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Subject

7200 - WATER MANAGEMENT

1. Explanation of Material Transmitted: This release provides policy and guidance for incorporation of water resource considerations in all Bureau resource management programs conducted in Montana, North Dakota and South Dakota. The manual section ties together all of the other water-related manual sections to provide an overall program framework.

2. Reports Required: None.

3. Material Superceded: Instruction Memorandum MT-77-195.

4. Filing Instructions: After the attached sheets have been filed as directed, this transmittal sheet may be discarded.

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.01 Purpose. The water resource is basic to all renewable resources, and fundamental to all life cycles. Further, nonrenewable resource production is intimately tied to the availability and wise use of this resource. It is absolutely essential, therefore, that all decisions and actions of the Bureau of Land Management include consideration for the wise use and protection of this basic resource.

The purpose of this manual section is fourfold:

- To provide guidance for the line manager in building water resource considerations into his overall land management program,

- To facilitate compliance with State and Federal laws, regulations, and executive orders dealing with the water resource,

- To give guidance to the field specialist (hydrologist) in fulfilling his professional responsibilities, and

- To provide a sound basis for addressing the water resource in fiscal program planning.

.02 Objectives. Managers need to have a clear understanding of how the quality and quantity of surface and subsurface waters may potentially be affected by their decisions. It also is essential that they be aware of the relationship of water to other dependent resource values such as wildlife, recreation and range.

The objective of the Water Resources Program is to provide basic water resource information for management decisions, to implement scientific multiple resource planning and management and to maintain or enhance the productivity and quality of the water resource. Within this framework, the specific objectives are:

A. Provide water resource information pertinent to land use planning, through the Bureau Planning System and activity planning processes.

B. Provide the hydrologic skills needed for conducting inventories, studies, and data interpretation in support of other resource activities, to form a scientific base for water management decisions.

C. Establish and maintain a continuing water resource inventory system that is responsive to the needs of all Bureau programs and administration, including short and long-range land use planning and environmental assessment.

D. Insure the compliance with applicable Federal/State laws and regulations dealing with water resources.

E. Coordinate the Bureau Water Resource Program activities with Federal, State and local agency representatives.

F. Increase the understanding between staff specialists and resource managers on the application of water resource information.

.03 Authority. The nature of the Bureau of Land Management's involvement in water resources is based upon several executive and legislative mandates that apply directly to water resource management on public lands.

A. Legislation

1. Water Protection and Flood Prevention Act of August 4, 1954, as amended (P.L. 566, 68 Stat. 666, 16 U.S.C. 1001).

2. Wild and Scenic Rivers Act of October 2, 1968 (82 Stat. 906).

3. National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4331).

4. Safe Drinking Water Act of 1974 (P.L. 93-523), as amended.

5. Federal Land Policy and Management Act of 1976 (P.L. 94-579, 43 U.S.C. 1701 et. seq.).

6. Surface Mining Control and Reclamation Act of 1977 (P.L. 95-87, 30 U.S.C. 1201 et. seq.).

7. Clean Water Act of 1977 (P.L. 95-217, 33 U.S.C. 1251 et. seq.).

B. Executive Orders and Other Guidance

1. Executive Order 11514, "Protection and Enhancement of the Environments" of March 5, 1970, states that the Federal agencies will provide leadership in protecting and enhancing the quality of the nation's environment to sustain and enrich human life.

2. Executive Order 11752, "Prevention, Control and Abatement of Environmental Pollution at Federal Facilities" of December 17, 1973, states that Federal agencies insure that all facilities under their jurisdiction are constructed, operated and maintained to conform with Federal, state, interstate and local water quality standards and effluent limits.

3. Executive Order 11988. "Floodplain Management" of May 24, 1977, states that each Federal agency shall take action to reduce the risk of floodloss, minimize the risk on human safety, health and welfare, and to restore and preserve the natural and beneficial value served by floodplains in the acquiring, managing, and disposing of Federal lands and facilities.

4. Executive Order 11990, "Protection of Wetlands" of May 24, 1977, states that the Federal agencies shall provide leadership and take action to minimize the destruction and loss or degradation of wetlands in carrying out responsibilities for acquiring, managing, and disposing of Federal lands and facilities.

5. OMB (Office of Management and Budget) Circular A-67, August 28, 1964, provides for the coordination of Federal activities in the acquisition of certain water data.

.04 Responsibilities

A. State Director. The State Director is responsible to plan and conduct all phases of the Water Resources Management Program at the State level. The State Director will develop guidelines for the protection and management of the water resource and for the coordination of multiple use management activities to attain the water management objectives.

Specifically, the State Director, with Assistance in the Division of Resources and the Staff Hydrologist is responsible to:

1. Establish the technical leadership, supervision, guidance and functional evaluation for the Water Resources Program to assure a unified statewide approach.

2. Provide the District Managers with up-to-date interpretations of, and insure compliance with, Departmental and Bureau policy and Federal and State legislation and executive orders as they pertain to water resources.

