



United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

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IN REPLY REFER TO:

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Memorandum

To: WASO and Field Directorate, and Manager, Denver Service Center

From: Associate Director, Natural Resources

Subject: Centralization of the Water Resources Function in the Fort Collins, Colorado Water Resources Branch of the Air and Water Quality Division

The purpose of this memorandum is to acquaint all concerned with the organization, mission, objectives, and issues which will be addressed by the Water Resources Field Unit in Ft. Collins, Colorado.

I want to highlight for you the six principal issues around which our funding and priorities will be developed; a more detailed description is contained in the attachments:

1. Identification and mitigation of external and internal influences to park water quality and quantity;
2. Water Resources Management Planning, as a component of the Natural Resource Management process;
3. Location and testing of ground water sources;
4. Floodplain and flood hazard delineation;
5. Inventory and quantification of water resources and water rights;
6. Acid deposition.

It is equally important to identify those water-related activities that will not be carried out by the Fort Collins Water Resources Field Unit; these activities fall in categories covered by PRIP, maintenance, etc., and include the following:

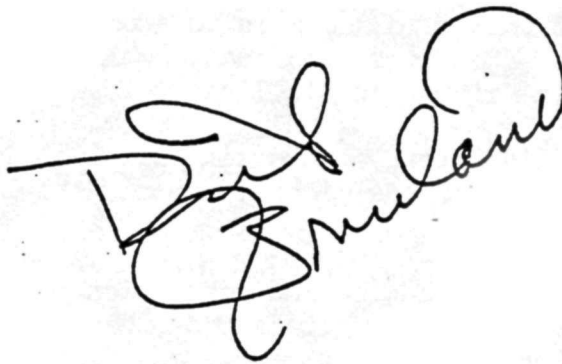
- o Dam safety
- o Rehabilitation of existing wells
- o Rehabilitation of surface water supplies
- o Determinations and recommendations on the utilization of existing water supplies to meet demand
- o Replacement of old and/or leaking pipelines
- o Installation of water saving devices and water reuse technology to conserve water.

Finally, we have consolidated the submission requirements and dates for the budget increase request process and the budget allocation (execution) process. This will be accomplished by:

- o The Budget Allocation process for FY 1985 requests will be on the same schedule as the budget increase request process for FY 1986.
- o The FY 1986 increase request list submitted by the Regions will serve as the "master" needs list from which water resources activities will be selected for funding in FY 1985.
- o Should additional FY'85 monies become available, we will look to the prioritized FY'86 list for further candidates.

A fuller explanation of the steps and timing for this proposed consolidation is contained in the attachments.

Enclosures

A handwritten signature in black ink, appearing to read "Earl E. Muland". The signature is stylized with large, flowing loops and a prominent initial "E".

A. ROLE and FUNCTIONS

The Water Resources Branch, under the general direction of the Chief, Division of Air and Water Quality (WASO), is administratively centered in the Water Resources Field Office, Fort Collins, Colorado.

The Branch Chief is directly responsible for the effective management of the Servicewide Water Resources Program, and shall be the principal contact for the Regions, Parks, and Denver Service Center on water resources matters.

The Branch is responsible for formulating and recommending annual Servicewide Water Resources Program-supported priorities. These priorities will be based upon the needs identified by Superintendents in their Resource Management Plans and forwarded each year to the Branch by the Regional Directors. Upon approval of annual priorities and funding levels, the Branch is further responsible for the timely obligation of funds and for serving as the contracting officer's representative for the project.

B. OBJECTIVE, ISSUES, AND GOALS

The Objective of the Water Resources Branch is:

TO FACILITATE THE PROTECTION, MANAGEMENT, AND ENHANCEMENT OF WATER AND RIPARIAN RESOURCES WITHIN UNITS OF THE NATIONAL PARK SYSTEM BY PROVIDING TIMELY RESEARCH AND TECHNICAL ASSISTANCE TO RESOURCE MANAGERS AND DECISION-SUPPORT INFORMATION TO WASO AND FIELD MANAGERS.

