management programs. Involvement of these parties, plus other interested organizations and landowners will facilitate better management.

A. Trout Unlimited. The BLM maintains a master MOU and cooperative agreement with Trout Unlimited for maintaining and enhancing coldwater fish habitats on public lands.

B. The Nature Conservancy. The BLM maintains a master MOU and cooperative agreement with The Nature Conservancy for maintaining and enhancing important aquatic habitats, including those containing special status species, on public lands.

C. Amerifish Corporation, Fishing Has No Boundaries. The BLM maintains a MOU with Amerifish Corporation for the purposes of promoting angling opportunities and increasing environmental awareness for disabled persons.

D. Other Parties. The aquatic resource specialist should coordinate activities with affected landowners and other interested parties as appropriate.

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Glossary of Terms

-A-

aquatic habitat: habitat confined to streams, rivers, springs, lakes, ponds, or reservoirs; habitat confined to water.

aquatic resources: fauna and flora that live within or are entirely dependent upon water to live; living resources of aquatic habitats (i.e., fishes, invertebrates, amphibians, etc.); aquatic species.

aquatic resource management program: all BLM activities undertaken expressly to maintain, improve, and protect aquatic habitat for fisheries or other aquatic resources.

anadromous species: species of fish that migrate upriver from the ocean to reproduce in freshwater.

-C-

candidate species: those category 1 or 2 species considered by the Secretary of the Interior for listing as published in Notices of Review in the Federal Register.

critical habitat: an area designated as such by the Secretary of the Interior on which are found those physical and biological features essential to the conservation of threatened or endangered species and which may require special management considerations or protection. Critical habitat may include any portion of the range of a listed species. Some listed species may not have any critical habitat designated.

-E-

essential habitat: an area on which are found those physical and biological features essential to the conservation of threatened or endangered species and which may require special management considerations or protection. Criteria for identifying essential habitat are the same as for critical habitat, although essential habitat has not been officially designated by the Secretary of the Interior.

exotic species: any species not naturally occurring, either presently or historically, in any ecosystem of the United States.

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-F-

floodplain: the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, that at a minimum is subjected to a 1 percent or greater chance of flooding in any given year.

-N-

native: any species that naturally occurred within a given body of water.

-P-

proper functioning condition: when riparian-wetland areas (1) dissipate energy associated with high water flows, thereby reducing erosion and improving water quality; (2) filter sediments and nutrients and aid in floodplain development; (3) contribute to root mass development that stabilize banks against cutting action; (4) develop diverse channel and ponding characteristics to provide the habitat necessary for fish production, waterfowl breeding and other uses; and (5) support greater biodiversity.

-R-

resident species: any species naturally occurring, either presently or historically, in any ecosystem of the United States. This definition excludes special status and anadromous species.

riparian habitat: a specialized form of wetland restricted to areas with characteristic vegetation along, adjacent to, or contiguous with perennially and intermittently flowing stream, lake, spring, and reservoir shore areas. Characteristic vegetation may range from hydrophilic plants such as pondweed through more terrestrial forms such as sycamores, cottonwoods, conifers, and willows. This habitat is transitional between true bottomland wetlands and upland terrestrial habitats, and while associated with water courses, may extend inland for considerable distances.

-S-

special status species: any species listed as threatened or endangered by the Federal government, officially proposed for such designation, Federal candidate species, BLM sensitive species, or species listed by State government as threatened or endangered.

species: any species, subspecies, or variety of flora or fauna.

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-W-

water quality degradation: any reduction in the biological, chemical, or physical values that describe the quality of water.

wetland or wetland habitat: Areas that have a predominance of hydric soils and that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions. Marshes, shallows, swamps, muskegs, bogs, and wet meadows are examples of wetlands.