3. Prepare annual work plan directives and program emphasis statements for the MSO organization and review district water resources programs for AWP input and quality control.

4. Coordinate and review water resources studies, investigations and research between districts and neighboring States and other State and Federal agencies.

5. Provide centralized support in water data acquisition, such as computer services, interagency agreements, and cooperative programs.

6. Insure that water resources data are acquired and interpreted consistent with accepted technical standards. Insure technical adequacy of planning documents and implementation programs.

7. Provide training opportunities and technical leadership for the field specialists.

8. Advise the Districts on selection of specialist personnel for filling vacancies or program expansion.

9. Formulate water rights policy and communicate with the State governments and the Field Solicitor in water rights matters. Direct an active program of water rights acquisition. Assist districts in securing water needed for management purposes in accordance with applicable Federal and State laws.

10. Provide leadership in meeting existing water quality standards and criteria and in prescribing management guidelines and specifications for the protection of water quality.

11. Obtaining and disseminating technical information concerning safe, efficient, and effective water resource management and environmental protection practices, insuring their use through assistance, training, and inspection.

12. Provide liaison with Geological Survey, Water Resources Division, as needed to effectively carry out the coordination of water-data-acquisition activities as directed under Office of Management and Budget Circular A-67.

13. Cooperate and maintain liaison at State levels with Federal and State agencies, such as the Soil Conservation Service, Environmental Protection Agency, Bureau of Reclamation, Corps of Engineers, Fish and Wildlife Service, Geological Survey, Public Health Service, National Weather Service, Extension Service, Science and Education Administration, Federal Power Commission, State Engineers, State Fish and Game Agencies, State Water Resource Boards, State Pollution Control organizations and universities and other groups in data acquisition, management and use of water resources, and permitting and planning programs related to public lands.

B. District Manager. The District Manager is responsible to the State Director for all water resource management activities within his area of jurisdiction. There is a continuing need for improving methods in water management and in applying this information to practical management situations.

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The District Manager, with the involvement of his Chief of Resources, Area Managers, Area and District hydrologist(s), will:

1. Prepare and update annually a District Water Resource Program to be in harmony with this Manual section, but specific to needs and concerns of the District. This program should include a description of the policies, objectives and responsibilities within the District, a water resource inventory program, a description of special studies and investigations and a discussion of coordination with other agencies and outside groups. Annually review and modify that program in light of new policy, legislation, AWP Directives, and State Office Review. This program document will serve as the basis for district AWP submissions which include water resource related activities.

2. Plan and conduct water resource studies, investigations, water quality monitoring and inventories for public lands, as part of the established state program, consistent with Manual Section 7211.

3. Prepare plans, make recommendations, and conduct needed watershed restoration project work, as related to the water resources program.

4. Maintain an inventory of district water use requirements, and in conjunction with the State Director, take the measures necessary to insure the legal availability of needed water for all Bureau programs, including instream flows.

5. Conduct or arrange for hydrologic inputs in environmental assessments and statements on District projects. Review other resource reports prepared at the District level for technical adequacy and provide recommendations as needed to protect the water resource.

6. In coordination with the State Director, cooperate and maintain liaison with, or arrange for assistance from, local representatives of State and Federal agencies in the collection of climate, surface and ground water, water quality and water use data, and protection of the water resource.

7. In coordination with the State Director, maintain liaison with and, when in the best public interest, work with local organizations and local governmental units on proposed or approved watershed protection and flood prevention (P.L. 566) projects, and watershed management programs or projects which include or involve public lands.

8. Develop and disseminate technical information concerning environmentally safe, efficient, and effective water resource management practices, insuring their use through assistance, training and inspection.

9. Provide for training needs of District personnel in the field of water resources.

.05 Policy. Water resource management activities on public lands will be in accordance with the general objectives of multiple use and will be coordinated with all other uses and activities. Bureau policy requires that all watershed protection and management activities on Public Lands will be planned and administered with safeguards needed to attain the widest range of beneficial uses without unacceptable degradation of the environment, risk to the public health or safety or loss of public values. Since water has been identified as one of the basic resources upon which all other renewable resources are dependent for life and growth and since all resource activities are committed to maintaining or enhancing these basic resources, the impact upon the water resource must be evaluated by competent professional personnel for any proposed management activity.

Therefore, it shall be the policy of the Bureau of Land Management in Montana and North and South Dakota to:

A. Assure that multiple use and sustained yield, as they relate to the water resource, its quality and various uses, are basic goals and objectives for land use planning and management on BLM-administered lands; activities will be in compliance with all applicable Federal, State and local laws and other mandates.

B. Protect, maintain, restore, and/or enhance the quality of water on all BLM-administered lands so that its utility will be maintained equal to, or above, legal water quality standards. Water quality limits are those defined by applicable laws and regulations (Ref. P.L. 95-217). Specifically, water quality monitoring of land-use activities shall be performed; the objective being to evaluate, maintain, protect or enhance water quality on, or passing through, these lands. (Ref. P.L. 94-579, Declaration of Policy).