There are six major issues within which all activities are focused:

1. Identification and mitigation of external and internal influences to park water resources
2. Water Resources Management Planning
3. Location and testing of ground water sources
4. Floodplain and Flood Hazard delineation
5. Inventory and quantification of water resources throughout NPS units, including water rights
6. Participation in the Federal interagency effort on acid precipitation

The following describes each issue and associated long-term and short-term goals. Annually, all activities supported by the Water Resources Program shall be identified with one of these issues, and accomplishments and program evaluation shall be directed towards maximizing progress towards meeting defined goals.

ISSUES AND GOALS

1. Identification and mitigation of external and internal influences to park water resources

To pursue an active research and technical assistance effort designed to provide decision-makers and resource managers with effective techniques, tools, data and analyses to meet evolving threats to riparian or aquatic ecosystems stemming from external and internal influences to park water resources.

a. Long-Term Goals

- To develop and implement effective techniques for identifying, predicting and quantifying the magnitude and scope of impacts to riparian or aquatic ecosystems within park units from natural or artificial degradation of water quality or quantity in surface or subsurface waters caused by internal and external activities including energy development.
- To coordinate all such efforts with allied federal and other agencies in order to enhance the capabilities of the Service to meet anticipated needs.

b. Short-Term Goals

- To establish formal and informal coordination of research with USFWS/Western Energy and Land Use Team and its Cooperative Instream Flow Group, and the U.S Forest Services's Watershed Systems Development Unit.
- To compile an information base of external/internal impacts or potential impacts to NPS riparian or aquatic ecosystems.
- To carry out in-depth water-related assessments of ongoing or proposed energy development and other projects which have the potential to cause significant adverse impacts on NPS water resources.

2. Water Resources Management Planning

To facilitate sound water resources management planning throughout the Service by providing water resources data and analysis to managers and planners responsible for the preservation and protection of System areas.

a. Long-term Goal

- To preserve and protect System area water-resources and related water dependent environment by supporting development and implementation of Water Resources Management Plans or statements within all Resource Management Plans of units with management jurisdiction over water resources.

b. Short-term Goals

- To conduct comprehensive water resources studies to identify and inventory the surface and ground water resources, including quantity and quality, of entire park-areas. Data collection and analysis contribute to the development of General Management Plans, Natural Resource Management Plans, and in some instances the development of System area Water Resources Management Plans. The investigations are of broad scope-needed for long-range-administrative, planning, and management purposes.
- Establishment and/or continuation of water quality/quantity monitoring programs to protect System area water resources from possible adverse impacts from planned or existing private developments, excessive ground water withdrawals, mining and industrial pollution, solid waste disposal, discharge of sewage effluent, non-point sources of pollution such as herbicides and pesticides, salt water contamination, etc.
- Evaluation and recommendation of effect on water resources of System areas of climatology projects, boundary adjustments, river basin developments, flood control projects, and proposals to use System area land for multi-purpose reservoirs, energy, industrial, and/or residential developments.
- Analysis of special use permits and concession contracts and related studies for the resolution of problems relating to the administration and management of water resources and their use.
- Preparation and/or reviews of Environmental Assessment documents involving or possibly affecting System area water resources.
- Formulation of water quality management plans and water quality standards and criteria needed to maintain, enhance, or restore System area water quality.
- Determination of instream flow requirements and ground water levels needed to preserve and protect the water dependent environment of System areas.
- Purchase, installation, maintenance, and operation of water and tidal measurement gages and observation wells needed to assess impacts on water quantity and quality.

3. Location and Testing of Ground Water Sources

To provide technical assistance in the development and maintenance of water supply sources needed to meet water demands of System areas.

a. Long-term Goal

- To provide technical assistance to parks related to the location and testing of suitable groundwater sources to meet visitor, employee, and wildlife water demands.
- To convert potable surface water sources subject to pollution to groundwater sources wherever practicable, in compliance with NPS policies.