C. Initiate and fully implement a continuing system for inventorying and monitoring the water resources of public lands and provide for the systematic collection, storage, retrieval, analysis, interpretation, and dissemination of water resource information, so that such data can be properly applied to land use planning and resource management decisions.

D. Document and protect water supply requirements for all BLM resource uses, which includes an inventory of all water uses including instream flow. Work agressively to resolve problems relating to Federal water rights.

E. Coordinate and cooperate with other Federal, state and local entities in the collection of water resource data and management of the water resource within the legal authorities of the Bureau.

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.1 Water Resource Program Support to All Activities. Water resource support services are the direct application of hydrologic knowledge to specific situations in proposed or ongoing resource development and management programs. Support services include advice, counsel and design of specific protection measures for definite project and activity objectives relating to flood and debris control, soil erosion, sediment yields, channel stability, instream flow requirements, recreation use requirements, water quality and quantity yield, and timing of flows (both surface and subsurface) and water supply. Also included is participation on interdisciplinary planning teams at all field levels.

Written documentation of support input is strongly encouraged. This might take the form of an assistance or staff report if the input is not otherwise incorporated in a formal document such as an activity plan. See Appendix 3, "Guidelines for Hydrology Staff Reports."

The following are examples of water resource input to the various Bureau activities (existing or proposed):

.11 Range Management.

- Provide hydrologic input to preparation of Allotment Management Plans, including the hydrologic implications of various grazing systems, and recommendations for stock water supplies, including ground water investigation for water wells.

- Provide the range manager with up-to-date climatological data which will assist him in determining site productivity and climate-species relationships.

- Determine the effects and benefits of various vegetation and/or surface manipulation treatments upon the water balance, water yield and water quality of the proposed site.

- Identify sensitive areas, adverse effects of alternative systems, and monitoring needs; recommend preventative or mitigative measures to avoid or minimize impacts on the water resource.

.12 Energy and Minerals.

- Provide input to the planning, conduct and interpretation of EMRIA studies.

- Determine impacts of proposed mineral development activities and recommendations for mitigating measures with respect to: both surface and subsurface flow patterns, stream channel geometry, change in aquifer characteristics and surface and subsurface water quality.

- Locate potential water sources for use in mineral and mineral processing development.

- Determine water requirements for reclamation.

- Review of reclamation recommendations for resource protection and management in the development of locatable, saleable and leasable minerals.

- Recommend lease stipulations covering operational quality control, mine and mineral processing, waste disposal and monitoring.

.13 Forest Management.

- Determine land capability, site potentials, hazards and risks in the development of timber management plans.

- Identify sensitive areas, alternative silviculture systems and methods; recommending preventative or mitigative measures to prevent or minimize impacts on the water resource.

- Provide hydrologic input to the planning and design of silvicultural activities, including harvesting, skidding, site preparation, reforestation, disease and pest control, and transportation activities.

- Determine the effect of silvicultural activities on quality, timing, and volume of water flow.

- Identify water quality standards and monitoring needs in sensitive areas.

- Assist in the coordination of forest management activities with management objectives.

.14 Fish and Wildlife.

- Provide streamflow, peak flow, and water quality data to the biologist and aid in the hydraulic design of such structures as gabions, channel alterations, spawning channel developments, and impoundments.

- Assist the biologist in problems dealing with water quality degradation and improvement practices, and stream sediment and channel stability.

- Provide the hydrologic/hydraulic input to instream flow determinations for wildlife and fisheries needs, and riparian wetland habitat inventory and management.

- Coordinate the combined and overlapping issues of wetlands management, instream flow quantification, floodplain management, and water quality management, assisting the biologist and the planning staff in drafting policy and guidance directives covering the four above-mentioned activities.

- Provide input to vegetation manipulation and conversion projects for habitat improvement.

.15 Lands and Realty

- Identify floodplain, high water table, riparian, wetland, mass wasting, and avalanche zones.

- Determine the level of risk associated with floodplains, avalanche zones, and other natural water-derived hazards.

- Assess hydrologic conditions as they affect the values of land.

- Identify and determine the adequacy of water supplies (quantity and quality) for development.

- Recommend restrictions and stipulations relating to water use and disposal.

- Participate in compliance checks of special use permittees and recommend mitigating measures to prevent or reduce impacts of proposed or existing permits.

.16 Recreation Management.

- Provide floodplain and water quality/quantity data for proposed recreation sites and recreational uses of streams and rivers.

- Provide snowpack, flood, health and avalanche hazard data to the recreation planner as applicable for recreation sites and areas.

- Provide hydrologic interpretations for interpretive displays, self-guided tours, natural areas, etc.

- Assist the landscape architect and recreation planner in determining instream flow needs and recommendations for recreational uses.

- Provide water quantity/quality data and coordinate water rights efforts in the Wild and Scenic Rivers program, and in wilderness area studies, and for other water oriented recreation opportunities.

- Identify impacts of management activities on recreational areas, identify sensitive areas, determine carrying capacities based on water quality, recommend preventative and mitigative measures to protect the esthetic, recreational, and health aspects of water.

- Provide expertise in the monitoring of potable water supplies, primary contact recreational waters, and other waters of high recreational value.

- Provide expertise and assistance in the location, selection, and design of waste disposal systems and potable water supplies.

.17 Engineering and Fire Management

- Provide hydrologic data to the design engineer involved in designing roads, bridges, reservoirs, recreation sites, water facilities, and other structures.

- Assist in the location of roads, stream crossings, and other facilities to avoid sensitive or hazardous areas; recommend measures to prevent or minimize impacts on the water resource.

- Provide technical and procedural input to drinking water monitoring activities at recreation sites and other administrative sites as required by the Safe Drinking Water Act.

- Assist in the acquistion of climatological data for fire management.

- Provide hydrologic input to prescribed fire plans and to post-fire rehabilitation efforts.

.18 Other Watershed Management Programs. Hydrologists have coresponsibility with the soil scientists, range conservationists, and watershed specialists in efforts related to soil erosion (where water is the principal transportation agent), soil water and sedimentation. The hydrology staff may also assist and be involved in the following areas of responsibility:

- Climatology.

- Earth Sciences: Well site investigations and fluvial geomorphology.

- Pesticides: Water quality implications, monitoring.

- Emergency Rehabilitation and Surface Protection: Rehabilitation teams may include a hydrologist responsible for water quality and quantity considerations, climatological data, water control structures, and other associated water resource related functions.

.19 Bureau Planning System and Environmental Assessment. The hydrologist will provide or assist in the development and review of water resource input to both the Bureau Planning System and to environmental assessment efforts. Guidelines may be provided to the planning staff in the form of recommended changes to the manual system. These changes will be coordinated with similar efforts underway in other states and in the Washington Office.

The first requirement of the Water Resources Program is to provide a continuing inventory and data base of the water resource for the planning system, that can be drawn upon by all other activities in their planning and development needs.

This inventory is the information source for Step 2 and 3 water resources discussion of the Unit Resource Analysis (URA), which will be used in the development of Step 4, the identification of management and treatment opportunities. The information is also utilized in identifying limiting physical factors and in developing the ecological profile of the planning area. The hydrologist should also be involved in the development of alternatives, determination of preventative and mitigative measures, and determination of hydrologic impacts of proposed actions and alternatives. Water resources, therefore, have an active role in environmental assessments and studies, unit resource analysis, (URA), management framework planning (MFP), and activity and project planning.

.2 Water Management Activities. The Bureau of Land Management is responsible for the management of all natural resources under its jurisdiction, including the water resource. Water management is the operational part of the Water Resources Program, which is designed to maintain a basic data acquisition program and to utilize this resource information in support of programs and projects specifically for the protection and enhancement of the water resource. Each Bureau activity draws on this data bank, which is also essential for providing the support services discussed previously; and it is through use of this information that sound management decisions are possible.

.21 Water Resource Inventories, Surveys and Investigations. Water resource inventories, surveys and investigations provide the basic data for characterizing the water resource, for identifying opportunities, limitations, and problems, for preparing watershed prescriptions and plans, and for managing and coordinating the water resource with multiple use objectives. The investigations or inventories include the determination of associated watershed and stream channel conditions, climate, and related factors to permit interpretation of cause and effect. Since several years of data collection are usually required to adequately characterize the water resource, these inventories require year-round continuity for reliable, quality data.

Bureau Manual Section 7211 - Water Resource Inventories, provides a detailed description of these aspects of the water resource program.

The BLM will continue to use the services of the U.S. Geological Survey as the principal source of surface and ground water data. The USGS, EPA, and state agencies will continue to be the principle sources for water quality data and the U.S. Weather Service for climatological data. It will be BLM's role to identify what, where, and when data are needed, and to acquire special water data in support of its missions when such data are not available from other sources. Such data collection efforts will be closely coordinated with other agencies to be effective and economical. Water resources data and inventories may be subdivided into three subject areas described below.

A. Climate. Types of data to be collected may include precipitation (rain and snow depth and water equivalent), temperature, humidity, wind, and evaporation. A network of climatological and snow survey stations may be needed to supplement existing agencies' stations to fill in data gaps to characterize the climate of public lands. Climatological stations will be installed only when data from existing weather stations is not adequate.

BLM involvement in climatological data collection will be coordinated with the U.S. Weather Service and other federal and state agencies engaged in this activity.

B. Surface and Ground Water Quantity. Knowledge of the source, timing, distribution, amount, uses, and value of water is necessary for resource planning and management. Surface waters in lakes, ponds, and reservoirs, and flowing water in streams and rivers need to be inventoried and characterized. Ground water supplies and yields must be appraised where these water resources are presently, or will be, significant to public land management.