b. Short-term Goals

- Evaluation of ground and surface water potential of entire System area to provide an overall appraisal of water resources potential. The hydrologic data collected is needed to meet current and future human or wildlife demands; maintenance of habitat; protection of existing supplies; and for increasing the available water supplies. Involves determination as to water source location, quality, and quantity.
- Assistance in the resolution of System area water supply problems involving existing water systems. Assistance includes investigating interference with park water supply as in the case of excessive ground water withdrawals reducing park well or spring supplies; determining cause of pollution of park water supply and recommendation on its elimination; and consultation on water well maintenance.
- Location of potable surface and ground water sources for new and/or existing developments and to serve as the replacement, where feasible, of existing surface water sources subject to pollution. Includes an evaluation of surface and ground water potential for specified development sites. Determination of dependable flow and quality of surface water sources. Based on existing data determine the potential for ground water development. If potential exists, test well sites are selected.
- Test well drilling to locate well or wells capable of yielding potable water and quantity required to meet water demand of specific developments. Involves determination of aquifer characteristics, water quality testing, pump testing to determine safe yield, size of pump, and final well design.
- Generation of hydrologic data pertinent to water system design.
- In areas where potable water sources are nonexistent or quantities limited, determine the feasibility of utilizing reverse osmosis to produce acceptable quality water from existing poor quality water.

- Where necessary, assist in the periodic sampling of water supplies to assure that water quality meets Federal water quality standards and criteria.

4. Floodplain and Flood Hazard Delineation

To participate in the implementation of E.O. 11988 "Floodplain Management" and E.O. 11990 "Wetland Protection" by identifying and delineating floodplains, high hazard floodways, wetlands, etc. in NPS units and to facilitate the implementation of floodplain and wetland protection procedures in applicable NPS units.

a. Long-term Goal

- To assist in the protection of life and property from flood hazards and the maintenance, enhancement, and restoration of wetlands by providing basic data on floodplains, flooding, flood hazards, and wetlands to decision makers, planners, and managers.

b. Short-term Goals

- Conduct flood hazard surveys of System areas involving the delineation of floodplains and wetlands; determination of the 100 year flood levels and 500 year flood levels if critical actions are involved; identify high hazard zones; preparation of map or maps depicting relationship of existing and proposed actions to floodplains, flood levels, and wetlands; determination of depth, velocity and rate of rise of floodwater, duration of flooding; provide data on past flooding and storm events, etc. The flood hazard data collected contributes to the development of early warning and emergency evacuation plans for System areas.
- In those NPS units where high hazard floodways have been identified and pose a danger to life or property, to assist in the development of mitigation measures including emergency warning and evacuation plans.

5. Inventory and quantification of water resources throughout NPS units, including water rights

To pursue an active program of identification and quantification of park water resources, water use, and related water rights.

a. Long-term Goal

- To make readily available to parks, regions, the Director, and representatives of the Solicitor's Office and Justice Department, supporting data needed to document, establish, and perfect Service claims to water necessary to assure the preservation and protection of park areas water resources and to satisfy visitor and employee water requirements.

b. Short-term Goals

- To identify, inventory, and quantify park water resources, present and future water use, and water rights. Includes the identification of reserved rights and acquired rights and the initiation of new water right dockets and updating existing dockets to document water use and water rights.
- To reactivate and maintain a computerized water rights data management system to facilitate accessibility of water rights data needed for documentation and proof of Service claims to water in State proceedings, court ordered adjudications, litigations, or other legal actions.

6. Atmospheric Deposition ("Acid Rain") Program

To monitor, investigate and determine the scope, magnitude and trends of actual or potential long-term effects to park natural resources which stem from or are exacerbated by atmospheric deposition.

a. Long-Term Goals

- To develop and maintain an atmospheric deposition monitoring program throughout sensitive units of the Park Service, in concert with other federal, state, and DOI agencies.
- To collect and synthesize, in cooperation with other federal and state agencies, pertinent chemical and ecological data necessary to understand watershed exposure levels to atmospheric contaminants of NPS areas.
- To determine effects of various atmospherically-derived chemical pollutants upon significant species or communities in sensitive park units.
- To identify the trends and timeframes of possible resource impacts, and to develop and provide sound management practices and/or mitigation alternatives for protection of affected park watersheds.

b. Short-Term Goals

- To evaluate NPS involvement in the National Atmospheric Deposition Program (NADP), assess the five year data base, and recommend necessary changes to the monitoring program.
- To phase in, over a period of three years or as funding allows, a major integrated aquatic/terrestrial ecosystem effects research program in up to ten major natural area parks in coordination with the Federal Interagency Plan for Assessment of Acid Rain.