The basic surface water data available from other agency water resource inventories will be reinforced by a system of gaging stations to arrive at reliable estimates of water yield from public lands. Data that is needed to fill in voids or gaps to characterize water yield from public lands will be obtained through in-service arrangements or cooperative agreements with the U.S. Geological Survey where possible.

C. Surface and Ground Water Quality. Water quality measurements include physical, chemical, bacteriological, radiological and biological parameters, where appropriate. As in the water quantity discussion, water quality monitoring will be conducted when suitable information is not available from other agencies. Information will be obtained through in-service arrangements, private contract, or under cooperative agreements with the U.S. Geological Survey, or other federal and state agencies. Data handling, including the storage, retrieval and analysis of data, will be accomplished by utilizing the US EPA's STORET, computer system (Ref. para. .25).

.22 Water Quality Coordination and Management. The water resource investigations discussed above should generate a data base essential for managing water quality. National legislation provides the framework for our water quality management responsibilities. Bureau responsibilities and policies in water quality are more thoroughly covered in Manual Section 7240.

The Clean Water Act of 1977 (P.L. 95-217, which amends P.L. 92-500) requires the elimination of pollutant discharge into navigable waters of the U.S. by 1985, with the interim goal of attainment of water quality suitable for fish, wildlife, and recreation by 1983. Section 313 and EO 11752 require federal agencies to comply with federal, state, interstate, and local requirements respecting control and abatement of pollution. Section 208 requires federal agency cooperation with states in developing water pollution control plans for nonpoint as well as point sources of pollution. Section 404 requires that a permit be obtained from the Corps of Engineers for dredging or placing fill material in navigable waters of the U.S. This Act and its amendments will have considerable effect on water related activities of the Bureau.

Water quality problems, interest, and concerns are not restricted to surface waters alone. The chemical constitutuents and pollutants in ground water are also becoming more important to land use planning.

The Water Resources Program must include participation with federal, state, and local agencies in water quality management planning and in formulation of rules and regulations attendant thereto. Examples of involvement efforts include:

- Serving in an advisory capacity in Section 208 planning efforts, insuring that Bureau planning and policy are incorporated in the state water quality management plans. Of principle concern is the development of nonpoint source pollution controls ("best management practices") for resource development and management activities affecting water quality, such as range management, forest management, mining activities, and construction activities. A Memorandum of Understanding between the MSO and the Montana Department of Health and Environmental Sciences Water Quality Board, MT-168, provides for the implementation of the 208 program on public lands. Cooperative agreements with North Dakota and South Dakota are forthcoming.

- Insuring that BLM management and development practices are in line with the National Water Quality goals of 1983 and 1985, and assisting resource managers in the compliance with state water quality standards.

- Working with the states in the implementation of Section 208 plans under Section 304(k) to achieve or maintain water quality where such involvement has been identified in approved plans.

- Participating actively with the state(s) and EPA in the establishment and revision of water quality standards and issuance of discharge (NPDES) permits where water quality of public lands may be affected.

.23 Water Quantity Coordination and Management. Water resources studies and investigations will provide a data base from which water quantity management decision can be made. All resource programs either directly or indirectly depend upon water. It is therefore necessary to identify and quantify water needs and uses on the public lands. The Water Resources Program must coordinate with federal, state and local agencies in water quantity management planning.

A. Water Rights. The Water Resources Program must address the necessity of insuring that water is available to serve dependent resource needs as they are identified in Bureau programs. This involves actively pursuing a program of quantifying water uses and the acquisition of legal rights and reservations to both surface and ground waters for development, use and management of the resources on public lands.

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Water, including instream flows, necessary for the development, use, and management of resources on public lands will be legally secured through procedures in accordance with the latest Bureau water rights policy and Solicitor's Office Opinion #M-36914, dated June 25, 1979. A Bureau water rights manual is in preparation at the time of this writing. Upon release of such policy guidance, MSO will prepare a supplement specifying procedures and responsibilities.

Where water rights are fully appropriated and not available and there is no federal claim to water, the BLM shall acquire rights by exchange, gift or purchase if they are essential to management activities. The BLM, in all matters related to water use and rights, will endeavor to work cooperatively with the state. Such cooperation will recognize the state's authority and responsibilities for allocation of waters within the state, and the need for the state to be informed as to the uses and future needs of water by BLM.

In order to protect and obtain water rights, the BLM must document all water uses which are under its jurisdiction. The BLM must therefore conduct and maintain a continuing inventory of all water uses necessary for the development, use, and management of public lands.

B. Instream Flows. Certain water dependent resource values (aquatic flora and fauna), as well as the quality of water itself, require a certain flow regime for maintenance. Serious depletion of flows in the surface water system could destroy certain valuable aquatic habitat and cause unacceptable levels of pollutant concentration.

It is an important and essential concern of the Water Resources Program to (1) quantify instream flow needs, and (2) provide for those needs through proper land management, where possible, and acquisition of water rights and reservations.

Refer to the "Bureau Instream Flow Guidelines" for a detailed discussion of this aspect of the program.

C. Floodplain and Wetland Management. The lands adjacent to water bodies or streams that are periodically flooded or inundated with surface or ground water possess unique resource values and require special management attention. Improper use of the areas can result in degredation to water quality and channel stability. Surface and ground water quantities may be adversely effected. Bureau Manual 7221 provides guidance for floodplain and water influence zone management.

The Water Resources Program is concerned with (1) identification of the floodplain, wetlands and water influence zones, (2) recommending management actions and assessing environmental impacts on such areas, (3) coordinating with the other Bureau resource programs and other Federal agencies involved with floodplain and wetland management.

.24 Research. The role of the MSO organization in the area of water resources research includes the following:

- recognition of needs for applied research,

- initiation of research proposals, and

- application of research findings to land management problems.

.25 Data Storage and Retrieval. All water resource data acquired by the Bureau in Montana, North and South Dakota will be entered on the EPA STORET water data storage and retrieval system. Maximum use should be made of the STORET water data analysis capability. Access to STORET for input, retrieval and analysis of data should be coordinated through the data management section, Division of Technical Services, MSO.

.26 Coordination and Cooperation with Other Groups and Agencies. The management of the water resource and related activities may have implications outside as well as inside the Bureau, and affect a variety of people. In turn, the activities and concerns of other agencies and organizations may have a significant influence on water management activities on public lands. Because of the large number of groups and agencies involved in water resources, close cooperation and coordination is necessary for the efficient collection of data, exchange of technical information, preventing duplication of effort, and avoiding conflicts. Cooperation and coordination is required by several Federal Laws, Executive Orders, and OMB Circular A-67.

Sound working relationships and/or cooperative programs should be established with other water resource agencies and organizations such as the following:

U.S. Geological Survey
U.S. Forest Service
Soil Conservation Service
U.S. Environmental Protection Agency
U.S. Army Corps of Engineers
U.S. Bureau of Reclamation
Universities & Other Research Organizations
U.S. Fish & Wildlife Service
State Department of Game & Fish
State Environmental Improvement Division
State Health Agency
State Engineer's Office
National Weather Service
State Soil & Water Conservation Division (Conservation Districts)

Cooperation and coordination may include such activities as cooperative field studies and data collection, river basin planning, meetings, participation on technical committees, and development of cooperative agreements.

.27 Training. Providing training and information to other specialists and to line managers in the up-to-date principles and techniques of hydrology and watershed management is an important part of the Water Resources Program. Training may be both formal and informal and involve in-service and out-service sources. There are essentially two categories of training: one is the technical training to subordinate hydrologists, specialists, and other personnel which may involve informal personal contacts and participation as an instructor in workshops or other training sessions; the second is continuing training of the hydrologist for career development and to keep him up-to-date in the latest techniques and research findings in his field, which involves attendance at professional meetings, conferences, and other training opportunities.

Both the U.S. Geological Survey and the Environmental Protection Agency have formal technical training programs that should be utilized whenever possible. Annual meetings of professional organizations, such as those of the Western Snow Conference, American Water Resources Association, and American Geophysical Union, are important for exchange of information and keeping abreast of new techniques and research.

.28 Administration and Programming. The staff hydrologist needs to participate in administrative and programming functions to insure that program needs are included and coordinated with other activities. Work in this area will require involvement in such activities as:

- preparation and submission of annual work plans (AWP) and program packages, including the development of objectives, priorities, directives, advices, and other budgetary planning aspects

- identification of staffing needs and hiring of professionals; preparation of position descriptions

- identifying training needs and opportunities

- preparation and administration of contracts dealing with water resources, including development of statement of work, bidder lists, participating on Technical Proposal Evaluation Committees, acting as project inspector.

- administrative reviews and evaluations dealing with water resources to insure the technical adequacy of programs, and

- preparation of manual supplements and other technical guidance.

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SUGGESTED FORMAT: DISTRICT WATER RESOURCE PROGRAM DOCUMENTATION

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WATER MANAGEMENT PROGRAM FOR THE _____ DISTRICT

I. Introduction

The 7200 MSO Manual Supplement, section .04B1, states that it is the responsibility of the "District Manager with the involvement of his Chief of Resources, Area Managers, Area and District Hydrologist(s)" to "prepare and update annually, a District Water Management Program to be in harmony with the state program, but specific to the needs and concerns of the district. This document is in compliance with the policies set forth in the 7200 MSO Manual Supplement.

This document will address the specific needs and concerns of the _____ District in relation to water management. The program provides a permanent foundation for developing and documenting water resources studies, surveys and investigation, and water quantity and quality coordination and management activities. The document establishes program direction in response to the various resource demands within the district and will facilitate the preparation of the Annual Work Plan and assure continuity in the Water Resource Program.

Inasmuch as this program is an appendum of the 7200 MSO Manual Supplement, the purpose, objectives, authority, responsibilities, and policy of _____ District Water Management Program are in harmony with those of the 7200 MSO Manual Supplement.

II. Objectives (The following is only suggested. Each district should modify the listed objectives as needed.)

Managers and resource specialist must have a clear understanding of how the quality and quantity of surface and subsurface waters may be affected by land use decisions. As stated in 7200 MSO Manual Supplement, the general objective of the Water Management Program is to provide water resource information in order to maintain or enhance water resource values. Program objectives for the district are:

A. To provide technical guidance and expertise to the District Manager, Area Managers, and Division Chiefs in understanding and building a viable water resource program for incorporation into the land management program.

B. To provide a sound basis for addressing the water resource in environmental analysis, the Bureau Planning System, activity plans, program packages, annual work plans, and project plans.

C. To comply with local, state, and federal laws, regulations, executive orders, and BLM directives pertaining to water resource.

D. To assure a good working relationship with local, state, and federal agencies which may have plans or actions affecting water resources on public lands within the district.

E. To assure long term continuity in the program by establishing goals and priorities for the accomplishment of the program.

F. To leave a clear record of water resource program accomplishments including studies, inventories, etc. that have been completed.

III. Responsibilities

The 7200 MSO Manual Supplement identifies the responsibilities of the District Manager in developing and implementing a Water Resource Program for the district. These responsibilities which are spread throughout the Divisions and Resource Areas are more clearly defined below:

A. District Manager and Area Manager

The District Manager is ultimately responsible for all programs conducted within the district. The Area Managers are responsible to the District Manager for programs conducted within their respective areas. These managers have the final responsibility of ensuring that the Water Management Program is implemented. (The following is only a suggested breakdown of district responsibilities and should be modified as needed.)

B. Division of Resources

1. Chief of Resources

a. Provides water management staff support and expertise to the District Manager and Area Managers.

b. Oversees coordination with the district for the implementation of the Water Management Program. Ensures implementation is carried out within established time tables.

c. Ensures water resource input on all Bureau and non-Bureau actions which directly or indirectly affect the water resource.

2. District Hydrologist - The major functions of the District Hydrologist are to monitor the progress of the Water Management Program and provide technical knowledge on district problems and projects.

   a. Prepares or reviews the Water Management Program input for the AWP and other projects assigned to the Division of Resources. Coordinates within the district for the implementation of the Water Management Program and annually reviews and monitors its progress.

   b. Provides technical water resource input and advice on all actions on the public lands which affect the water resource.

   c. Supervises and/or conducts special studies, surveys, and inventories. This may include contracts or cooperative agreements with private or government entities. Coordinates water resource studies, investigation, or plans with local, state, and federal agencies.

   d. Provides management with recommendations for water resource staffing needs and necessary qualifications.

   e. Provides training, information, and technical guidance or supervision to resource specialists and line managers.

   f. Collects, analyzes, and interprets water resource data in accordance with program directives.

   g. Is responsible for ADP data storage and retrieval, and reference material in the district library.

C. Division of Planning and Environmental Coordination

1. Chief of Planning and Environmental Coordination

   a. Through the Planning Coordinator and Environmental Coordinator, the chief ensures that the water resource is adequately addressed in all planning system documents and environmental assessments.

2. Planning Hydrologist - The major functions of the Planning Hydrologist are to prepare and review Bureau Planning System documents and environmental assessments.

a. Prepares or reviews the water resource input for the Bureau Planning System documents. This will require close coordination with District and Area hydrologists to assure that water resource inventories and surveys are conducted with planning efforts in mind.

b. Prepares or reviews the water resource sections of major environmental assessments within the district. This may include the review of other agency environmental statements that affect public lands in the district.

c. Coordinates water resource planning with other local, state, and federal agencies.

D. Resource Areas

1. Area Managers

a. Identifies to the District Manager the need for water resource input for development of the AWP, environmental assessments, activity plans, project plans, and other special studies.

b. Is responsible for implementing the Water Management Program in the Resource Area.

2. Area Hydrologist - The major function of the Area Hydrologist is data collection and interpretation for inventories and special studies.

a. Provides water resource input for the AWP.

b. Implements the Water Management Program for the Resource Area.

c. Provides Resource Area water resource input and advice on all actions on the public lands which affect the water resource.

d. Supervises and/or conducts special studies, surveys, and inventories. This may include contracts or cooperative agreements with private or government entities.

e. Works with local, state, and federal agencies for the collection of water resource data.

f. Provides training, information, and technical guidance or supervision to resource specialists and line managers.

g. Collects, analyzes, and interprets water resource data in accordance with program directives.

E. Division of Operations

1. Chief of Operations

a. Seeks professional assistance for water resource input for the new construction or maintenance of watershed projects and all other projects which directly or indirectly affect the water resource.

b. Files on water rights and coordinates water quality sampling from Bureau maintained public drinking water facilities with the Area Manager.

c. Assures compliance with all water resource related laws, regulations, and stipulations regarding oil and gas activity and other compliance work.

IV. Program Composition

A. Support Service (for each of the following activities, describe the program in your district and describe what is the role of the Water Resources Program within it. Use 7200 MSO Manual Supplement for guidance.)

1. Range
2. Minerals
3. Forest Management
4. Fish and Wildlife
5. Recreation
6. Engineering and Fire Management
7. Watershed
8. Planning and Environmental Assessment

B. Activity Operations. The following provides a guide or outline of the various activity operations of the Water Management Program. This is provided to assist the districts in categorizing their various projects. The hydrologist should identify all completed, existing, and future water resource work within the various activity operations identified below.

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1. Water Resource Inventories, Surveys, and Investigations. Hydrologic surveys conducted by the BLM may be classified into three commonly used categories: reconnaissance surveys, benchmark surveys, and special studies. Bureau Manual 7211 provides information on the various types and levels of surveys and guidance for the design of water resource inventories.

   a. Reconnaissance surveys are inventories of the water resources in a planning unit. Information from the survey is necessary for the preparation of the Unit Resource Analysis (URA) and the identification of areas where more detailed studies are needed. The components of the survey are as follows:

      (1) Review and summarize all existing hydrologic data and surveys.

      (2) Intermittent sampling of streamflow and water quality in areas where little or no data is available.

      (3) Measuring and calculating runoff from major watersheds.

      (4) Conduct a ground water inventory.

      (5) Establish a precipitation monitoring network.

      The reconnaissance survey should be completed for each planning unit in the order that URA and Management Framework Plan (MFP) update is scheduled. Each district should identify all reconnaissance surveys that are in progress or completed. Establish priorities and time tables for completing these surveys.

   b. Benchmark surveys are those in which long-term data records are needed to establish statistically reliable baselines of water quantity and/or quality, to characterize watersheds quantitatively, and to determine trends as a result of management activities. They are conducted primarily at a Level 2 intensity. Their primary purpose is to characterize the water resources of public lands in a given area and to monitor long-term changes in quantity and quality.

Information from these long-term records is useful for land use planning purposes, for an assessment of pollution problems to assist in water quality management planning, for evaluating water quality in relation to water quality standards, for determining impacts of management activities on a drainage basin, and for developing and evaluating predictive models and management guidelines.

c. Special studies are short-term, intensive investigations (1 to 5 years in duration) designed to monitor individual management activities or to investigate specific problems for administrative purposes. Special studies may be designed to quantify impacts of management activities, to determine cause and effect relationships, to evaluate the effectiveness of management controls, to develop management guidelines and prediction techniques, and to identify problem areas and recommend corrective measures.

2. Water Quality and Quantity Coordination and Management. The water resource investigations discussed above provide a data base from which water quality and quantity management decisions can be made. Management of the water resource requires close coordination with federal, state, and local agencies in the following:

a. Section 208 of the Clean Water Act. (Describe the current situation of 208 in the district. Identify future involvement and program needs.)

b. Water Rights. (Describe current situation of water uses inventory. Identify future needs to quantify water rights.)

c. Instream Flows. (Describe current situation of quantifying instream flows. Identify future needs to quantify instream flows on public lands.)

d. Floodplain and Wetland Management. (Describe the current program. Identify needs and existing floodplain and wetland maps such as USGS or HUD.)

3. Research (describe any BLM funded research that is taking place in your district. Identify needed research.)

4. Data Storage and Retrieval (describe how data will be stored and retrieved using STORET, who will be responsible).

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5. Coordination and Cooperation with other Groups and Agencies. (identify the other federal, state, and local agencies with which you work in water management. State the principal reason or expertise provided by the agency.)

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GUIDELINES FOR HYDROLOGY STAFF REPORTS

To meet Bureau of Land Management directives and policy that establish both quantity and quality goals, basic hydrologic inputs must be provided for all resource development and management programs, and land use and functional planning. This input may consist of an assistance or staff report developed by the hydrologist and presented to management. It should contain, but not be limited to, the following elements where applicable.

- An on-site investigation characterizing the present water resource.

- A description of the problem where and when it occurred.

- An assessment and identification of watershed quality standards and tolerance levels based on the resource situation.

- The identification and quantified estimates of the magnitude of impacts of the proposed activity on watershed (water resource) values.

- The identification of site potential to meet planned objectives.

- The identified feasible mitigating measures and the expected effectiveness of maintaining quality within acceptable tolerance levels.

- A prediction of risk regarding the proposed action with the selected mitigating measures.

- An interpretation or analysis from water resource investigations and/or data.

- A recommendation prescribing:

  (1) New or additional data requirements.
  (2) Necessary funds and manpower.
  (3) On-site work necessary to achieve mitigating measures.
  (4) Guidance measures needed to avoid such problems in the future.
  (5) Incorporation into planning system update.

Such report should become part of a permanent record for the benefit of those who follow.